April 23, 1984
NRC/TMI-84-027

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
April 15, 1984 - April 21, 1984

Data from effluent and environmental monitoring systems indicated no plant releases in excess of regulatory limits. A modified seal plate was installed in the reactor building to seal the cavity between the reactor vessel and the refueling canal floor.

Other site activities this period included: preparations for head lift in late summer, reactor building air cooling system work and auxiliary and fuel handling building decontamination. (For more details see appropriate paragraphs below.)

Significant items covered in the enclosure are:

-- Reactor Building Activities
-- Auxiliary and Fuel Handling Building Activities
-- TMI Occupational Dose Activities
-- Waste Management Activities
-- Public Meetings

Data summary sheets included in this report are:

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

ORIGINAL SIGNED BY:

Lake H. Barrett
Deputy Program Director
TMI Program Office

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TMI
+ Dtm-61

Enclosure: As stated

OFFICE ▶							
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DATE	4/23/84	4/23/84	4/23/84	4/24/84			

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ENCLOSURE

REACTOR BUILDING ACTIVITIES:

During reactor building entries last week, a modified seal plate was installed to seal the cavity between the reactor vessel and the refueling canal floor. The normal seal plate was modified with special gaskets and fasteners to provide better assurance that the seal plate would remain leak tight during defueling. A sealant was used above the seal plate to provide a secondary leak barrier. A protective platform will be installed above the seal plate and gaskets during the next several entries to protect the seal from inadvertent damage.

The reactor coolant system has been pressurized to 60 psig ± 10 psig and is being processed through the SDS ion exchangers in preparation for reactor vessel head removal scheduled for August 1984.

AUXILIARY AND FUEL HANDLING BUILDING ACTIVITIES:

Decontamination activities continued this week. Maintenance work to restore the "A" decay heat pump to operable status was started this week. Decontamination work continued on the outside surfaces of overhead ventilation ducts in the north-south corridor of the 281 ft. level of the auxiliary building as did decontamination work on the tanks in the "A" fuel pool. Steady progress is also being made on the reactor building cooling (chiller) system.

TMI OCCUPATIONAL DOSE ACTIVITIES:

Licensee TLD (Thermoluminescent Dosimeter) records indicate the following station occupational radiation doses for the period March 1, 1984 through March 31, 1984.

Unit 1 and Unit 2 Combined Dose Ranges

Category in Rem	Number of Station Personnel
No Measurable Dose	1,129
Dose Less Than 0.1	280
0.1 to 0.25	69
0.25 to 0.5	53
0.5 to 0.75	21
0.75 to 1	8
1 to 2	0
2 to 3	0
Above 3	0

Total Doses	Man-Rem
Unit 2 (March)	53.3
Unit 2 (Year-to-Date)	97.6
Units 1 & 2 TLD (March)	69.873
Units 1 & 2 TLD (Year-to-Date)	123.339*

*Includes correction to previously reported figures.

WASTE MANAGEMENT ACTIVITIES:

The submerged demineralizer system (SDS) operated in support of the "A" fuel pool tank farm decontamination through April 17, 1984. On April 17, the SDS began processing SDS batch No. S-081 from "C" reactor coolant bleed tank (RCBT) through SDS to "A" RCBT. The EPICOR II system remained shutdown throughout the week.

PUBLIC MEETINGS:

Past Meeting

On April 19, 1984, Dr. Bernard Snyder and Dr. Frank Congel (Chief, Radiation Assessment Branch, NRC) addressed the members of the Advisory Panel for the Decontamination of Three Mile Island, Unit 2 on health research studies of the Pennsylvania Department of Health. The major point of discussion was the reassessment of worker exposure and radiation protection measures employed at TMI-2.

Future Meeting:

On April 26, 1984, Lake Barrett will address Food and Drug Administration staff on the status of TMI-2.

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: April 1 - April 7, 1984

Results: Gamma Scan Negative

TMI Water Samples: 7 samples

Period Covered: April 1 - April 7, 1984

Results:

March 31 - April 1, 1984 composite sample

Cesium-139 - 7 pCi/l ± 2 pCi/l
Cobalt-60 - 5 pCi/l ± 1 pCi/l (1.17 MeV peek area)
- 6 pCi/l ± 2 pCi/l (1.33 MeV peek area)

April 1 - April 7, 1984

6 composite samples
Gamma Scan Negative

A liquid radioactive waste discharge, within NRC limits, was made from Unit 1 on March 31 - April 1, 1984. As expected, this discharge was detected by EPA's extremely sensitive composite sampler at the site discharge point. The concentrations in the release were approximately one ten thousandth of the permissible concentrations.

APPENDIX 2

ENVIRONMENTAL DATA

Environmental Protection Agency

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

Location	March 2 - March 16, 1984 (pCi/m^3)
Goldsboro	26
Middletown	28
Yorkhaven	27
TMI Observation Center	26

-- The EPA gamma radiation detection system continuously monitors for increases above naturally occurring radioactivity and residual fallout radioactivity at 13 stations in the TMI area. During this period the EPA has attributed the measurements to naturally occurring radioactivity and/or residual fallout radioactivity.

Period Covered: February 28 - March 31, 1984

	Location	Average (millirem)	Integrated Dose (millirem)	Degrees	Distance (miles)
03	Harrisburg International Airport, Middletown	(No data available for this period)		325	3.5
05	Londonderry Township Bldg	.007	5.56	040	2.6
09	Newville	.009	6.81	100	3.0
11	Falmouth	.010	7.52	130	2.9
13	Falmouth	.007	5.15	150	3.0
17	York Haven	.007	5.15	180	3.0
20	Woodside	.006	4.83	205	2.5
31	Goldsboro	.010	7.92	270	1.5
34	Plainfield	.006	4.99	305	2.7
35	Royalton	.009	6.97	068	3.5
36	TMI Observation Center	.008	6.10	095	0.5
39	EPA TMI Field Station, Middletown	.006	5.07	356	2.8
40	Newberrytown	.007	5.78	236	3.0
41	Yocumtown	.007	5.86	275	4.0

-- EPA results of airborne particulate samples collected at the same locations as the gamma radioactivity monitors (above) during the period February 28 - March 31, 1984 were all less than 0.2 picocuries per cubic meter of air, the minimum detectable concentrations for EPA's analytical instruments.

-- The Kr-85, the air and gamma rate analyses are all performed by the EPA staff at Middletown. EPA results for these analyses are released monthly. These results will be reported here as they become available from EPA.

NRC Environmental Data

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

Sample	Period	I-131 (uCi/cc)	Cs-137 (uCi/cc)
HP-415	April 12, 1984 - April 19, 1984	<1.1 E-13	<1.1 E-13

APPENDIX 3

RADIOACTIVE MATERIALS/RADWASTE SHIPMENT DATA

-- On April 18, 1984, 103 drums of contaminated laundry from Unit 1 and Unit 2 were shipped to Interstate Uniform Service, New Kensington, Pennsylvania.

-- On April 19, 1984, a cerium-144 calibration source was shipped to New York University Medical Center facility, Tuxedo, New York.

-- On April 19, 1984, an air sample filter was sent to Applied Science Laboratories at Oak Ridge, Tennessee.

APPENDIX 4

WATER PROCESSING DATA

Submerged Demineralizer System (SDS)

Processing of SDS Batch No. S-081 began on April 17, 1984. Batch S-081 is reactor coolant system letdown batch R-021, 32,515 gallons.

EPICOR II

EPICOR II is shutdown.

APPRENDIX 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: SPC

Major Parameters as of 5:00 AM, April 20, 1984 (approximate values):
Average Incore Thermocouples*: 83°F
Maximum Incore Thermocouple*: 141°F

RCS Loop Temperatures:

	A	B
Hot Leg	70°F	76°F
Cold Leg (1)	66°F	65°F
(2)	66°F	65°F

Reactor Core Decay Heat: 17.5 Kilowatts

RCS Pressure: 60 psig

Reactor Building: Temperature: 63°F
Pressure: -0.2 psig
Airborne Radionuclide Concentrations:

<6 E-9 uCi/cc H^3 (Tritium) (LLD)
(sample taken 4/17/84)

2.7 E-9 uCi/cc particulates
(predominately Cs-137)
(sample taken 4/17/84)

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