

December 17, 1984
NRC/THI-84-090

MEMORANDUM FOR: Harold R. Denton, Director
Office of Nuclear Reactor Regulation

Bernard J. Snyder, Program Director
THI Program Office

FROM: William D. Travers, Deputy Program Director
THI Program Office

SUBJECT: NRC THI PROGRAM OFFICE WEEKLY STATUS REPORT FOR
DECEMBER 9, 1984 - DECEMBER 15, 1984

Data from effluent and environmental monitoring systems indicated no plant release in excess of regulatory limits. Waste processing continued on a routine basis. Plant parameters have shown no significant changes. Other site activities this period included: continued fuel pool "A" refurbishment, building decontamination, makeup and purification demineralizer elution, and plenum jacking.

Significant items covered in the enclosure are:

- Reactor Building Activities
- Auxiliary and Fuel Handling Building Activities
- EPA Environmental Sampling Results
- Public Meeting

Summary sheets included in this report are:

- Liquid Effluent and Environmental Data
- Plant Status Data

ORIGINAL SIGNED BY:
Philip J. Grant/for
William D. Travers
Deputy Program Director
THI Program Office

Enclosure: As stated

*TDIP-5
THI*

8412310296 841217
PDR ADOCK 05000320
R PDR

OFFICE					
DATE					

INTERNAL DISTRIBUTION

EDO
OGC
Office Directors
Commissioner's Technical Assistants
NRR Division Directors
NRR A/D's
Regional Administrators
IE Division Directors
TAS
EIS
TII Program Office Staff (10)
PHS
EPA
DOE
RI Division Directors
Public Affairs, RI
State Liaison, RI
TMIPO HQ r/f
TMI SITE r/f
CENTRAL FILE
NRC PDR
LOCAL PDR
TMI-2 Project
Section File

OFFICE	TMIPD <i>dlc</i>	TMIPD <i>RC</i>	TMIPD <i>RC</i>	TMIPD <i>RC</i>		
SURNAME	DJCollins/ <i>log</i>	CCowgill	<i>RC</i>	<i>RC</i>		
DATE	12/17/84	12/17/84	12/17/84	12/17/84		

ENCLOSURE

REACTOR BUILDING ACTIVITIES:

Four hydraulic jacks, positioned inside the reactor vessel, were used to raise the plenum assembly to 7½ inches above its normal seating surface. It was anticipated that the jacks would be used to raise the plenum to 9 inches, however structural interferences between the jacks and the plenum limited the lift to 7½ inches. The plenum was lifted without any indication of binding and no obstacles were noted which may interfere with plenum removal. The polar crane will be used to complete the plenum lift and to transfer the plenum to storage in the deep end of the refueling canal.

During the plenum jacking, long handled tools were used to detach the remaining fuel assemblies and fuel assembly end fittings which adhered to the underside of the plenum. A video inspection is currently in progress to confirm that the fuel assembly separation task was successful. The plenum will remain supported on jack mechanical followers until its scheduled removal in May 1985.

Construction of supporting systems for plenum removal and defueling is in progress. The portions of these systems located in the vicinity of the deep end of the refueling canal are controlling the plenum removal schedule. A six foot high dam will be installed to separate the deep end of the canal from the main refueling cavity floor and enable a sufficient depth of water to shield the plenum assembly during storage through defueling. A "dry" (airborne versus underwater) transfer of the plenum from the reactor vessel to the deep end of the pool is anticipated.

Prior to plenum transfer, a defueling water cleanup system will be installed to process water from the deep end of the canal, the fuel storage pool, and the reactor vessel including the modified internals indexing fixture. The installed fuel handling transfer mechanism from the deep end of the canal in the reactor building to the fuel storage pool in the fuel handling building is being modified to handle the specially designed canisters. The fuel handling bridges which span the fuel pools in the reactor building and the fuel handling building are being modified with shielded grappling mechanisms to permit "dry" fuel canister transfers through the partially flooded fuel pools.

AUXILIARY AND FUEL HANDLING BUILDING ACTIVITIES:

The makeup and purification demineralizer elution process has continued this week, as has the refurbishment decontamination of the "A" fuel pool. The highly contaminated primary coolant pump seal return filter was successfully removed from its housing and prepared for shipment to a burial site this week. The filter has been in place since prior to the 1979 accident.

EPA ENVIRONMENTAL SAMPLING RESULTS:

Included in Appendix 1 are results from EPA's environmental monitoring program in the area surrounding Three Mile Island. Periods covered include October 12 through November 9, 1984 for noble gas monitoring, and November 1 through 30, 1984 for gamma radiation and airborne particulate radioactivity.

PUBLIC MEETING:

The Advisory Panel for the Decontamination of Three Mile Island Unit 2 will meet on January 10, 1985, from 7:00 PM to 10:00 PM at the Holiday Inn, 23 South Second Street, Harrisburg, Pennsylvania. The meeting will be open to the public.

At this meeting the Panel will be provided with a cleanup status report by the licensee, General Public Utilities Nuclear Corporation. Topics to be covered by the licensee include the status of the reactor building polar crane, the results of a recent exploration of the reactor building basement by a remotely controlled vehicle, and the industry voluntary funding initiative. The Panel will also conduct an agenda planning session for the 1985 calendar year. The Panel will provide an opportunity for public comment on issues related to the decontamination of TMI-2.

Persons desiring the opportunity to speak before the Panel are asked to contact Mr. Thomas Smithgall at 717-291-1042 or write to him at 2122 Marietta Avenue, Lancaster, Pennsylvania 17603. Persons desiring to submit topics or questions for consideration by the Panel are asked to contact, in writing, Mayor Arthur Morris, 120 North Duke Street, Lancaster, Pennsylvania 17602.

APPENDIX 1

LIQUID EFFLUENT AND ENVIRONMENTAL 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 December 7, 1984 through December 11, 1984, liquid effluents contained no detectable radioactivity at the discharge point. Individual effluent sources originating within Unit 2 contained minute amounts of radioactivity. Calculations indicate that less than 2.2 E-5 (0.0000022) of a curie of gross beta activity was discharged.

Environmental Protection Agency

Lancaster Water Samples: 7 samples

Period Covered: November 25 - December 1, 1984

Results: Gamma Scan Negative for reactor related radioactivity

TMI Water Samples: 7 samples

Period Covered: November 24 - December 1, 1984

Results: Gamma Scan Negative for reactor related radioactivity

NRC Environmental Data

The NRC operated continuous outdoor air sampler at the TMI site did not detect any reactor related radioactivity. The air sampler parameters are listed below. The analysis results were less than the lower limit of detectability of the analytical instruments: 9.8 E-14 uCi/cc for I-131 and 9.8 E-14 uCi/cc for Cs-137.

<u>Sample</u>	<u>Period</u>	<u>Volume</u>
HP-448	December 8 - 12, 1984	357.5 m ³

EPA Environmental Data

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

<u>Location</u>	<u>October 12-26, 1984</u> (pCi/m ³)	<u>October 26 - November 9, 1984</u> (pCi/m ³)
Goldsboro	28	27
Middletown	29	25
York Haven	24	No Sample
TMI Observation Center	28	25

- 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: November 1-30, 1984

<u>Location</u>	<u>Direction</u> (degrees)	<u>Distance</u> (miles)	<u>Average</u> (millirem/hr)	<u>Integrated Dose</u> (millirem)
Harrisburg International Airport, Middletown	325	3.5	.008	5.5
Londonderry Township Bldg	040	2.6	.007	5.2
Newville	100	3.0	.010	6.9
Falmouth	130	2.9	.010	7.2
Falmouth	150	3.0	.008	5.6
York Haven	180	3.0	.009	6.2
Woodside	205	2.5	.007	5.0
Goldsboro	270	1.5	.011	7.8
Plainfield	305	2.7	.008	5.4
Royalton	068	3.5	.009	6.6
TMI Observation Center	095	0.5	.008	5.5
EPA TMI Field Station, Middletown	356	2.8	.006	4.5
Newberrytown	136	3.0	.009	6.3
Yocumtown	275	4.0	.007	5.1

- EPA results of airborne particulate samples collected at the same locations as the gamma radioactivity monitors (above) during the period November 1-30, 1984 were all less than 0.2 picocuries per cubic meter of air, the minimum detectable concentrations for EPA's analytical instruments.

APPENDIX 2

PLANT STATUS

Reactor Vessel Configuration: Reactor vessel open with modified internals indexing fixture installed

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

Available Core Cooling/Makeup Sources:
Standby pressure control (SPC) system
Reactor coolant bleed tank (RCBT) water transfer system
Mini decay heat removal (MDHR) system

Major Parameters as of 5:00 AM, December 14, 1984 (approximate values):

Reactor Coolant System:

Loop Temperatures:

	A	B
Cold Leg (1)	60°F	68°F
(2)	60°F	68°F

Reactor Core:

Average Incore Thermocouples:*	93°F
Maximum Incore Thermocouple:*	101°F
Decay Heat:	14.5 kilowatts

Reactor Building: Temperature:	64°F
Pressure:	-0.05 psig

Airborne Radionuclide Concentrations:

Tritium:	1.8 E-7 uCi/cc (sample 12/12/84)
Particulates:	7.0 E-11 uCi/cc (sample 12/11/84) predominately Cs-137

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