

May 21, 1984  
NRC/TMI-84-033

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  
May 15, 1984 - May 19, 1984

On May 18, 1984, two Unusual Events were declared due to inoperability status of both diesel generators. At 12:10 PM, the standby unit failed to operate properly while maintenance was performed on the other unit. The unit under maintenance was returned to service and the event terminated at 1:30 PM. The second Unusual Event, at 6:17 PM, was declared when smoke was found coming from a malfunctioning relay of the standby diesel generator. The unit which caused the 12:10 PM event was repaired. The malfunctioning relay was replaced, the unit tested and returned to service. The event was terminated at 9:45 PM. There was no interruption of the normal offsite power sources, no effect on plant conditions regarding reactor stability, nor was any radioactive material released during these events.

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 have shown no significant changes. 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 and tank removal. (For more details see appropriate paragraphs below.)

Significant items covered in the enclosure are:

- Two Unusual Events on May 18, 1984
- Reactor Building Activities
- Auxiliary and Fuel Handling Building Activities
- 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

TDR-5  
TMI

8406040110 840521  
PDR ADOCK 05000320  
R PDR

Lake H. Barrett  
Deputy Program Director  
TMI Program Office

Enclosure: As stated

INTERNAL DISTRIBUTION

EDO

OGC

Office Directors

Commissioner's Technical Assistants

NRR Division Directors

NRR A/D's

Regional Administrators

IE Division Directors

TAS

EIS

TMI Program Office Staff (15)

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>DR</i>	TMIPD	TMIPD	TMIPD			
BURNHAM ▶	DCollins/Imp. AFasano		PGrant <i>NT</i>	LBarrett			
DATE ▶	5/2/84	5/2/84	5/2/84	5/ /84			

## ENCLOSURE

### TWO UNUSUAL EVENTS DECLARED ON MAY 18, 1984:

On May 18, 1984, at 12:10 PM, GPU Nuclear declared an Unusual Event at TMI-2 when it was discovered that both "A" and "B" diesel generators were inoperable. The "B" diesel generator had been removed from service for electrical maintenance and had been out of service for approximately four hours. The licensee, as per Technical Specification requirements, attempted to test the "A" diesel generator to determine operability. However, after the "A" generator was brought to speed, the output breaker would not close, thus rendering the "A" diesel generator inoperable while the "B" diesel generator was still out of service and GPUN conditions for an Unusual Event were established. The "B" diesel generator was put back into service and declared operable by 1:30 PM following a 60 minute demonstration run. The cause of the "A" diesel generator breaker failure to close was found to be a defective relay in the synchronizing circuit.

A second Unusual Event was declared at 6:17 PM when technicians discovered smoke coming from a malfunctioning relay in the electrical system of the "B" diesel generator. The "B" diesel generator was declared inoperable, the synchronizing relay removed, and used to repair the "A" diesel generator from the "B" diesel generator. The "A" diesel generator was then tested and returned to service. The relay removed from the "B" diesel generator was replaced from warehouse supplies. The malfunctioning relay which caused the burning in the "B" diesel generator, not required to operate the diesel generator, serves as a shutdown function. This relay, as permitted by plant procedures, was bypassed. The "B" diesel generator was tested and returned to service. The Unusual Event was terminated at 9:45 PM. Both diesel generators were operable at 10:30 PM.

Normal electrical power from offsite was in use and was not interrupted. There was no effect on the reactor system and no effect on radioactive material control. No releases of radioactive material were affected. In the event of loss of the two offsite power sources and both of the diesel generators, batteries provide power for instrumentation to monitor the status of the reactor system. The reactor system would remain stable because at present cooling is provided by natural heat loss to the reactor building.

### REACTOR BUILDING ACTIVITIES:

Reactor building entries are continuing at the rate of four per week in preparation for reactor vessel head lift which is scheduled for August 1984. The most man hour intensive task in the building at the present time involves the modification of the auxiliary fuel handling bridge (AFHB) for use as a defueling work platform. The mast below the AFHB was removed this week. Also, the polar crane power bus bars were partially removed from the polar crane. These conductors were damaged by heat during the 1979 accident and have not been used. The polar crane has been powered through an alternate power cable.

### AUXILIARY AND FUEL HANDLING BUILDING ACTIVITIES:

Decontamination activities continued in the Auxiliary and Fuel Handling Buildings this week. Steady progress continues on installation of the Reactor Building Chiller System. Steady progress is being made on the equipment installation for the purification demineralizer elution project. Preparations for removing tanks from the "A" fuel pool continued.

WASTE MANAGEMENT ACTIVITIES:

The EPICOR II system remains shutdown.

The submerged demineralizer system (SDS) began processing batch S-090 (RCS letdown batch 23) on May 17, 1984. Letdown batch 23 was 44,000 gallons.

PUBLIC MEETINGS:

1. On May 22, 1984, Lake Barrett will meet with the Concerned Mothers of Middletown at the NRC's office located at 100 Brown Street, Middletown to discuss various issues related to TMI.
2. On May 30, 1984, the Advisory Panel for the Decontamination of Three Mile Island, Unit 2, will meet with the Nuclear Regulatory Commission at 11:00 AM in the Commission's offices at 1717 H Street, NW, Washington, DC. The public may observe the meeting.
3. On June 14, 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. At this meeting the Advisory Panel will receive a presentation from GPU Nuclear Corporation on the planned reactor vessel head lift. The licensee will also provide the current funding plan for the cleanup. Alternative methods of funding and completing the cleanup will also be presented. Persons that have questions pertaining to the TMI-2 cleanup that would like to have them considered or addressed by the Advisory Panel are asked to contact, in writing, Mayor Arthur Morris, 120 Duke Street, Lancaster, PA 17602. Persons desiring the opportunity to speak before the Advisory Panel are asked to contact Mr. Thomas Smithgall at 2122 Marietta Avenue, Lancaster, PA 17603 (telephone 717-291-1041).

## 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 May 11 through May 17, 1984, the effluents contained no detectable radioactivity at the discharge point. Individual effluent sources originating within Unit 2 contained minute amounts of radioactivity. Calculations indicated that the discharges were less than  $1.5 \text{ E-6}$  ( $0.0000015$ ) of a curie of Cs-137 and less than  $1.9 \text{ E-6}$  ( $0.0000019$ ) of a curie of gross beta activity.

#### Environmental Protection Agency

Lancaster Water Samples:	6 samples
Period Covered:	April 29, May 1-5, 1984
Results:	Gamma Scan Negative
TMI Water Samples:	7 samples
Period Covered:	April 28 - May 5, 1984
Results:	Gamma Scan Negative

## APPENDIX 2

### ENVIRONMENTAL DATA

#### NRC ENVIRONMENTAL DATA

A continuous outdoor air sampler operated by the NRC at the TMI site did not detect any reactor related radioactivity. The air sampler results are listed below.

<u>Sample</u>	<u>Period</u>	<u>I-131</u> <u>(uCi/cc)</u>	<u>Cs-137</u> <u>(uCi/cc)</u>
HP-419	May 10, 1984 - May 17, 1984	<1.1 E-13	<1.1 E-13

### APPENDIX 3

#### RADIOACTIVE MATERIALS/RADWASTE SHIPMENT DATA

- On May 16, 1984, a combined Unit 1 and Unit 2 contaminated laundry shipment was sent to Interstate Nuclear Services at New Kensington, Pennsylvania.
- On May 14, 1984, a combined Unit 1 and Unit 2 shipment of 14 steel barrels (Unit 1 [10] and Unit 2 [4]), containing compacted radioactive waste, in a Chem Nuclear Systems, Inc. (CNSI) 14/190 N shipping cask was sent to U.S. Ecology burial site at Hanford, Washington.

## APPENDIX 4

### WATER PROCESSING DATA

#### Submerged Demineralizer System (SDS)

SDS began processing batch 90 from the "C" reactor coolant bleed tank on May 17, 1984. This batch contains 44,000 gallons from reactor coolant letdown batch R-023. The performance parameters for SDS batch 86 (33,164 gallons) are indicated below.

#### SDS Performance Parameters May 1, 1984 to May 4, 1984

<u>Radionuclide</u>	<u>Average Influent (uc/ml)</u>	<u>Average Effluent (uc/ml)</u>	<u>Percent Removed (%)</u>
Cesium 137	1.03	5.9 E-4	99.9
Strontium 90	5.54	5.99 E-3	99.9

## 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: SPC

Major Parameters as of 5:00 AM, May 18, 1984 (approximate values):

Average Incore Thermocouples\*: 88°F

Maximum Incore Thermocouple\*: 136°F

RCS Loop Temperatures:

	A	B
Hot Leg	72°F	80°F
Cold Leg (1)	70°F	72°F
(2)	70°F	72°F

Reactor Core Decay Heat: 17 Kilowatts

RCS Pressure: 60 psig

Reactor Building: Temperature: 65°F

Pressure: -0.15 psig

Airborne Radionuclide Concentrations:

4.8 E-8 uCi/cc H<sup>3</sup> (Tritium) (LLD)  
(sample taken 5/14/84)

4.4 E-10 uCi/cc particulates  
(predominately Cs-137)  
(sample taken 5/14/84)

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