August 23, 1982  
NRC/TMI-82-052

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

Enclosed is the status report for the period of August 15 - 21, 1982. Major items included in this report are:

- Liquid Effluents
- EPA and NRC Environmental Data
- Radioactive Material and Radwaste Shipments
- Submerged Demineralizer System Status
- EPICOR II
- Reactor Building Entries
- EPICOR II Prefilter Shipment
- Public Meetings

Enclosure: As stated
cc w/encl:
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
Projects Br. #2 Chief, DPRP, RI
RI Division Directors
Public Affairs, RI
State Liaison, RI
NRC TMI PROGRAM OFFICE WEEKLY STATUS REPORT
August 15, 1982 - August 21, 1982

Plant Status

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

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

RCS Pressure Control Mode: RCS is vented to the reactor building.

Major Parameters (as of 0600, August 20, 1982) (approximate values)
Average Incore Thermocouples: 125°F
Maximum Incore Thermocouple: 143°F

RCS Loop Temperatures:

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hot Leg</td>
<td>107°F</td>
<td>106°F</td>
</tr>
<tr>
<td>Cold Leg (1)</td>
<td>85°F</td>
<td>84°F</td>
</tr>
<tr>
<td>(2)</td>
<td>87°F</td>
<td>85°F</td>
</tr>
</tbody>
</table>

Pressure: The reactor coolant system is vented to the reactor building.

Reactor Building:
Temperature: 85°F
Pressure: -0.2 psig

Airborne Radionuclide Concentrations:
4.7 E-8 uCi/cc H\(^3\)
(same sample taken 8/10/82)
6.2 E-6 uCi/cc Kr\(^{85}\)
(same sample taken 8/10/82)
7.9 E-9 uCi/cc particulates
(same sample taken 8/13/82)

1. Effluent and Environmental (Radiological) Information

Liquid effluents from the TMI site released to the Susquehanna River after processing, were made within the regulatory limits and in accordance with NRC requirements and City of Lancaster Agreement dated February 27, 1980.

During the period August 13, 1982, through August 19, 1982, the effluents contained no detectable radioactivity at the discharge point and individual effluent sources, which originated within Unit 2, contained no detectable radioactivity.
2. **Environmental Protection Agency (EPA) Environmental Data**

-- The EPA Middletown Office has not received the environmental Kr-85 analytical results for the samples which were taken July 31, 1982, through August 19, 1982, 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 August 11, 1982, through August 19, 1982.

3. **NRC Environmental Data**

Results from NRC monitoring of the environment around the TMI site were as follows:

-- The following are the NRC air sample analytical results for the onsite continuous air sampler:

<table>
<thead>
<tr>
<th>Sample</th>
<th>Period</th>
<th>I-131 (uCi/cc)</th>
<th>Cs-137 (uCi/cc)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HP-332</td>
<td>August 11, 1982 - August 18, 1982</td>
<td>&lt;6.5 E-14</td>
<td>&lt;6.5 E-14</td>
</tr>
</tbody>
</table>

4. **Licensee Radioactive Material and Radwaste Shipments**

-- On August 17, 1982, an EPICOR II prefilter (PF-3) was shipped to the U.S. Department of Energy facility at Battelle Laboratory in Columbus, Ohio.

-- On August 18, 1982, 90 drums of Units 1 and 2 contaminated laundry were shipped to Interstate Uniform Services, Inc., New Kensington, Pennsylvania.

**Major Activities**

1. **Submerged Demineralizer System (SDS).** Replacement of the feed pump has been completed. SDS processing of batch 33 commenced August 19, 1982 and is scheduled for completion August 26, 1982. Batch 33 consists of approximately 40,000 gallons of reactor building sump water.

2. **EPICOR II.** The EPICOR system is presently shutdown but it is scheduled to be activated on August 22, 1982, when it will process batch 33 effluent. In preparation for EPICOR activation, liner F37 was removed from the system and replaced with liner F38.

3. **Reactor Building Entries.** Two reactor building entries were conducted during the past week (Wednesday, August 18; and Friday, August 20, 1982). Major activities during the entries included: water sample extraction from the reactor vessel, continued remote decontamination of the 282 ft.
elevation surfaces, polar crane damage assessment, and modifications to the personnel lift device (spider shaft) to extend the operating range of the lift from the polar crane to the 305 ft. elevation.

The licensee delayed the operation to disconnect all control rod drive leadscrews from the control rods from last week to this week. The delay was to review personnel safety precautions when gas samples taken from the control rod drive assemblies indicated that certain assemblies contained hydrogen and oxygen gas in combustible concentrations. This review concluded that proper precautions are in effect to insure personnel safety and system integrity. Three to four reactor building entries have been dedicated to the uncoupling operation, which is scheduled to begin August 23, 1982.

5. **EPICOR II Prefilter Shipment.** On August 17, 1982, the first of 49 EPICOR II Prefilters (PF-3) was shipped from THI to the Battelle Columbus Laboratories (BCL) in West Jefferson, Ohio. This 50 cubic foot ion exchange vessel, which was used to process accident generated water from the Unit 2 auxiliary building in 1979, contained approximately 1,800 curies of radioactive material and was shipped in a special type B cask (designed to withstand transportation accidents). The Department of Energy (DOE) took possession of this waste material at THI and will conduct research and development at BCL. The NRC inspected the waste shipping package to ensure conformance with applicable regulations. The waste shipment arrived safely at BCL on August 19, 1982.

GPU is preparing waste liner PF-1 for shipment to the Idaho National Engineering Laboratory (INEL) on August 24, 1982. The licensee is currently monitoring hydrogen gas generation rates to demonstrate that the liner will have non-combustible gas mixtures during the waste handling and transport period. The initial gas sample on PF-1 indicated 3.3% hydrogen, non-detectable oxygen, and 97% nitrogen.
Past Meetings

On Thursday, August 19, 1982, Lake Barrett met with the Concerned Mothers of Middletown to view and discuss the TMI Unit 2 Quick Look I, II, and III video tapes. They expressed their opinion that Unit 1 should not be restarted prior to completion of Unit 2 cleanup.

Future Meetings

On Wednesday, September 1, 1982, Lake Barrett will meet with the Concerned Mothers of Middletown to discuss the Atomic Safety Licensing Board's decision on the examination cheating as well as Unit 2 cleanup issues.