January 3, 1983
NRC/TMI-83-01

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 December 19, 1982, through January 3, 1983*. 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 Status
--- Reactor Building Entries
--- SDS Liner Shipment Preparations
--- EPICOR II Prefilter Shipment
--- Public Meetings

*Due to the Christmas holiday, no report was issued on December 27, 1982.

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
RI Division Directors
Public Affairs, RI
State Liaison, RI
NRC TMI PROGRAM OFFICE WEEKLY STATUS REPORT

December 19, 1982 - January 1, 1983

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: Standby Pressure Control System.

Major Parameters (as of 5:00 AM, January 1, 1983) (approximate values)

Average Incore Thermocouples*: 87°F
Maximum Incore Thermocouple*: 130°F

RCS Loop Temperatures:

<table>
<thead>
<tr>
<th>Hot Leg</th>
<th>Cold Leg (1)</th>
<th>Cold Leg (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A 83°F</td>
<td>78°F</td>
<td>80°F</td>
</tr>
<tr>
<td>B 86°F</td>
<td>79°F</td>
<td>78°F</td>
</tr>
</tbody>
</table>

Pressure: 70 psig

Reactor Building: Temperature: 72°F
Pressure: -0.12 psig

Airborne Radionuclide Concentrations:

8.3 E-7 uCi/cc H^3
(sample taken 12/29/82)

4.5 E-9 uCi/cc particulates
(sample taken 12/30/82)

1. Effluent and Environmental (Radiological) Information

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

During the period December 17, 1982, through December 30, 1982, the effluents contained no detectable radioactivity at the discharge point although individual effluent sources which originated within Unit 2 contained minute amounts of radioactivity. Calculations indicate that less than four millionths (0.000004) of a curie of cesium was discharged.

*Uncertainties exist as to the exact location and accuracy of these readings.
2. **Environmental Protection Agency (EPA) Environmental Data**

- The EPA measures Kr-35 concentrations at several environmental monitoring stations and reported the following results:

<table>
<thead>
<tr>
<th>Location</th>
<th>Nov. 24, 1982 - Dec. 10, 1982 (pCi/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goldsboro</td>
<td>23</td>
</tr>
<tr>
<td>Middletown</td>
<td>25</td>
</tr>
<tr>
<td>Yorkhaven</td>
<td>23</td>
</tr>
<tr>
<td>TMI Observation Center</td>
<td>27</td>
</tr>
</tbody>
</table>

- The EPA Middletown Office has not received the environmental Kr-85 results for the samples which were taken subsequent to December 10, 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 periods from December 15, 1982 through December 23, 1982 and December 24, 1982 through December 30, 1982.

3. **NRC Environmental Data**

Results are from NRC monitoring of the environment around the TMI site.

- 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-349</td>
<td>December 16 - December 23, 1982</td>
<td>&lt;7.6 E-14</td>
<td>&lt;7.6 E-14</td>
</tr>
<tr>
<td>HP-350</td>
<td>December 23 - December 29, 1982</td>
<td>&lt;8.4 E-14</td>
<td>&lt;8.4 E-14</td>
</tr>
</tbody>
</table>

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

- On December 20, 1982, 20 boxes of Unit I noncompactable trash were shipped to Chem-Nuclear Systems, Inc., Barnwell, S.C.

- On December 20, 1982, 66 drums and 1 box of Unit I LSA compacted and noncompacted trash were shipped to Chem-Nuclear Systems, Inc., Barnwell, S.C.

- On December 20, 1982, 85 drums of contaminated laundry from Units I and II were shipped to Interstate Uniform Services, New Kensington, PA.
On December 27, 1982, 83 drums of contaminated laundry from Units I and II were shipped to Interstate Uniform Services, New Kensington, PA.

On December 29, 1982, one Unit II EPICOR II prefiter (PF-49) was shipped to the Idaho National Engineering Laboratory, Scottville, Idaho.

On December 29, 1982, one box containing five Unit I liquid samples was mailed to Nuclear Water and Waste Technology, San Jose, CA.

On December 31, 1982, SDS liner No. D-10012 was shipped to Battelle Pacific Northwest Laboratories, Richland, Washington.

Major Activities

1. Submerged Demineralizer System (SDS). Processing of Batch 6 of reactor coolant system water (SDS batches 39 and 40), which had been temporarily halted on December 18 for component repair and maintenance, was resumed on December 18 and completed on December 27, 1982. Since then, another "feed-and-bleed" process has been performed and 40,000 gallons of water from the reactor building sump were staged in preparation for SDS processing.

2. EPICOR II. The EPICOR II system is presently in a shutdown condition.

3. Reactor Building Entries. A total of eighteen reactor building entries were made during the month of December, 1982. Polar crane refurbishment and reactor building decontamination were the most man-hour intensive tasks in the reactor building during the December entries. The primary system was refilled and repressurized following the closed circuit television inspection of the core. Primary system repressurization was necessary to decrease the likelihood of secondary to primary leakage during chemical conditioning of the steam generators. The secondary side of the "A" steam generator was filled on December 30, 1982, as the first step in the chemical conditioning process which will establish recommended long term lay-up chemistry in the steam generators. The process involves recirculation of chemically treated water through the secondary system prior to draining the steam generators for long term lay-up.

Reactors Building entries are scheduled to continue at a rate of four to five per week during the month of January.

4. SDS Liner Shipment Preparations. The vacuum recombiner demonstration test (described in the December 20, 1982, Weekly Status Report) was completed on SDS liner D10012. This test demonstrated that the catalytic
recombiner system would maintain non-combustible gas mixtures (<0.3% hydrogen gas) and vacuum conditions (<5.0 psia) during the 14-day monitoring period. Based on this supporting data, the first in a series of approximately ten scheduled recombiner-loaded SDS liner shipments was made by the Department of Energy (DOE) to Richland, Washington on December 31, 1982. The shipment is scheduled to arrive on January 3, 1983. The DOE will perform research and development type testing on glass vitrification of this spent zeolite waste shipment. The licensee is preparing for the next recombiner-loaded SDS liner, which is scheduled for shipment in late January, 1983.

5. EPICOR II Prefilter Shipment. EPICOR II prefILTER liner PF-49 was shipped from TMI to the Idaho National Engineering Laboratory (INEL) on December 29, 1982. The shipment of this nitrogen-inerted liner brings to a total of 16 (in a group of 49) EPICOR prefilters that were shipped to INEL during 1982. The licensee plans to have the remaining 33 prefilters shipped before September, 1983. One prefILTER is scheduled for shipment next week.
Future Meetings

1. On January 11, 1983, Lake H. Barrett will meet with the Concerned Mothers of Middletown to discuss TMI related issues.

2. On January 17, 1983, Lake H. Barrett will meet with Friends and Family of TMI to discuss various TMI related issues.

3. During the ASME week activities January 17-20, 1983, in Sarasota, Florida, Ronald R. Bellamy will speak on TMI related issues.

4. On January 19, 1983, Anthony N. Fasano will speak on the reactor vessel "Quick Look" results at an American Nuclear Society Meeting at Pennsylvania State University, Middletown campus.

5. On January 24, 1983, Lake H. Barrett will address the Harrisburg Rotary Club on various TMI issues.

6. On February 2, 1983, the Advisory Panel for the decontamination of TMI Unit 2 will hold a meeting from 7:00 to 10:00 p.m. at the Holiday Inn, 23 South Second Street, Harrisburg, Pennsylvania.