May 25, 1984
NRC/THI-84-034

MEMORANDUM FOR: Harold R. Denton, Director
Office of Nuclear Reactor Regulation
Bernard J. Snyder, Program Director
THI Program Office

FROM: Lake H. Barrett, Deputy Program Director
THI Program Office

SUBJECT: NRC THI PROGRAM OFFICE WEEKLY STATUS REPORT FOR
May 19, 1984 - May 25, 1984

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:

- Reactor Building Activities
- Auxiliary and Fuel Handling Building Activities
- Makeup and Purification Demineralizer Resin Disposal Status
- TMI Occupational Dose
- Waste Management
- 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

Enclosure: As stated

ORIGINAL SIGNED BY:
Lake H. Barrett
Deputy Program Director
THI Program Office
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ENCLOSURE

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. Polar crane preventive maintenance is scheduled to be performed next week.

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. One fifteen thousand gallon tank has been removed from the "A" fuel pool and is being prepared for shipment offsite. Preparations for removing the remaining tanks continued.

MAKEUP AND PURIFICATION DEMINERALIZER RESIN DISPOSAL STATUS:

Preparations continued this week for the removal of radioactive materials from the radioactive resins in the makeup and purification demineralizers. Phase I is removal of cesium by elution. In progress are the installation of hardware for the cesium removal process, preparation of software for operation of the equipment, and the preparation of the safety evaluation of the process. Commencement of the cesium elution process is scheduled in mid-July 1984. The licensee has proposed to suspend the project after the cesium elution (Phase I) leaving the lower activity resins in the demineralizer vessels until later in the plant cleanup schedule and thus directing financial resources toward the more important defueling activities. The NRC staff has approved this request for deferring the resin sluicing and shipping (Phases II and III) pending review of the licensee's Safety Evaluation Report addressing the issues associated with cesium elution and resin storage in the demineralizer vessel.

TMI OCCUPATIONAL DOSE:

Licensee TLD (Thermoluminescent Dosimeter) records indicate the following station occupational radiation doses for the period April 1, 1984 through April 30, 1984.

<table>
<thead>
<tr>
<th>Category in Rem</th>
<th>Number of Station Personnel</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Measurable Dose</td>
<td>1,147</td>
</tr>
<tr>
<td>Dose Less Than 0.1</td>
<td>285</td>
</tr>
<tr>
<td>0.1 to 0.25</td>
<td>83</td>
</tr>
<tr>
<td>0.25 to 0.5</td>
<td>33</td>
</tr>
<tr>
<td>0.5 to 0.75</td>
<td>13</td>
</tr>
<tr>
<td>0.75 to 1</td>
<td>2</td>
</tr>
<tr>
<td>1 to 2</td>
<td>0</td>
</tr>
<tr>
<td>2 to 3</td>
<td>0</td>
</tr>
<tr>
<td>Above 3</td>
<td>0</td>
</tr>
<tr>
<td>Period</td>
<td>Man-Rem</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>Unit 2 (April)</td>
<td>38.1</td>
</tr>
<tr>
<td>Unit 2 (Year-to-Date)</td>
<td>135.7</td>
</tr>
<tr>
<td>Units 1 &amp; 2 TLD (April)</td>
<td>43.965</td>
</tr>
<tr>
<td>Units 1 &amp; 2 TLD (Year-to-Date)*</td>
<td>167.315</td>
</tr>
</tbody>
</table>

*Includes correction made to previously reported figure.

**WASTE MANAGEMENT ACTIVITIES:**

The submerged demineralizer system (SDS) completed processing batch S-090 on May 22, 1984. (See Appendix 4)

The EPICOR II system remains shutdown.

**PUBLIC MEETINGS:**

**Past Meeting:**

On May 22, 1984, Lake Barrett met with the Concerned Mothers of Middletown. They expressed their concern that Unit 1 not be restarted until the cleanup of Unit 2 is complete.

**Future Meetings:**

1. 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.

2. 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).

3. On June 19, 1984, Dr. Bernard Snyder and 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.
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 18 through May 24, 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 E-7 (0.00000015) of a curie of gross beta activity.

Environmental Protection Agency

Lancaster Water Samples: 7 samples
   Period Covered: May 6-12, 1984
   Results: Gamma Scan Negative

TMI Water Samples: 7 samples
   Period Covered: May 5-12, 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.

<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-420</td>
<td>May 17 - 23, 1984</td>
<td>&lt;1.3 E-14</td>
<td>&lt;1.3 E-14</td>
</tr>
</tbody>
</table>
APPENDIX 3

RADIOACTIVE MATERIALS/RADWASTE SHIPMENT DATA

-- On May 21, 1984, a Unit 1 shipment consisting of dewatered spent resins in a high integrity container, was sent to the Chem Nuclear Systems, Inc. waste disposal facility at Barnwell, South Carolina.

-- On May 22, 1984, a Unit 1 shipment consisting of two solidified evaporator bottoms in steel liners, was sent to the Chem Nuclear Systems, Inc. waste disposal facility at Barnwell, South Carolina.

-- On May 23, 1984, a combined Unit 1 and Unit 2 radioactively contaminated laundry shipment was sent to Interstate Nuclear Services at New Kensington, Pennsylvania.

-- On May 23, 1984, a Unit 1 shipment consisting of two solidified evaporator bottoms in steel liners, was sent to the Chem Nuclear Systems, Inc. waste disposal facility at Barnwell, South Carolina.
**APPENDIX 4**

**WATER PROCESSING DATA**

Submerged Demineralizer System (SDS)

**SDS Performance Parameters Batch 90**
May 17-22, 1984

<table>
<thead>
<tr>
<th>Radionuclide</th>
<th>Average Influent (uc/ml)</th>
<th>Average Effluent (uc/ml)</th>
<th>Percent Removed (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cesium 137</td>
<td>8.5 E-1</td>
<td>1.5 E-4</td>
<td>99.9</td>
</tr>
<tr>
<td>Strontium 90</td>
<td>3.8 E-0</td>
<td>3.8 E-3</td>
<td>99.9</td>
</tr>
</tbody>
</table>
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: Standby Pressure Control (SPC) System

Major Parameters as of 5:00 AM, May 24, 1984 (approximate values):

Average Incore Thermocouples*: 88°F
Maximum Incore Thermocouple*: 116°F

RCS Loop Temperatures:

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hot Leg</td>
<td>73°F</td>
<td>84°F</td>
</tr>
<tr>
<td>Cold Leg (1)</td>
<td>68°F</td>
<td>72°F</td>
</tr>
<tr>
<td>(2)</td>
<td>68°F</td>
<td>72°F</td>
</tr>
</tbody>
</table>

Reactor Core Decay Heat: 17 Kilowatts

RCS Pressure: 59 psig

Reactor Building: Temperature: 69°F

Pressure: -0.15 psig

Airborne Radionuclide Concentrations:

2 E-8 uCi/cc H³ (Tritium) (sample taken 5/21/84)

9 E-10 uCi/cc particulates (predominately Cs-137) (sample taken 5/21/84)

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