



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20545

July 7, 1980  
NRC/TMI-80-104

MEMORANDUM FOR: H. R. Denton, Director,  
Office of Nuclear Reactor Regulation  
B. J. Snyder, Program Director,  
TMI Program Office

FROM: J. T. Collins, Deputy Program Director,  
TMI Program Office

SUBJECT: NRC TMI PROGRAM OFFICE WEEKLY STATUS REPORT

Enclosed is the status report for the week of June 29-July 5, 1980.

*John T. Collins*  
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Deputy Program Director  
TMI Program Office

Enclosure: As stated

cc: EDO  
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# NRC TMI PROGRAM OFFICE WEEKLY STATUS REPORT

Week of: June 29-July 5, 1980

## Plant Status

Core Cooling Mode: Cyclic natural circulation in the "A" reactor coolant system (RCS) loop via the "A" once through steam generator (OTSG), steaming to the main condenser, and RCS loop-A and B cyclic natural circulation to reactor building ambient.

Available Core Cooling Modes: OTSG "B" to the main condenser; long term cooling "B" (OTSG-B); decay heat removal.

RCS Pressure Control Mode: Standby Pressure Control (SPC) System.

Backup Pressure Control Mode: Makeup system in conjunction with letdown flow (Emergency use only due to suspected leaks in the seal injection system).

Major Parameters (As of 0500, July 3, 1980) (approximate values)

Average Incore Thermocouples: 140°F

Maximum Incore Thermocouple: 195°F

RCS Loop Temperatures:

	A	B
Hot Leg	147°F	150°F
Cold Leg (1)	105°F	82°F
(2)	124°F	84°F

RCS Pressure: 80 psig (Heise)  
93 psig (DVM controlling)

Pressurizer Temperature: 92°F

Reactor Building: Temperature: 92°F  
Water level: Elevation 290.3 ft. (7.8 ft. from floor)  
via penetration 401 manometer  
Pressure: -0.5 to -0.1" Hg (Heise, controlling  
with purge in progress)  
(As of 0700, July 7, 1980) Curies released (Kr-85):  
27,814 by effluent monitor calculations  
Curies remaining (Kr-85): 0.37 uCi/cc by building  
sample (total 21,070)  
Maximum purge flow rate: 540 cfm  
Average stack flow rate: 100,000 cfm

## Environmental & Effluent Information

1. Liquid effluents from TMI-1 released to the Susquehanna River, after processing, were within the limits specified in Technical Specifications.

2. No liquid effluents were discharged from TMI-2.
3. Results from EPA monitoring of the environment around the TMI site were:
  - EPA environmental stations registered background levels for air particulate and water samples. Gamma scan results for all sampling locations were negative.
  - Kr-85 was measured at the TMI Observation Center from noon on July 1 to noon on July 2, 1980, showed a concentration of 3,100 pCi/m<sup>3</sup>. This significant increase in Kr-85 concentration was expected during the reactor building purge operation. This concentration corresponds to 0.014 mrem and 0.00012 mrem dose to the skin and to the whole body, respectively. Other sampling locations including Bainbridge, Goldsboro, Hill Island and Middletown showed no Kr-85 concentrations above background.
4. NRC Environmental Data
  - The West Screen House continuous air sample (HP-222) for the sampling period June 25 through July 2, 1980, has been delivered to the EPA Coordination Center for analysis.
  - The licensee provided the following monthly inventory of Kr-85 releases for 1980: January-80 Ci, February-80 Ci, March-63 Ci, April-69 Ci, May-85 Ci, June (to midnight of June 25) 58 Ci.
  - On Saturday, June 28, 1980, the purge of the reactor building was started. The total calculated amount of Kr-85 released as of 7:00 a.m., July 7, 1980, is 27,814 Curies. Remaining concentration in the containment building based on the last building air sample was 21,070 Curies.
  - Results of the environmental TLD measurements for the period April 30 to May 29, 1980, indicate no gamma levels above natural background. Fifty-eight TLD's registered doses ranging from 0.11 mR/day to 0.20 mR/day. Average dose was 0.16 mR/day. These dose rates are consistent with natural background radiation in the TMI area.
  - On July 2, 1980, the fifty-eight NRC environmental TLD's were collected and taken to Region I, King of Prussia, for readout and evaluation.
  - The cumulative doses calculated to a hypothetical maximally exposed individual in each of the 16 sectors (22.5° each) were reported by Met-Ed. The following is a list of the cumulative dose through midnight of July 1, 1980.

## Calculated Dose

<u>Sector</u>	<u>Skin</u>	<u>Whole Body</u>
1	0.41	5.1 E-3
2	0.83	9.8 E-3
3	0.27	4.3 E-3
4	0.071	9.0 E-4
5	0.18	1.7 E-3
6	1.67	1.5 E-2
7	1.08	8.7 E-3
8	0.26	2.8 E-3
9	0.0054	6.3 E-5
10	0.0076	4.9 E-5
11	0.0	0.0
12	0.0021	6.4 E-6
13	0.0	0.0
14	0.027	5.1 E-4
15	0.081	1.1 E-3
16	0.084	9.3 E-4

These doses were well below the dose limits required by the Commission's order.

5. Radioactive Material and Radwaste Shipments Offsite were as follows:

- On Monday, June 30, 1980, a Unit 2, 40 ml reactor coolant sample was shipped to Babcock and Wilcox, Lynchburg, Virginia, for analysis.
- On Monday, June 30, 1980, a Unit 2 shipment of 18 wooden boxes of non-compacted (LSA) trash was sent to Nuclear Engineering Company (NECO), Richland, Washington.
- On Thursday, July 3, 1980, a Unit 2 CC-T-2 (EPICOR II) sample was sent to Science Applications Incorporated (SAI), Rockville, Maryland.

6. EPICOR II Processing Status: (Auxiliary building approximate quantities)

Amount processed this week: 37,000 gallons  
 Amount processed to date: 384,000 gallons  
 Amount to be processed: 90,000 gallons

7. The transfer of waste water from the lower fuel pool storage tank to the "C" reactor coolant bleed tank has been completed. The "C" tank was processed, and the remaining water from the "C" tank was transferred to the "B" reactor coolant bleed tank. Also, the upper fuel pool storage tank is being routed to the "B" reactor

coolant bleed tank. A sample is being taken on the miscellaneous waste holdup tank. Due to the waste water transfer processes and the holiday weekend, EPICOR II is presently down and expected to restart on July 9, 1980.

8. Long-term spent resin storage facility. Fifty-four of the sixty spent resin storage cells in the "A" long term waste storage module hold spent resin liners. The "B" module is scheduled to be completed by July 30, 1980. Also, the licensee began stacking 4X4 liners on June 5, 1980, two per storage cell. At present, the licensee has stacked three 4X4 liners. Additionally, six more storage cells have become available due to the shipment of Unit 1 liners off site. The interim staging has four empty cells. Based on current liner generation rate and the above storage factors, it does not appear that EPICOR II will have to be halted because of the lack of storage space.

#### Major Activities This Week

1. Reactor Building Purge. Purging of the reactor building atmosphere utilizing the modified hydrogen control system continued at various system flow rates based on meteorological conditions. Shutdown other than those due to weather conditions occurred to perform filter changeouts on instrumentation sample systems and for minor corrective maintenance on various system components.

Periodic monitor equipment filter grab samples were analyzed and indicated particulate activity release within regulatory limits. This was confirmed by NRC Region I Mobile Laboratory.

An additional monitor, consisting of a 3X3 inch sodium iodide crystal detector installed in the plant stack sample line, is providing signals to a multi channel analyzer where Kr-85 gamma signals are distinguished from other potential isotopes, in particular Cesium 137. This new monitor is being used as backup to the plant effluent monitor (HP-R-219A) with associated filter sample analyses. The sample analysis requires the removal of HP-R-219A particulate filter, once per day, for spectral analysis to identify any particulate activity indication. All releases were made in accordance with the Commission Order, the Technical Specifications and the licensee's procedures.

2. Reactor Building Entry. On Tuesday, July 1, 1980, one hole was drilled in the inner door of personnel airlock no. 2. Utilizing this hole (approximately 1 inch) as access to the  $\Delta P$  safety interlock solenoid pin, the licensee determined that the pin was stuck in the interlock function position preventing the roller mechanism from being operated. The pin was subsequently restored to the deenergized state.

On Thursday, July 3, 1980, the handwheel was successfully turned beyond the interlock position indicating roller mechanism disengagement. During these events the inner door was held closed by restraints.

Plans for opening the inner door and containment entry were not finalized as yet in light of reactor building purge evolutions.

3. Mini-Decay Heat (MDH) System. During this week the staff approved a technical document report on expected reactor core boron concentration with the initial startup of the MDH system. The analysis results indicated that local boron concentration in the core will not go below the Technical Specification (proposed) limit of 3,000 ppm when MDH is started on the reactor coolant system (RCS).

Several system modification work items are still in progress. Operation is expected by the end of July 1980.

The staff approved the operating and emergency procedure for opening DH-VI/171. These valves are in parallel and isolate the RCS from the decay heat systems. A schedule date for opening these valves was not finalized by the licensee.

### Meetings attended with Public Officials and Interested Groups

During the week of June 30, 1980, through July 5, 1980, J. Collins, E. P. Matthauer (EPA), and representatives from the Department of Environmental Resources held a daily news conference to brief the media on current activities of purging the reactor building.

### Future Meetings

The Atomic Safety and Licensing Board has scheduled a prehearing conference on July 7, 1980, in Harrisburg, Pennsylvania, on proposed technical specification changes to the license for the damaged Unit 2.