



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

December 8, 1980
NRC/TMI-80-150

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

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

SUBJECT: NRC TMI PROGRAM OFFICE WEEKLY STATUS REPORT

Enclosed is the status report for the period of November 23 - December 6, 1980.
As discussed in the last report, this report covers a two week period.

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

Enclosure: As stated

cc: EDO
OGC
Office Directors
Commissioner's Technical Assistants
NRR Division Directors
NRR A/D's
Regional Directors
IE Division Directors
XOOS
XOMA
TMI Program Office Staff (15)
HEW
EPA
RO&NS Branch Chief, Region I
FF&MS Branch Chief, Region I
Public Affairs, Region I
T. Elsasser

NRC TMI PROGRAM OFFICE WEEKLY STATUS REPORT

Week of November 23 - December 6, 1980

Plant Status

Core Cooling Mode: Reactor coolant System (RCS) heat transfer to reactor building ambient (air and sump water)

Available Core Cooling Modes: OTSG "A" or "B" steaming 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: One of two decay heat removal pumps to supply pressure in conjunction with variable recirculation back to the borated water storage tank (BWST) to provide control of pressure.

Major Parameters (As of 0500, December 5, 1980) (approximate values)

Average Incore Thermocouples: 134°F

Maximum Incore Thermocouple: 168°F

RCS Loop Temperatures:

	A	B
Hot Leg	129°F	132°F
Cold Leg (1)	70°F	71°F
(2)	70°F	70°F

RCS Pressure: 97 psig (DVM)

Pressurizer Temperature: 72°F

Reactor Building: Temperature: 65°F

Water level: Elevation 290.5 ft. (8.0 ft. from floor)
via penetration 401 manometer

Pressure: -0.5 psig (Heise)

Concentration: 1.4×10^{-4} uCi/cc (Kr-85) (sample taken 12/4/80)

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. EPA Environmental Data. Results from EPA monitoring of the environment around the TMI site were as follows:

3. EPA Environmental Data Results from EPA monitoring of the environment around the TMI site were as follows:

-- The EPA measured Krypton-85 (Kr-85) concentrations (pCi/m³) at several environmental monitoring stations and reported the following results:

<u>Location</u>	<u>November 21 - December 1, 1980</u> (pCi/m ³)
Bainbridge	18
Goldshorn	22
Observation Center	22
Middletown	19

All of the above levels of Kr-85 are considered to be background levels.

-- No radiation above normally occurring background levels were detected in any of the samples collected from the EPA's air and gamma rate networks during the period from November 26 through December 4, 1980.

4. IIRC 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:

<u>Sample</u>	<u>Period</u>	<u>I-131</u> (uCi/cc)	<u>Cs-137</u> (uCi/cc)
HP-244	November 26 - December 3, 1980	7.9 E-14	7.4 E-14

5. Licensee Radioactive Material and Radwaste Shipments. The following shipment was made:

-- On Monday, December 1, 1980, a 40 ml Unit 2 reactor coolant sample was sent to Babcock and Wilcox (B&W), Lynchburg, Virginia.

Major Activities

1. Reactor Decay Heat Cooling. The loss of Decay Heat to Ambient Test (transfer of reactor decay heat to the reactor building ambient) is continuing. A decrease in key plant temperatures is noted since the start of the test on November 6, 1980. Short period review of thermocouple data indicated an apparent decrease of approximately 60F for the average value of the incore thermocouples (1400F to 1340F) and the hottest loop hot leg temperature decreased approximately 60F (1380F to 1320F).

The licensee will be submitting a proposal to the NRC to justify the shutdown of the secondary plant for long term layup based on test data and this includes finalizing the special operating (test) procedure to a formal operating procedure.

2. Reactor Building Purge/Entry The fifth entry into the Unit 2 reactor building is scheduled for Thursday, December 11, 1980. A pre-entry purge was conducted on Thursday, December 4, 1980. An estimated six curies of Kr-85 was released during this period. A second purge is scheduled to commence Tuesday, December 9, 1980. This purge will continue through the entry. The objective of the second purge is to minimize Kr-85 concentrations during operations inside the reactor building.

The planned tasks inside the reactor building include replacement of the neutron source range preamplifier, decontamination experiments, and additional radiation mapping. The decontamination experiments are designed to test the effectiveness of various decontamination solutions. A detailed radiation map will be made on the 305' elevation and a three man team will climb into the refueling pool (presently dry) to take radiation readings in the vicinity of the reactor head. One of the entrants will climb a vertical ladder to the polar crane to assess the condition of the crane.

3. Contamination of Building Expansion Joints. During a radiological survey of the 281' elevation of the Unit 2 auxiliary building on November 27, 1980, contamination was found in an expansion joint. The expansion joint lies between the service building on one side and the auxiliary building and the air intake tunnel on the other side. Further licensee investigations revealed contamination in a second expansion joint which is contiguous to the first and which circles the reactor building. The expansion joints appear to be more highly contaminated towards the seal injection room which is adjacent to the reactor building and through which the second expansion joint runs. The seal injection room is currently inaccessible because of high radiation levels as a result of previous reactor coolant system leakage. The contamination has been identified as including Cs-134, Cs-137, Ru-106, Sb-125, Ce-144; and Sr-90. Water samples taken from the expansion joint by the licensee, showed cesium activity of 0.85 - 1.7 uCi/ml.

The licensee has implemented a plan to determine the source and the extent of the contamination.

The on site NRC staff will continue to closely monitor the licensee's actions in this area and licensee's plan. The plan includes taking core samples of the expansion joints and excavating to monitor the outside edges of the expansion joints.

4. Long Term Spent Resin Storage Facility During this reporting period the licensee received the analysis results from the laboratory on a water sample from the sump used to collect water for the Long Term Spent Resin Storage Facility (Module A and B). Gamma spectroscopic analyses indicated trace amounts (1.2×10^{-8} uCi/ml) of Cs-137. Tritium analysis indicated 3×10^{-5} uCi/ml. The licensee strongly suspects that this activity is due to rain water leakage picking up known liner loose surface contamination and tritium vapor offgassing through liner fittings.

Module A has been in use as a repository for EPICOR-I and EPICOR-II spent resins since early 1980. The module has 60 cells. Each cell can accommodate one 6' x 6' (nominal external dimensions) liner or two 4' x 4' liners. Presently the A module contains approximately 50 liners. The B module is structurally complete but is empty at the present time. Water drains are provided at the bottom of each storage cell. The drains from both the A and B modules flow to a common sump.

Collected sump water is being stored onsite for processing and onsite storage. NRC review of the licensee's surveillance program in this area continues.

Meeting Attended

On Friday, December 5, 1980, L. Barrett attended a meeting with the Atomic Industrial Forum Working Committee on TMI-2 Recovery, to discuss the NRC's site office role in cleanup operations of TMI-2.

Future Meetings

1. On Thursday, December 11, 1980, L. Barrett and R. Bellamy will attend a public briefing in Harrisburg sponsored by the Department of Environmental Resources on the status of decontamination at Three Mile Island. Representatives from General Public Utilities (GPU) and the U.S. Environmental Protection Agency will also be participating in the presentation.
2. On Friday, December 12, 1980, L. Barrett and R. Bellamy will attend a meeting in Parsippany, New Jersey, with GPU and Met-Ed to discuss proprietary information concerning EPICOR-II radwaste system.