



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

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NRC/TMI-80-125

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 August 10-16, 1980.

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

Enclosure: As stated

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NRC TMI PROGRAM OFFICE WEEKLY STATUS REPORT

Week of August 10-16, 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, August 15, 1980) (approximate values)

Average Incore Thermocouples: 141°F

Maximum Incore Thermocouple: 187°F

RCS Loop Temperatures:

	A	B
Hot Leg	137°F	140°F
Cold Leg (1)	92°F	82°F
(2)	86°F	83°F

RCS Pressure: 91 psig (Heise)
93 psig (DVM-controlling)

Pressurizer Temperature: 88°F

Reactor Building: Temperature: 83°F
Water level: Elevation 290.2 ft. (7.7 ft. from floor)
via penetration 401 manometer
Pressure: -0.25 psig (Heise)
Concentration: 6.9×10^{-6} uCi/cc (Kr-85)

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:

- The EPA measured Kr-85 concentrations (pCi/m^3) at several environmental monitoring stations and reported the following results:

<u>Location</u>	<u>August 1-8, 1980</u> (pCi/m^3)
Bainbridge	27
Goldsboro	30
Observation Center	620
Middletown	26
Hill Island	24

Background levels of krypton-85 were measured in air samples collected at EPA's noble gas sampling stations located at Bainbridge, Goldsboro, Hill Island and Middletown during the period August 1 through August 8, 1980. The average concentration of krypton-85 in the sample collected at the TMI Observation Center August 1 through 8, 1980 was $620 \text{ pCi}/\text{m}^3$. This apparently resulted from the announced releases on August 1 and August 8, 1980 and corresponds to a skin dose of 0.022 mrem and a whole body dose of 0.0002 mrem. The total skin dose at this station since June 28, 1980 is now 0.61 mrem or 4% of the skin dose limit of 15 mrem per year. The accumulated whole body dose at this location from krypton-85 releases is now 0.0051 mrem or 0.02% of the whole body dose limit of 25 mrem per year.

- EPA environmental stations registered background levels for air particulate and water samples. Gamma scan results for all sampling locations were negative.
- Instantaneous direct radiation readings showed an average level of 0.012 mrem/hr for the 18 monitoring stations.

4. NRC Environmental Data

- 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)
HPR-228	August 6 - August 13, 1980	<6.8 E-14	<6.8 E-14

No reactor related radioactivity was detected.

- Environmental TLD measurements for the period July 2 to July 31, 1980, indicate gamma radiation to be at the natural background levels. Fifty-seven TLD's registered doses ranging from 0.11 mR/day to 0.18 mR/day. Average dose was 0.14 mR/day. These dose rates are consistent with natural background radiation in the TMI area.

5. Radioactive Material and Radwaste Shipments were as follows:

- On Tuesday, August 12, 1980, eighteen (18) Unit 2 air sample filter papers from HPR-219A were sent to Teledyne Isotopes, Westwood, New Jersey.
- On Tuesday, August 12, 1980, a forty (40) ml Unit 2 Reactor Coolant Sample was sent to Babcock & Wilcox, Lynchburg, Virginia.
- On Tuesday, August 12, 1980, a one thousand (1000) ml Waste Evaporator Condensate Storage Tank (WECST) sample was sent to Teledyne Isotopes, Westwood, New Jersey.
- On Friday, August 15, 1980, a box containing nine (9) air sample filter papers was sent to Science Applications Inc. (SAI), Rockville, Maryland.
- On Friday, August 15, 1980, a box containing four (4) air sample filter papers was sent to Teledyne Isotopes, Westwood, New Jersey.

Major Activities This Week

1. EPICOR II System

The processing of the accumulated reactor coolant bleed tank 'B' water is complete. The RCBT 'B' processed water tallies the total process effort to 501,000 gallons. Further periodical processing is expected due to accumulated water from decontamination, flushing and tank transfers.

The two week outage commenced August 13, 1980, as scheduled. The major work effort is to improve personnel safety related items.

2. Reactor Building Entry/Purge

Four men made the second post accident entry into the TMI Unit 2 reactor building at 10:42 a.m., August 15, 1980. The planned duration of the entry was 40 minutes. After approximately 20 minutes inside the reactor building, one of the men became physically exhausted and requested to come out. He and another man were directed to exit the reactor building. The two remaining men exited the reactor building at 11:20 a.m. All men were physically exhausted. Exhaustion was attributed to the use of several layers of protective clothing, full face respirator, and 85° F to 90° F temperatures inside the reactor building.

Preliminary measurements, digital and pocket dosimeters, indicate that the maximum total body dose to any member of the entry team was less than 300 mr. The entry team surveyed the 305' elevation (ground level) and the 347' elevation (refueling floor). Gamma readings on the 305' elevation were 400-700 mr per hour in shielded

areas. The average gamma readings on the 347' elevation were between 100 and 300 mr per hour. A teletector reading 12' from the reactor head indicated 150 mr.

The entry team energized the reactor building lights and over 50% of the lights illuminated. The reactor building sump water was observed to be murky with floating debris. Some electric wires on the 347' elevation were very brittle and crumbled when touched. A standard black telephone was melted and deformed almost beyond recognition. A 55 gallon drum with the top cover still attached was crushed. Numerous rusted surfaces were observed, however the reactor head appeared to be in good condition.

Prior to the four man entry, the reactor building was purged beginning 9:15 a.m. on August 14, 1980, and terminated at 9:25 a.m. on August 15, 1980. Approximately 85 curies were released to the atmosphere. After purging, the building air concentration was less than the MPC in a restricted area (1×10^{-5} uCi/cc) Kr-85.

Bechtel Corporation has been contracted to continue with the work inside the reactor building. The date for the next entry has not been decided.

3. Decay Heat Valve

The DH-V1 valve was opened August 8, 1980, (see the weekly status report of August 8, 1980) and no indications of "through the valve" or "out of the valve" leakage have occurred. Radiation levels have stabilized as indicated in the previous weekly status reports and no unusual occurrences have taken place.

4. Weekly Boron Analysis

Since the week of August 3, 1980, the Babcock & Wilcox laboratory was unable to analyze the reactor coolant system (RCS) sample from TMI-2 due to contamination from a radiation spill. The licensee is past the 7 day technical specification surveillance frequency and notified the TMI Program Office on Friday, August 8, 1980. The licensee has no reason to suspect the boron concentration to deviate. The B&W laboratory was scheduled to analyze the backlog of RCS samples on August 15, 1980.