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February 13, 1981
NRC/TMI-81-013

MEMORANDUM FOR: Harold R. Denton, Director,
Office of Nuclear Reactor Regulation

Bernard J. Snyder, Program Director,
TMI Program Office

FROM: Lake H. Barrett, Acting Deputy Program Director,
TMI Program Office

SUBJECT: NRC TMI PROGRAM OFFICE WEEKLY STATUS REPORT

Enclosed is the status report for the period of February 8-14, 1981.

Lake H. Barrett
Acting Deputy Program Director
TMI Program Office

Enclosure: As stated

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NRC TMI PROGRAM OFFICE WEEKLY STATUS REPORT

Week of February 8-14, 1981

Plant Status

Core Cooling Mode: Heat transfer from the reactor coolant system (RCS) loops to reactor building ambient.

Available Core Cooling Modes: Long-term cooling "B" (once through steam generator-B); decay heat removal systems.

RCS Pressure Control Mode: Standby pressure control (SPC) system.

Backup Pressure Control Mode: One decay heat removal pump to supply pressure in conjunction with variable recirculation back to the borated water storage tank (BWST).

Major Parameters (as of 0500, February 13, 1981) (approximate values)

Average Incore Thermocouples: 118°F
Maximum Incore Thermocouple: 153°F

RCS Loop Temperatures:

	A	B
Hot Leg	118°F	121°F
Cold Leg (1)	66°F	66°F
(2)	66°F	66°F

RCS Pressure: 101 psig

Reactor Building: Temperature: 61°F
Water level: Elevation 290.6 ft. (8.1 ft. from floor)
via penetration 401 manometer
Pressure: -1 psig (Heise)
Concentration: 1.75×10^{-4} uCi/cc (Kr-85)
(sample taken 2/9/81)

Effluent and Environmental (Radiological) Information

1. Liquid effluents from TMI site released to the Susquehanna River after processing, were made within the regulatory limits and in accordance with NRC requirements and City of Lancaster Agreement dated February 27, 1980.

During the period February 6, 1981, to February 12, 1981, the effluents contained no detectable radioactivity at the discharge point although individual effluent sources which originated within Unit 2 contained minute amounts of activity. Calculations indicate that less than three millionths (0.000003) of a curie of cesium-137 and less than one thousandth (.001) of a curie of tritium was discharged.

2. 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>January 30-February 6, 1981</u> (pCi/m ³)
Bainbridge	21
Goldsboro	18
Observation Center	100*
Middletown	24

*This slightly elevated measurement is associated with the announced release of 12 Ci of krypton-85 in the period February 2-5, 1981. Background levels were measured at the other monitoring stations.

- 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 period from February 4, 1981, through February 11, 1981.

3. NRC 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-254	February 4, 1981-February 11, 1981	<9.1 E-14	<9.1 E-14

No reactor related radioactivity was detected.

4. Licensee Radioactive Material and Radwaste Shipments. The following shipments were made:

- On Monday, February 9, 1981, a 40 ml Uni reactor coolant sample was sent to Babcock and Wilcox (B&W), Lynchburg, Virginia.

Major Activities

1. Reactor Building Entry. The seventh entry into the Unit 2 reactor building (RB) has been scheduled for March 5, 1981. Scheduled activities for this entry are: surveillance and servicing of various valves in the RB, inspection of the polar crane, and technicians will attempt to repair a closed circuit television camera which has been inoperable since installation during the previous entry. Also proposed for this entry is obtaining a sample of water from the reactor building sump for use in evaluating resin performance during processing of the water. The sample will be passed through a zeolite bed prior to removing from the reactor building.

During the sixth entry, repairs were performed on the defective triaxial cable leading from the NI-2 neutron source range monitor. Subsequent tests indicate that the cable repairs were successful. A preamplifier which can be installed outside the RB has arrived on site and is scheduled to be installed next week. It is expected that the NI-2 monitor will be functional after the new preamplifier is installed.

2. Submerged Demineralizer System (SDS). SDS construction is now approximately 80% complete. Initial testing of completed portions is in progress while construction is ongoing. The testing verifies the proper operation of equipment and does not involve processing radioactive water. The licensee is preparing an update to the Technical Evaluation Report which should be available for NRC review by the end of February.
3. Contaminated Building Expansion Joint. During a prolonged dry spell prior to the week of February 8, 1981, water could not be detected in the cork. On February 11, 1981, following approximately 12 hours of rain, the licensee took a sample of the cork in one of the same locations where prior samples were taken. An analysis of the cork and liquid samples is being made by the licensee.
4. Solid Waste Staging Facility Sump Contamination. Water samples collected from the drains of the A storage module have been analyzed by the licensee as being less than the lower limit of detection (LLD). The licensee's LLD for radioactive cesium was 1.7×10^{-8} uCi/cc and for tritium was 9.1×10^{-6} uCi/cc. A second sample of the A storage module drains was sent off site to an independent laboratory for analysis. The results of this analysis have not been received.

A water sample of the B storage module drains was also taken. The sample is being analyzed by the licensee.

Meetings Attended

1. On Monday, February 9, 1981, Lake Barrett met with the Mayor of York to discuss the status of TMI-2. Their discussion centered around the current status of the cleanup operations of TMI-2, including the history of liquid effluents.
2. On Wednesday, February 11, 1981, Ronald Bellamy and Anthony Fasano attended the TMI Advisory Panel meeting held at the Forum in Harrisburg. Planned topics of discussion were a discussion of the water issue and ultimate disposition of TMI radioactive wastes.

Chairman Minnich reported that he is pursuing further representation by the Commonwealth of Pennsylvania on the panel, but felt any further comments at this time may jeopardize a satisfactory resolution. Due to inclement weather, the meeting was shortened, with discussions centering around final approval of the motions discussed at the February 4 meeting, and disposal of wastes. The five recommendations pertaining to the water issue were unanimously approved in the following form:

Recommendation 1

The radioactively contaminated water located in the reactor building be decontaminated as rapidly as possible using the licensee's proposed submerged demineralizer system (SDS) currently being constructed. This recommendation, specific to the SDS system, is contingent upon approval of that system by the NRC.

Recommendation 2

The approximately 1.6 million gallons of decontaminated water expected as a result of the TMI-2 decontamination activities be stored initially in onsite tanks to permit accurate assessment of its residual radioactivity content prior to a decision regarding ultimate disposal.

Recommendation 3

The appropriateness of continued onsite storage of decontaminated water be reviewed annually by this Advisory Panel.

Recommendation 4

To the extent practicable, Metropolitan Edison Company should minimize additional onsite water requirements by maximizing the use of recycled decontaminated water.

Recommendation 5

The radioactive contaminants (excepting tritium) in the unprocessed water at TMI-2 should be reconcentrated and immobilized as expeditiously as possible consistent with regulatory requirements.

The first recommendation will be amplified to indicate that use of the SDS, as planned, is not a final goal of the cleanup process, but water treatment and ultimate disposal must be treated as one integral problem. Commitments from DOE to accept high-level wastes should be pursued now. A sixth recommendation, discussion allowable amounts of residual activity in processed water, was tabled until the February 19 meeting.

With respect to waste solidification, the panel unanimously passed a motion to recommend to the NRC that the NRC allow Met-Ed to ship low-level spent resins in an unsolidified form, providing all transportation and other regulations are satisfied, including minimization of the possibility of potential leakage while in transit. This motion specifically excludes higher level EPICOR II first-stage spent resins, and SDS resins.

The next panel meeting, scheduled for February 19, 1981, will finish the discussions of the water issue and ultimate disposal of TMI radioactive wastes.

3. On Friday, February 13, 1981, Gary Krampholz presented a seminar on the operation of EPICOR II to his senior college class at the Pennsylvania State University, Capitol Campus. A review of the transfer, storage, and processing of waste water and the handling, storage, and disposition of waste generated from the operation of EPICOR II was his primary assignment as an intern.

Future Meetings

The NRC's Advisory Panel for the Decontamination of Three Mile Island, Unit 2, will hold a meeting in Harrisburg, on February 19, 1981, beginning at 7:00 p.m. The public is invited to observe the meeting, which will be held at the Forum of the Education Building on Commonwealth and Walnut Streets.