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July 6, 1981
NRC/TMI-81-038

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 June 28 - July 5, 1981.

Lake H. Barrett
Acting Deputy Program Director
TMI Program Office

Enclosure: As stated

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NRC FORM 318 (10-80) NRCM 0240

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NRC TMI PROGRAM OFFICE WEEKLY STATUS REPORT

Week of June 28 - July 5, 1981

Plant Status

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

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

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

Backup Pressure Control Modes: Mini Decay Heat Removal (MDHR) System. Decay Heat Removal (DHR) System.

Major Parameters (as of 0400, July 2, 1981) (approximate values)
Average Incore Thermocouples: 119°F
Maximum Incore Thermocouple: 145°F

RCS Loop Temperatures:

	A	B
Hot Leg	118°F	121°F
Cold Leg (1)	71°F	73°F
Cold Leg (2)	72°F	73°F

RCS Pressure: 96 psig

Reactor Building: Temperature: 77°F
Water level: Elevation 290.8 ft. (8.4 ft. from floor) via penetration 401 manometer
Pressure: -0.4 psig
Concentration: 4.9×10^{-6} uCi/ml Kr-85 (Sample taken 7/ 1/81

Effluent and Environmental (Radiological) Information

1. Liquid effluents from the 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 June 28, 1981, through July 5, 1981, the effluents contained no detectable radioactivity at the discharge point and individual effluent sources which originated within Unit 2 contained no detectable radioactivity.

2. Environmental Protection Agency (EPA) Environmental Data. Results from EPA monitoring of the environment around the TMI site were as follows:

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

Location	June 19 - June 26, 1981 (pCi/m^3)
Goldsboro	20
Observation Center	20
Middletown	*
Yorkhaven	20

*Results not available due to procedural difficulty.

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

-- 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 June 25, 1981, through July 2, 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:

Sample	Period	I-131 (uCi/cc)	Cs-137 (uCi/cc)
HP-274	June 24, 1981 - July 2, 1981	<8.2 E-14	<8.2 E-14

4. Licensee Radioactive Material and Radwaste Shipments

-- On Monday, June 29, 1981, a 40 ml Unit 2 reactor coolant sample was sent to Babcock and Wilcox (B&W), Lynchburg, Virginia.

-- On Wednesday, July 1, 1981, one cask containing 17 drums of Unit 2 LSA compacted and noncompacted waste was shipped to U.S. Ecology, Richland, Washington.

-- On Thursday, July 2, 1981, two Hittman steel liners containing Unit 1 solidified evaporator bottoms were shipped to U.S. Ecology, Richland, Washington.

Major Activities

1. Submerged Demineralizer System (SDS). The first waste water transfer from the Reactor Coolant Bleed Tank (RCBT) "B" to the SDS feed tanks commenced on June 30, 1981. The RCBT "B", which contains waste water generated during the decontamination of the Unit 2 Auxiliary Building, is scheduled to be processed in two 50,000 gallon batches. Transfer of one batch was completed July 5, 1981. RCBT "B" water was transferred through two particulate filters (pre and final) into the SDS feed tanks. After minor startup problems, the evolution proceeded smoothly. Processing through ion exchange vessels is tentatively scheduled to begin during the week of July 6, 1981.

   The TMI Program Office has currently approved 21 of the 37 required procedures to operate the SDS. These 21 procedures were required to be approved prior to RCBT "B" transfer to the SDS feed tanks. The remaining procedures need NRC approval prior to SDS processing. Functional testing of the remaining parts of the SDS have been completed with the exception of the zeolite vessel trains.

   Operator training for processing feed tank water through the SDS is continuing in conjunction with system functional testing and zeolite vessel loadings.

2. EPICOR-II Liner Disposal. On June 30, 1981, the last 2 (of 22) second and third stage EPICOR-II liners reached the burial site in Hanford, Washington. These liners were generated during the processing of contaminated water through the EPICOR-II system. The EPICOR-II system was used to process Auxiliary Building water (approximately 500,000 gallons) from the March 28, 1979 accident.

   Forty-nine first stage prefilter (PF) EPICOR-II liners are still stored on site. The best method of disposal for these higher activity liners is being evaluated at the present time. One of the higher activity liners (PF-16) was shipped to Battelle Northwest Laboratories for analysis on May 19, 1981.

3. Reactor Building Entry. Four men inspected and surveyed the Unit 2 Reactor Building (RB) polar crane during a RB entry on July 1, 1981. Six of the 14 polar crane motors were meggered during the two hour inspection. The resistance between the motor phases and ground, as measured at a common junction box, ranged between 0.2 and 0.5 megohms. The licensee is evaluating the significance of these measurements, although the low resistance suggests that the motors may be damaged. Insulation on some crane power cables was damaged to the extent that bare conducting wires were visible. The padding on the seat of the crane operator's chair was burned and charring in the crane cab appeared to indicate the presence of flames during the March 28, 1979, accident. Crane mechanical components appeared undamaged although patches of rust were evident. The licensee is evaluating what repairs will be necessary before the crane can be used to remove the reactor vessel head.

Upon exiting the RB, the entry team underwent routine "frisking" for radioactive contamination. Contamination was found on the skin of all four individuals. The primary areas of contamination included the buttocks, elbows, and knees. Personnel decontamination procedures were initiated and after several hours, three of the four individuals were decontaminated on July 1, 1981. The buttock of the fourth individual was not completely decontaminated until the following day.

The skin contamination apparently resulted from climbing on contaminated crane surfaces in persperation soaked protective clothing. Following several instances of personnel exhaustion during RB entries, the licensee relaxed the criteria for use of plastic protective clothing in the RB to reduce fatigue and the crane inspection team was wearing only two sets of protective clothing. The outer layer of protective clothing was advertised by the manufacturer as water impermeable. The same type of protective clothing had been worn during the initial climb on the crane with no instances of skin contamination. The second crane climb was physically more demanding and all team members exited from the RB exhausted with the inner layer of protective clothing completely soaked. The licensee is evaluating the available information to determine what combination of protective clothing is required for future entries.

The next RB entry is scheduled for July 23, 1981.

Meeting Held

On Wednesday, July 1, 1981, Lake Barrett met with area mothers to discuss various subjects related to TMI. Topics included gas generation in stored EPICOR-II prefilters, how the NRC audits licensee radiological analyses by independent measurements, SDS and cleanup progress.

Future Meeting

On Thursday, July 9, 1981, the Advisory Panel for the Decontamination of Three Mile Island, Unit 2 will be meeting from 7:00 p.m. to 10:00 p.m. in the Holiday Inn, 23 South Second Street in Harrisburg, to discuss the current status of cleanup activities at TMI. This meeting will be open for public observation.