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December 7, 1981
NRC/TMI-81-008

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

Bernard J. Snyder, Program Director
TMI Program Office

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

SUBJECT: NRC TMI PROGRAM OFFICE WEEKLY STATUS REPORT

Enclosed is the status report for the period of November 22, 1981 to December 5, 1981. Major items included in this report are:

- Liquid Effluent Releases
- NRC and EPA Environmental Data
- Radioactive Material and Radwaste Shipments
- Submerged Demineralizer System Status
- EPICOR II
- Reactor Building Entries
- Public Meetings

Lake H. Barrett
Deputy Program Director
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Enclosure: As stated

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Harold R. Denton
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December 7, 1981

cc w/encl:

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TMI PROGRAM OFFICE WEEKLY STATUS REPORT

November 22 - December 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 0500, December 4, 1981) (approximate values)

Average Incore Thermocouples: 111°F

Maximum Incore Thermocouple: 137°F

RCS Loop Temperatures: (The last cycle of natural circulation occurred in the "B" loop on 12/2/81 and in the "A" loop on 12/1/81)

	A	B
Hot Leg	104°F	107°F
Cold Leg (1)	73°F	84°F
(2)	75°F	85°F

RCS Pressure: 95 psig

Reactor Building: Temperature: 64°F
Water level: Elevation 287.2 ft. (4.7 ft. from floor)
via penetration 401 manometer
Pressure: -0.17 psig
Concentration: 9.9×10^{-6} uCi/cc Kr-85
(Sample taken 12/2/81)

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 November 20, 1981, through December 3, 1981, the effluents contained no detectable radioactivity at the discharge point although individual effluent sources which originated within Unit 2 contained minute amounts of radioactivity. Calculations indicate that less than two hundred thousandths (0.00002) of a curie of tritium was discharged.

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

- The EPA Kr-85 samples experienced a shipping delay; results were not available. Area Kr-85 concentrations will be reported in a future report.
- 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 November 18, 1981, through December 1, 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> <u>(uCi/cc)</u>	<u>Cs-137</u> <u>(uCi/cc)</u>
RP-294	November 18, 1981 - November 24, 1981	<9.2 E-14	<9.2 E-14

4. Licensee Radioactive Material and Radwaste Shipments.

- On Monday, November 23, 1981, four Unit 1 liners of solidified evaporator bottoms were shipped to Chem Nuclear Systems Inc., Barnwell, South Carolina.
- On Wednesday, November 25, 1981, 50 drums of contaminated laundry were shipped to Tri-State Industrial Laundry, Utica, New York.
- On Monday, November 29, 1981, a Unit 2 decontaminated resin liner (EPICOR 11 liner X-3) was shipped to U.S. Ecology, Hanford, Washington.
- On Tuesday, December 1, 1981, a Hitman radwaste mixing head used at Unit 1 was shipped back to Hitman Nuclear Development Corporation, Columbia, Maryland.
- On Wednesday, December 2, 1981, a Unit 2 decontaminated resin liner (EPICOR 11 liner F-13) was shipped to U.S. Ecology, Hanford, Washington.
- On Thursday, December 3, 1981, two Unit 1 liners of solidified evaporator bottoms were shipped to U.S. Ecology, Hanford, Washington.

Major Activities

1. Submerged Demineralizer System (SDS). Processing of batch number 11 was completed on November 28, 1981. During November 29, 1981, to December 1, 1981, approximately 50,000 gallons of reactor coolant bleed tank water were transferred to the SDS feed tanks in the fuel handling building. Processing of batch number 12 commenced on December 2, 1981. To date, approximately 295,000 gallons of reactor building sump water have been transferred from the reactor building sump and processed. Transfers of reactor building sump water is expected to continue following the processing of two batches (12 and 13) of reactor coolant bleed tank water. SDS performance parameters for batch 11 are attached.
2. EPICOR II. Processing of SDS effluent through the EPICOR II system continued this week. Approximately 285,000 gallons of reactor building sump water have been polished. Recent performance parameters for EPICOR II are attached.
3. Reactor Building Entries. Reactor building (RB) entry number 13 was completed on Thursday, December 3, 1981. This was the seventh entry in support of the gross decontamination experiment. Tasks during the entry included installation of components on the rotor crane for use in entry and installation of new radio equipment for use in the RB. The RB entry will continue until the gross decontamination experiment is completed. Due to delays with reactor modifications, the gross decontamination experiment has been delayed and it is not expected that flush water will be introduced into the RB until mid January. To date, based on dosimeters, 10.6 man rem have been expended during the RB entries in support of the gross decontamination experiment. During the 16 entries prior to the decontamination experiment, a total of approximately 10.6 man rem were expended in the RB.

Future Meetings

The NRC's Advisory Panel for the Decontamination of TMI Unit 2 is scheduled to meet on December 10, 1981, from 7:00 to 10:00 PM in Lancaster at 208 North Duke Street. Additional meetings are presently scheduled for January 13 and January 28, 1982, at the Holiday Inn in Harrisburg.

ATTACHMENT

205 Performance for Batch Number 11

<u>Radionuclide</u>	<u>Average Influent (uc/ml)</u>	<u>Average Effluent (uc/ml)</u>	<u>Average DF</u>
Cesium 137	1.0×10^2	7.2×10^{-4}	1.4×10^5
Strontium 90	4.7	9.2×10^{-3}	5.1×10^2

210 Performance for Reactor Building Sump Water
Sample 11 - 10/10/80 to 11/10/80

<u>Radionuclide</u>	<u>Average Influent (uc/ml)</u>	<u>Average Effluent (uc/ml)</u>	<u>Average DF</u>
Cesium 137	1.5×10^{-4}	2.4×10^{-7}	3.5×10^3
Strontium 90	3.3×10^{-3}	1.1×10^{-5}	3.5×10^2
Plutonium 239	1.7×10^{-3}	2.1×10^{-7}	8.1×10^3