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November 9, 1981
NRC/TMI-81-062

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 1-7, 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
- Interim Staging Module Status
- Public Meetings

Lake H. Barrett
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TMI Program Office

Enclosure: As stated

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DATE	11/ /81	11/9/81	11/9/81	11/9/81	11/ /81	11/ /81

NRC IMI PROGRAM OFFICE WEEKLY STATUS REPORT

Week of November 1-7, 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, November 6, 1981) (approximate values)
Average Incore Thermocouples: 113°F
Maximum Incore Thermocouple: 142°F

RCS Loop Temperatures:

	A	B
Hot leg	107°F	110°F
Cold leg (1)	69°F	72°F
(2)	69°F	69°F

RCS Pressure: 96 psig

Reactor Building Temperature: 66°F
Water level: Elevation 288.4 ft. (5.9 ft. from floor) via penetration 401 manometer
Pressure: -0.15 psig
Concentration: 8.6 x 10-6 uCi/cc Kr-85
(Sample taken 11/4/81)

Effluent and Environmental (Radiological) Information

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 22, 1980

During the period October 30, 1981, through November 6, 1981, the effluents contained no detectable radioactivity at the discharge point and radiological 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	October 9 - October 23, 1981 (pCi/m^3)
Goldsboro	24
Observation Center	26
Middletown	30
Yorkhaven	30

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 October 28, 1981, through November 5, 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-292	October 28, 1981 - November 4, 1981	< 8.6 E-14	<8.6 E-14

4. Licensee Radioactive Material and Radwaste Shipments.

-- On Wednesday, November 4, 1981, an EPICOR II dewatered resin liner (F-8) was shipped to U.S. Ecology, Richland, Washington.

-- On Wednesday, November 4, 1981, 20 metal containers (boxes) of Unit 1 LSA noncompacted waste were shipped to U.S. Ecology, Richland, Washington.

-- On Thursday, November 5, 1981, 50 drums containing Unit 2 contaminated laundry were shipped to Tri-State Industrial Laundry Inc., Utica, New York.

-- On Thursday, November 5, 1981, a one liter, Unit 1 WECST (waste evaporator condensate storage tank) composite sample was mailed to Teledyne Isotopes, Westwood, New Jersey.

-- On Friday, November 6, 1981, one EPICOR II dewatered resin liner (liner K-2) was shipped to U.S. Ecology, Richland, Washington.

-- On Friday, November 6, 1981, one EPICOR II dewatered resin liner (liner F-9) was shipped to U.S. Ecology, Richland, Washington.

-- On Friday, November 6, 1981, 35 drums and seven metal boxes containing Unit 2 compacted and noncompacted waste, and one EPICOR II dewatered resin liner (liner 2K-1) were shipped to U.S. Ecology, Richland, Washington.

Major Activities.

1. Submerged Demineralizer System (SDS). Processing of batch number 8 was completed on October 31, 1981. During October 31, - November 1, 1981, approximately 40,000 gallons of reactor building sump water were transferred to the SDS feed tanks in the fuel handling building. This transfer brings the amount of water transferred from the reactor building sump to a total of approximately 205,000 gallons. Processing of batch number 9 commenced on November 2, 1981. This batch includes the above 40,000 gallons of water transferred and approximately 7,000 gallons of water from a reactor coolant bleed tank. As of November 5, 1981, approximately 180,000 gallons of reactor building sump water had been processed.

   Following processing of batch 9, the licensee has scheduled a short outage period (less than one week) to replace ion exchange vessels and perform minor maintenance on system valves to increase flow through the pool water cleanup system. SDS performance parameters for batch 8 are attached.

2. EPICOR II. Processing of SDS effluent through the EPICOR II system continued this week. As of November 5, 1981, approximately 170,000 gallons of reactor building sump water had been polished. Liner F-8 was shipped on November 4, 1981 to a commercial burial facility near Richland Washington for disposal. Recent performance parameters for EPICOR II are attached.

3. Reactor Building Entries. The third reactor building (RB) entry (entry 19) in support of the gross decontamination experiment was completed on Thursday, November 5, 1981. During the first three entries, housekeeping and trash removal were the most time consuming tasks in the RB. Surveys in accessible areas of the RB have not detected any radiological changes which could be attributed to the transfer of 205,000 gallons of water from the RB basement to the SDS.

   Three of the four scheduled gross decontamination experiment entries have been completed. However, the schedule for specific tasks has fallen behind in several areas. Delays in work to install the high pressure water hose, the power lift, new radio antennas, and electrical power for support equipment appear to be the most significant. The impact of the existing delays on the overall decontamination experiment schedule has not been assessed. The decontamination experiment was originally scheduled to be completed in December 1981.

4. Interim Staging Module Status. Two interim staging modules were constructed on site to store spent EPICOR liners prior to shipment off site. Each module contains 60 storage cells. At one time, the modules contained all the spent resins which were generated by the EPICOR II system which processed water from the auxiliary building. All the above EPICOR liners which qualified for disposal at commercial radioactive burial facilities have been shipped off site. Forty-nine EPICOR II prefilters do not meet commercial burial criteria and are still stored in the interim staging modules. The Department of Energy has agreed to transfer these liners to government controlled facilities for R&D purposes. It is anticipated that the first liners will be shipped in early 1982 when construction of the transfer equipment is complete.

Periodically, the interim staging modules are used for temporary staging of Unit 1 waste and EPICOR II polishing resins which are used to process SDS effluent. The Unit 1 waste and the EPICOR II polishing resins meet commercial burial criteria and are routinely shipped off site. The interim staging module sump is sampled periodically to detect leakage from the stored liners. Although trace quantities of radioactive cesium and tritium have been detected in the sump, the quantities of radioisotopes have not shown any tendency to increase. Leakage from spent resin liners would be expected to increase sump radioactivity significantly.

Meetings Held

A meeting was held on November 3, 1981, by B. Snyder with Maryland State Delegate Catherine Riley to brief her on TMI-2 cleanup progress and future plans. Delegate Riley represents the area of Maryland which includes the Susquehanna River and the head of the Cheasapeake Bay. She has had a continuing interest in TMI-2, including active participation in NRC public meetings held in Maryland on the Programmatic Environmental Impact Statement. In addition to a discussion of the current status of TMI-2 cleanup activities, Delegate Riley was briefed on future NRC studies for further investigation of alternatives for disposition of processed accident water and assessments of potential socio-economic impacts associated with each alternative. Planned State of Maryland studies of socio-economic impacts of processed accident water disposition were also discussed.

Future Meetings

1. On Friday, November 13, 1981, Lake Barrett will be meeting with local mothers to discuss the decontamination experiments and other related TMI-2 issues.

2. On Saturday, November 14, 1981, at 8:00 p.m., Lake Barrett will participate in a panel discussion at the Elizabethtown Public Library on the government's response to the TMI accident.

3. The NRC's Advisory Panel for the Decontamination of Three Mile Island Unit 2 will meet November 16, 1981, from 7:00 p.m. to 10:00 p.m. in the Municipal Building, 400 South 8th Street, Lebanon. At the meeting, the panel plans to discuss cleanup financial problems and the current status of cleanup activities at Three Mile Island. The meeting is open to the public.

ATTACHMENT

SDS Performance for Batch Number 8 - October 23, 1981 to October 31, 1981

Radionuclide	Average Influent (uc/ml)	Average Effluent (uc/ml)	Average DF
Cesium 137	1×10^{2}	5.9×10^{-4}	1.7×10^{5}
Strontium 90	4.2	8.7×10^{-3}	4.8×10^{2}

EPICOR II Performance for Reactor Building Sump Water
October 21, 1981 to November 4, 1981

Radionuclide	Average Influent (uc/ml)	Average Effluent (uc/ml)	Average DF
Cesium 137	7.4×10^{-4}	4.5×10^{-7}	1.6×10^{3}
Strontium 90	8.9×10^{-3}	8.3×10^{-6}	1.1×10^{3}