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November 2, 1981  
NRC/TMI-81-061

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 October 25-31, 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/Decontamination Experiment
- Public Meetings

Original signed by  
Lake H. Barrett

Lake H. Barrett  
Deputy Program Director  
TMI Program Office

Enclosure: As stated



Harold R. Denton  
Bernard J. Snyder

November 2, 1981

cc w/encl:

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TMIPD	TMIPD	TMIPD	TMIPD	TMIPD	TMIPD
JMiebr/109	RConte	MShanbaky	AFasano	RB	JMiebr
11/ /81	11/2/81	11/ /81	11/ /81	11/2/81	11/2/81

NRC INI E - INI OFFICE WEEKLY STATUS REPORT

Week of October 25-31, 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, October 30, 1981) (approximate values)

Average Incore Thermocouples: 114°F  
Maximum Incore Thermocouple: 143°F

RCS Loop Temperatures:

	A	B
Hot Leg	108°F	111°F
Cold leg (1)	69°F	71°F
(2)	70°F	70°F

RCS Pressure: 96 psig

Reactor Building: Temperature: 70°F  
Water level: (Elevation 288.9 ft. (6.4 ft. from floor)  
via penetration 401 manometer  
Pressure: -0.2 psig  
Concentration:  $4.4 \times 10^{-5}$  uCi/cc Kr-85  
(Sample taken 10/25/81)

Effluent and Environmental (Radiological) Information

1. Liquid effluents from the INI 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 October 23, 1981, through October 29, 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. The EPA announced on July 6, 1981, that, due to a new shipping procedure for Kr-85 samples to the laboratory, the results for the Kr-85 environmental monitoring stations around IMI will not always be available on a weekly basis. The NRC will report these results as they become available.

-- 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 21, 1981, through October 29, 1981.

3. NRC Environmental Data. Results from NRC monitoring of the environment around the IMI 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-291	October 21, 1981 - October 28, 1981	<8.2 E-14	<8.2 E-14

4. Licensee Radioactive Material and Radwaste Shipments.

-- On Monday, October 26, 1981, a 40 ml Unit 2 reactor coolant sample was sent to Babcock and Wilcox (B&W), Lynchburg, Virginia.

-- On Monday, October 26, 1981, a drum containing Unit 2 core flood tank pressure and level transmitters was shipped to EG&G Idaho Inc., Idaho Falls, Idaho.

-- On Monday, October 26, 1981, a drum containing pressure switches, flow transmitters, and paint chips from the Unit 2 reactor building was shipped to EG&G Idaho, Idaho Falls, Idaho.

-- On Tuesday, October 27, 1981, ten drums containing Unit 1 compacted waste and four metal boxes containing non-compacted waste were sent to Clem Nuclear System, Inc., Barnwell, South Carolina.

-- On Tuesday, October 27, 1981, two 1 liter EPICOR effluent samples and two 1 liter CC-1-2 samples were sent from Unit 2 to the State of Maryland.

-- On Tuesday, October 27, 1981, two Unit 1 solidified evaporator samples were shipped to Clem Nuclear System, Inc., Barnwell, South Carolina.

- On Wednesday, October 28, 1981, an EPICOR II dewatered resin liner (F-6) was shipped to U.S. Ecology, Richland, Washington.
- On Thursday, October 29, 1981, an EPICOR II dewatered resin liner (F-7) was shipped to U.S. Ecology, Richland, Washington.

### Major Activities

1. Submerged Demineralizer System (SDS). Processing of batch number 8 continued through the reporting period. Processing was interrupted for approximately one day when sample analysis showed greater than expected Sr-90 concentrations in the SDS process system effluent, but the problem was traced to a sample analysis problem. The problem was corrected, the actual Sr-90 concentrations were verified to be within the expected range, and the SDS was restarted. The total amount of water transferred from the reactor building sump as of October 29, 1981, was approximately 165,000 gallons. The total amount of reactor building sump water processed through the SDS system as of October 29, 1981, was approximately 145,000 gallons. The SDS performance parameters for batch 7 are attached.
2. EPICOR II. Processing of the SDS effluent through the EPICOR II system continued this week. As of October 29, 1981, approximately 130,000 gallons of reactor building sump water had been polished. Liner F-7 was shipped to Richland, Washington for disposal at a commercial burial facility. Recent performance parameters for EPICOR II are attached.
3. Reactor Building Entries. The first two reactor building (RB) entries (entries 17 and 18) in support of the gross decontamination experiment were completed during the last week in October. The objective of these entries was to thoroughly characterize the RB contamination prior to decontamination with water sprays. One of the two entries scheduled during the first week in November was cancelled in order to give the entry groups more time to prepare for the work inside the RB. The next entry is now scheduled for Tuesday, November 5, 1981.

The tasks completed during the two entries this week included sample removal for analysis, trash removal, and gamma multichannel analyzer surveys on the 305' elevation. Prior to commencing the scheduled tasks, a survey was conducted on the 305' elevation to determine whether the processing of the first 165,000 gallons of sump water changed radiological conditions in the accessible areas of the RB. An area radiation survey was conducted and a high volume air sample was taken on the 305' elevation. These surveys indicated that there was no detectable change in radiological conditions. Water transfer from the RB to the SDS has lowered the water level in the RB by approximately 2 1/2 feet to date.

Future Meetings

1. 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 the current status of cleanup activities at Three Mile Island. The meeting is open to the public.
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.

ATTACHMENT

SNS Performance for Batch Number 7 - October 10, 1981 to October 18, 1981

Radionuclide	Average Influent (uc/ml)	Average Effluent (uc/ml)	Average DF
Cesium 137	$1 \times 10^2$	$9.1 \times 10^{-4}$	$1.1 \times 10^5$
Strontium 90	3.8	$1.6 \times 10^{-2}$	$2.4 \times 10^2$

EPICOR 11 Performance - October 13, 1981 to October 20, 1981

Radionuclide	Average Influent (uc/ml)	Average Effluent (uc/ml)	Average DF
Cesium 137	$1 \times 10^{-3}$	$5.7 \times 10^{-7}$	$1.8 \times 10^3$
Strontium 90	$1.2 \times 10^{-2}$	$8.7 \times 10^{-6}$	$1.4 \times 10^3$