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November 23, 1981
NRC/TMI-81-064

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

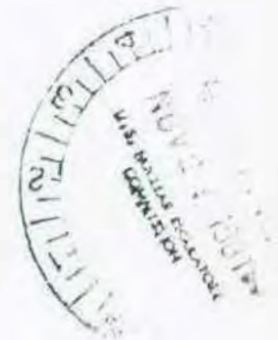
Bernard J. Snyder, Program Director
TMI Program Office

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 15-21, 1981.
Major items included in this report are:

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



There will be no weekly status report issued next week due to the Thanksgiving holiday.

Original signed by

Lake H. Barrett

Lake H. Barrett
Deputy Program Director
TMI Program Office

OFFICE ▶

SURNAME ▶

Enclosure: As stated

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Harold R. Denton
Bernard J. Snyder

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November 23, 1981

cc w/encl:
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DATE	11/14/81	11/17/81	11/22/81	11/22/81	11/22/81	11/22/81

NRC TMI PROGRAM OFFICE WEEKLY STATUS REPORT

Week of November 15-21, 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 20, 1981) (approximate values)

Average Incore Thermocouples: 112°F

Maximum Incore Thermocouple: 140°F

RCS Loop Temperatures: (A cycle of natural circulation occurred in the "B" loop on 11/18/81)

	A	B
Hot Leg	106°F	108°F
Cold Leg (1)	68°F	78°F
(2)	68°F	76°F

RCS Pressure: 96 psig

Reactor Building: Temperature: 64°F
Water level: Elevation 287.8 ft. (5.3 ft. from floor)
via penetration 401 manometer
Pressure: -0.15 psig
Concentration: less than 6×10^{-8} $\mu\text{Ci/cc}$ Kr-85
(Sample taken 11/17/81)

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 13, 1981, through November 19, 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. Airborne Effluents. Airborne effluents released to the environment were within the regulatory limits and in accordance with NRC requirements.

The licensee reported the following gaseous releases:

	<u>August</u>	<u>September</u>	<u>October</u>
Noble Gases (Ci)	94.3	53.1	14.8
Particulates (Ci)	9.29×10^{-7}	2.49×10^{-6}	1.84×10^{-6}
Tritium (Ci)	2.52	0.815	3.26

The above releases represent a small fraction of the allowable regulatory limits. These quantities are consistent with previous releases associated with routine operations.

The downward trend in noble gas releases can be attributed to recent refinements in evaluating monitoring instrument output data. Based upon an Environmental Protection Agency (EPA) analysis of a vent sample and comparison with HPR-219A readings during the month of August, it was concluded that the HPR-219A gas channel was indicating larger than actual noble gas releases due to low level instrument noise and temperature effects.

3. 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:

<u>Location</u>	<u>October 23 - November 6, 1981</u> (pCi/m^3)
Goldsboro	3
Observation Center	25
Middletown	30
Yorkhaven	23

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 November 13, 1981, through November 19, 1981.

4. 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 sample:

<u>Sample</u>	<u>Period</u>	<u>I-131</u> (uCi/cc)	<u>Cs-137</u> (uCi/cc)
HP-294	November 12, 1981 - November 18, 1981	<9.7 E-14	<9.7 E-14

5. Licensee Radioactive Material and Radwaste Shipments.

-- On Monday, November 16, 1981, one Unit 1 solidified powdex resin liner (precoat in HN-600 liner number 28) was shipped to Chem Nuclear System Inc., Barnwell, South Carolina.

-- On Monday, November 16, 1981, one Unit 1 solidified powdex resin liner (precoat in HN-600 liner number 29) was shipped to Chem Nuclear Systems Inc., Barnwell, South Carolina.

-- On Friday, November 20, 1981, seven Unit 2 SDS (Submerged Demineralizer System) liquid samples, each 60 ml., were shipped to Oak Ridge National Laboratory, Oak Ridge, Tennessee.

6. TMI Occupational Exposure. Licensee TLD (Thermoluminescent Dosimeter) records indicate the following Unit 2 total occupational radiation exposure for 1981:

October 1981 11 man-rem

Total 1981 (January-October) 110 man-rem

Major Activities

1. Submerged Demineralizer System (SDS). Processing of batch number 10 was completed on November 19, 1981. During November 20-21, 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 295,000 gallons. Processing of batch number 11 commenced on November 22, 1981. As of November 20, 1981, approximately 255,000 gallons of reactor building sump water had been processed. SDS performance parameters for batch 10 are attached.

2. EPICOR II. Processing of SDS effluent through the EPICOR II system continued this week. As of November 20, 1981, approximately 245,000 gallons of reactor building sump water had been polished. Recent performance parameters for EPICOR II are attached.

3. Reactor Building Entries. Reactor building (RB) entries 21 and 22 were completed on November 17 and 20, 1981. These entries are part of an accelerated program during which large scale decontamination experiments will be conducted. Tasks during the entries were performed in preparation for the gross decontamination experiment. Specific tasks accomplished during the two entries were: (1) work commenced on the polar crane to obtain a detailed assessment of damage, and to evaluate repair requirements; (2) extensive still photography documentation of areas on the 305 ft. elevation and the 347 ft. elevation; (3) testing of video equipment to be used for video tape documentation of the reactor building; and (4) placement of a battery powered high reach platform in containment for use during the decontamination test.

Work on the polar crane was terminated earlier than planned when one of the workers inspecting the polar crane reported that he felt hot and stated that he desired to exit the RB. The entire four man polar crane team was ordered to leave the RB by personnel controlling the entry from a command center outside the RB. During the descent from the crane, the individual who reported the apparent heat problem stopped on a platform and loosened his full face respirator. The man appeared exhausted and immobile to personnel in the command center who were monitoring the descent on closed circuit television. A back-up worker was sent into the RB to assist. The full face respirator and some protective clothing were removed from the exhausted individual and he was assisted down from the platform and out of the RB. The man was examined by doctors on site and was released. The individual had small areas of hair and skin contamination which were decontaminated prior to release. A whole body radionuclide count indicated approximately 50 nanocuries of activity. This amount of activity is insignificant from personal health concerns, but is higher than the natural radioactivity in the human body. The occurrence is being evaluated by the NRC staff.

The RB entry scheduled for the week of November 23, 1981, has been cancelled. The next entry is tentatively scheduled for December 3, 1981.

4. Emergency Preparedness On December 2 and 10, 1981, the licensee plans to conduct a "dress rehearsal" drill and annual exercise, respectively, to test the implementation of the TMI-2 Emergency Plan.

Work-up drills were conducted in the past three months in preparation for these exercises. The NRC on-site staff plans to participate in both drills.

Meetings Held

1. The NRC's Advisory Panel for the Decontamination of TMI Unit 2 met on November 16, 1981, in Lebanon. The major topic of discussion was the financial problems that are hindering the pace of the cleanup of Unit 2. The panel heard various groups expressing their opinions on cost sharing approaches and the restart of TMI Unit 1 reactor. The panel decided to obtain and discuss additional economic information during future meetings before taking a position on any of the various proposed resolutions to the financial problem.

The panel unanimously passed a resolution uncoupling the restart of Unit 1 from future Unit 2 financial discussions by stating that "the restart of Unit 1 should be based solely on health, safety and technological considerations and not on economic considerations of the cleanup of Unit 2". The panel also authorized Chairman Minnich to send a letter to the NRC Commissioners urging them to further emphasize the safety significance of continued cleanup delays to convince national groups, e.g. Congress, that the TMI financial problem is not only a local issue, but is also one of national importance requiring prompt resolution.

The next meeting is scheduled to be held on December 10, 1981, from 7:00 to 10:00 PM in Lancaster, 208 North Duke Street. Additional meetings are scheduled for January 13, and January 28, 1982, at the Holiday Inn in Harrisburg.

2. On Thursday, November 19, 1981, Lake Barrett met with a group of area mothers to discuss the forthcoming reactor building decontamination experiment, the status and plans to ship FPICOR II prefilters, reactor vessel embrittlement, inadequate core cooling instrumentation, and operator licensing examinations. They expressed their opinion that Unit 1 should not be restarted prior to the completion of the Unit 2 cleanup.

ATTACHMENT

SDS Performance for Batch Number 10

<u>Radionuclide</u>	<u>Average Influent (uc/ml)</u>	<u>Average Effluent (uc/ml)</u>	<u>Average DF</u>
Cesium 137	1.2×10^2	9.2×10^{-4}	1.3×10^5
Strontium 90	5.3	8.9×10^{-3}	6.0×10^2

EPICOR II Performance for Reactor Building Sump Water
November 11, 1981, to November 18, 1981

<u>Radionuclide</u>	<u>Average Influent (uc/ml)</u>	<u>Average Effluent (uc/ml)</u>	<u>Average DF</u>
Cesium 137	1.0×10^{-3}	2.6×10^{-7}	3.8×10^3
Strontium 90	1.4×10^{-2}	1.4×10^{-5}	1.0×10^3
Antimony 125	1.4×10^{-2}	3.5×10^{-7}	4.0×10^4