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January 17, 1983
NRC/TMI-83-05

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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 January 9, 1983, through January 15, 1983. Major items included in this report are:

- Liquid Effluents
- EPA and NRC Environmental Data
- Radioactive Material and Radwaste Shipments
- Submerged Demineralizer System Status
- EPICOR II Status
- Reactor Building Entries
- SDS Liner Shipment Preparations
- EPICOR II Prefilter Shipment
- Public Meetings

Original signed by
Lake H. Barrett

Lake H. Barrett
Deputy Program Director
TMI Program Office

Enclosure: As stated

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Harold R. Denton
Bernard J. Snyder

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January 17, 1983

cc w/encl:

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SURNAME	LGage:js	BO'Neill	JWhebe	APasano	RBottamy	LBarratt	
DATE	1/17/83	1/17/83	1/17/83	1/17/83	1/17/83	1/17/83	

NRC TMI PROGRAM OFFICE WEEKLY STATUS REPORT

January 9, 1983 - January 15, 1983

Plant Status

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

Available Core Cooling Modes: Mini Decay Heat Removal (MDHR) system.

RCS Pressure Control Mode: Standby Pressure Control System.

Major Parameters (as of 5:00 AM, January 14, 1983) (approximate values):

Average Incore Thermocouples*: 89°F

Maximum Incore Thermocouple*: 129°F

RCS Loop Temperatures:

	A	B
Hot Leg	87°F	83°F
Cold Leg (1)	79°F	83°F
(2)	80°F	80°F

Pressure: 64 psig

Reactor Building: Temperature: 71°F

Pressure: -0.1 psig

Airborne Radionuclide Concentrations:

4.6 E-7 uCi/cc H³
(sample taken 1/12/83)

1.3 E-8 uCi/cc particulates
(sample taken 1/12/83)

1. Effluent and Environmental (Radiological) Information

Liquid effluents from the TMI site released to the Susquehanna River after sampling and monitoring were within the regulatory limits and in accordance with NRC requirements and City of Lancaster Agreement.

During the period December 31, 1982, through January 6, 1983, 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 one-hundred-thousandths (0.00002) of a curie of cesium and less than three one-hundred-thousandths (0.00003) of a curie of tritium were discharged.

*Uncertainties exist as to the exact location and accuracy of these readings.

2. Environmental Protection Agency (EPA) Environmental Data

- The EPA measures Kr-85 concentrations at several environmental monitoring stations and reported the following results:

<u>Location</u>	<u>December 12 - 21, 1982</u> (pCi/m ³)
Goldsboro	26
Middletown	26
Yorkhaven	26
TMI Observation Center	28

- The EPA Middletown Office has not received the environmental Kr-85 results for the samples which were taken subsequent to December 21, 1982 from the EPA's Counting Laboratory at Las Vegas, Nevada. These results will be included in a subsequent 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 periods from January 5, 1983 through January 13, 1983.

3. NRC Environmental Data

Results are from NRC monitoring of the environment around the TMI site.

- 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> (uCi/cc)	<u>Cs-137</u> (uCi/cc)
HP-352	January 4 - 12, 1983	<6.8 E-14	<6.8 E-14

4. Licensee Radioactive Material and Radwaste Shipments

- On January 11, 1983, one SN-1 (Type B) shipping cask containing EPICOR prefilter PF-5 was shipped to Idaho National Engineering Laboratory, Scoville, Idaho.
- On January 12, 1983, 78 drums containing contaminated laundry from Unit 1 and Unit 2 were shipped to Interstate Uniform Services, New Kensington, Pennsylvania.
- On January 13, 1983, one box containing two small quantity check sources was mailed to New England Nuclear Corporation, N. Billerica, Maine.

Major Activities

1. Submerged Demineralizer System (SDS). Processing of SDS batch 41 (48,000 gallons of reactor building sump water) began January 4, 1983. It was interrupted on January 7, 1983, after processing approximately 20,000 gallons, to allow the EPICOR II processing of the water from the "A" once-through-steam-generator (OTSG). In addition, 40,000 gallons of RCS water, which had gone through the "feed-and-bleed" process, have been staged in the "C" reactor coolant bleed tank to await processing.
2. EPICOR II. EPICOR II began processing water from the "A" OTSG, which had been drained into the contaminated drain tanks, on January 8, 1983. It will consist of approximately 35,000 gallons. Subsequent to this, EPICOR II will begin processing of SDS Batch 41.
3. Reactor Building Entries. Five reactor building entries were conducted during the week of January 9, 1983. Principle activities in the reactor building continue to be polar crane refurbishment and decontamination of selected components and areas. The polar crane load test is scheduled for late February, 1983. Reactor building entries are scheduled to continue at the rate of five entries per week during January.

Based on information obtained during a "quick scan" operation (radiation measurements above the reactor plenum) and the leadscrew decontamination experiments, it appears that radiation levels above the reactor plenum are higher and the contamination is more firmly fixed than previously anticipated. "Quick scan" measurements indicated that the gamma dose rate inside the reactor vessel, in the area above the plenum, was in excess of 500 R/hr. Decontamination of a control rod leadscrew segment which was removed during the "quick look" operation (closed circuit television inspection of the core) revealed that the cesium contamination of the leadscrew surface could not be removed with the decontamination techniques that are presently contemplated for use inside the reactor vessel. If the source of the high radiation above the plenum is similar to the leadscrew contamination and cannot be reduced prior to reactor vessel head removal, the existing preliminary concept for reactor vessel disassembly may require substantial modification.

It had been anticipated that borated water flushes could be used to effectively remove radioactive contamination from the plenum surfaces and that the head lift and plenum removal could be made without filling the refueling canal with shield water. Additional radiation measurements and experiments will be performed to confirm the magnitude and tenacity of the surface contamination in the plenum region. The impact of the high radiation levels under the reactor vessel head on the recovery schedule has not been determined. Head removal had been scheduled for the summer of 1983.

4. SDS Liner Shipment Preparations. The licensee is making preparations for the next recombiner loaded SDS shipment, which is tentatively scheduled for January 20, 1983. The shipping preparations will be similar to those for the first shipment, including a monitoring period to demonstrate that non-combustible gas conditions will be maintained for a minimum of twice the expected handling and shipping period.
5. EPICOR II Prefilter Shipment. EPICOR II prefilter liner PF-5 was shipped from TMI to the Idaho National Engineering Laboratory (INEL) on January 11, 1983. This EPICOR prefilter shipment brings to a total of 18 (in a group of 49) prefilters that have been shipped to INEL. One prefilter shipment is scheduled for next week.

Past Meetings

On January 11, 1983, Lake H. Barrett met with the Concerned Mothers of Middletown to discuss TMI related issues. They expressed their concern that TMI Unit 1 should not be restarted prior to completion of the Unit 2 cleanup.

Future Meetings

1. During the ASME week activities January 17-20, 1983, in Sarasota, Florida, Ronald R. Bellamy will speak on TMI related issues.
2. On January 19, 1983, Anthony N. Fasano will speak on the reactor vessel "Quick Look" results at an American Nuclear Society Meeting at Pennsylvania State University, State College campus.
3. On January 24, 1983, Lake H. Barrett will address the Harrisburg Rotary Club on various TMI issues.
4. On February 2, 1983, the Advisory Panel for the decontamination of TMI Unit 2 will hold a meeting from 7:00 to 10:00 p.m. at the Holiday Inn, 23 South Second Street, Harrisburg, Pennsylvania.
5. On February 7, 1983, Lake H. Barrett will meet with Friends and Family of TMI to discuss various TMI related issues.
6. On February 8, 1983, Lake H. Barrett will meet with the Concerned Mothers of Middletown to discuss TMI related issues.