

May 2, 1983
HRC/TMI-83-027

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

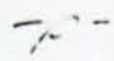
Bernard J. Snyder, Program Director
TMI Program Office

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 April 24, 1983, through April 30, 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
- SUS Liner Shipments
- EPICOR II Prefilter Shipments
- Public Meeting


Lake H. Barrett
Deputy Program Director
TMI Program Office

Enclosure: As stated

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cc w/encl:
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 TMI Program Office Staff (15)
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OFFICE ▶	TMIPO	TMIPO <i>BAE</i>	TMIPO <i>Alasano</i>	TMIPO <i>PG</i>	TMIPO <i>LBarrett</i>		
NAME ▶	GKajman/Imp	BO'Neill	<i>Alasano</i>	<i>PG</i>	LBarrett		
DATE ▶	5/2/83	5/2/83	5/2/83	5/2/83	5/2/83		

NRC TMI PROGRAM OFFICE WEEKLY STATUS REPORT

April 24, 1983 - April 30, 1983

Plant Status

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

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

RCS Pressure Control Mode: Standby Pressure Control System.

Major Parameters (as of 5:40 AM, April 29, 1983) (approximate values)

Average Incore Thermocouples*: 87°F

Maximum Incore Thermocouple*: 115°F

RCS Loop Temperatures:

	A	B
Hot Leg	86°F	84°F
Cold Leg (1)	76°F	76°F
(2)	78°F	76°F

RCS Pressure: 63 psig

Reactor Building: Temperature: 70°F

Pressure: -0.2 psig

Airborne Radionuclide Concentrations:

1.4 E-7 uCi/cc H³
(sample taken 4/27/83)

2.1 E-9 uCi/cc particulates
(sample taken 4/28/83)

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 April 22, 1983, through April 28, 1983, the effluents contained no detectable radioactivity at the discharge point and individual effluent sources, which originated within Unit 2, contained minute amounts of radioactivity. Calculations indicate that less than one ten-millionth (0.0000001) of a curie of cesium was 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 concentration at several environmental monitoring stations and reported the following results:

<u>Location</u>	<u>March 31, 1983 - April 15, 1983</u> (pCi/m ³)
Goldsboro	24
Middletown	27
Yorkhaven	Insufficient for Analysis
TMI Observation Center	28

- The EPA Middletown Office has not received the environmental Kr-85 analytical results for the samples which were taken subsequent to April 15, 1983, 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 period from April 21, 1983, through April 28, 1983.

3. NRC Environmental Data

- 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-367	April 20 - 28, 1983	<6.4 E-14	<6.4 E-14

4. Licensee Radioactive Material and Radwaste Shipments

- On April 25, 1983, one CNSI 8-120-3 (Type B) shipping cask containing Unit 2 EPICOR prefilter No. PF-34 was shipped to EG&G Idaho Inc., Scoville, Idaho.
- On April 27, 1983, one drum containing one resistor bank and two control relays taken from the Unit 2 polar crane was shipped to EG&G Idaho, Inc., Scoville, Idaho.
- On April 27, 1983, one HN-200 (Type B) shipping cask containing Unit 2 EPICOR prefilter No. PF-28 was shipped to EG&G Idaho Inc., Scoville, Idaho.
- On April 28, 1983, 20 steel boxes containing non-compacted trash from Units 1 and 2 were shipped to U.S. Ecology, Hanford burial site, Richland, Washington.

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- On April 28, 1983, one CNSI 1-13C-II (Type B) shipping cask containing Unit 2 SDS liner No. D20027 was shipped to Rockwell Hanford Operations, Richland, Washington.
 - On April 28, 1983, 93 drums containing contaminated laundry from Units 1 and 2 were shipped to Interstate Uniform, New Kensington, Pennsylvania.

Major Activities

1. Submerged Demineralizer System (SDS). SDS processed approximately 34,000 gallons of reactor building sump water during the past week; the performance parameters are included in Attachment 1. In preparation for refurbishing the spent fuel pool for fuel removal, the SDS staging tanks in the "A" spent fuel pool were not used during processing of the latest batch of water. Water from the sump was pumped directly through the SDS system to the monitoring tanks by-passing the tank farm.

Six waste storage tanks were installed in the "A" spent fuel pool to increase radioactive water storage capacity immediately following the accident. The stored water in these tanks was processed, and four (15,000 gallon) tanks were used as staging tanks in the SDS system. Engineering work has commenced to reclaim the "A" spent fuel pool for eventual defueling and fuel storage.

As of April 28, 1983, a total of 1,598,552 gallons of water have been processed through the SDS. In the course of feed and bleed cleanup of the reactor coolant system and decontamination flushes in the reactor building, the same water may be cycled through the SDS several times.

2. EPICOR II. EPICOR II processed approximately 20,500 gallons of SDS effluent during the past week; performance parameters are included in Attachment 1.
3. Reactor Building Entries. Three reactor building entries were completed during the week of April 24, 1983. The polar crane in conjunction with a 5 ton portable hoist was used to move shielding supports from the 305 ft. elevation to the refueling pool. The shielding supports were installed around the control rod drive mechanisms on the reactor vessel head. Lead blankets will be attached to the supports to decrease the radiation levels in the vicinity of the reactor vessel head.

The dose rate in the working areas around the control rod drive service structure has been reduced to less than 200 mr/hr by decontamination and other dose reduction techniques. However, prior to head removal, the control rod lead screws will be raised from their present position inside the reactor vessel to a parked position in the service structure. Radiation levels on the three lead screws, which were removed from the reactor to facilitate the Quick Look inspection, were in excess of 50 R/hr on contact. In the parked position, the remaining 66 lead screws

have a potential to substantially increase radiation levels in the reactor vessel head area. The service structure shielding is being installed to reduce existing radiation levels and to minimize the impact of the anticipated source term increase in the future.

Five reactor building entries have been scheduled for the week of May 1, 1983. One of the tasks scheduled to be performed involves source checking the source range neutron monitors. A 4.59 curie Am Be neutron source will be lowered alongside each of the source range neutron detectors to calibrate the instrumentation. The neutron monitoring circuitry downstream of the detectors has been calibrated periodically, however, this will be the first time since the 1979 accident that the neutron sensors will be included in the calibration. On Wednesday, May 4, 1983, two NRC personnel from the TMIPO will make a two hour reactor building entry to evaluate general conditions in the building.

4. SDS Liner Shipments. The eighth SDS waste liner (D20027), in a group of thirteen, was shipped from TMI to the Rockwell Hanford facility (Richland, Washington) on April 28, 1983. This 10-cubic foot zeolite liner, which contained approximately 30,000 curies of mixed fission products (predominately Cesium-137, Strontium-90, and their daughter products) was loaded with a catalytic recombiner to maintain non-combustible conditions during the handling and shipment period. The next SDS waste liner (D10014) shipment is tentatively scheduled on May 12, 1983.
5. EPICOR II Prefilter (PF) Shipment. Two EPICOR II prefilters (PF-28 and PF-34) were shipped from TMI to the Idaho National Engineering Laboratory (INEL) last week. These shipments represent a total of 36 prefilters (in a group of 50) that have been shipped by the Department of Energy to INEL. One prefilter (PF-37) is scheduled for shipment next week.

Future Meeting

On May 2, 1983, Lake H. Barrett will meet with the Concerned Mothers of Middletown to discuss TMI related issues.

ATTACHMENT 1

SDS PERFORMANCE PARAMETERS

<u>Radionuclide</u>	<u>Average Influent (uc/ml)</u>	<u>Average Effluent (uc/ml)</u>	<u>Average DF</u>
Cesium 137	6.1	3.5×10^{-5}	1.7×10^5
Strontium 90	3.0	2.4×10^{-4}	1.2×10^4

EPICOR II PERFORMANCE PARAMETERS

APRIL 21, 1983 to APRIL 28, 1983

<u>Radionuclide</u>	<u>Average Influent (uc/ml)</u>	<u>Average Effluent (uc/ml)</u>	<u>Average DF</u>
Cesium 137	3.5×10^{-5}	$<2.7 \times 10^{-7}$	$>1.3 \times 10^2$
Strontium 90	4.7×10^{-4}	$<1.6 \times 10^{-5}$	$>2.9 \times 10^1$
Antimony 125	2.2×10^{-3}	$<3.1 \times 10^{-7}$	$>7.1 \times 10^3$