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May 17, 1982
NRC/TMI-82-031

50-320

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 May 9, 1982 to May 15,1982. Major items included in this report are:

-- Liquid Effluents

-- Airborne Effluents

-- NRC and EPA Environmental Data

-- Radioactive Material and Radwaste Shipments

-- Submerged Demineralizer System Status

-- EPICOR II

-- Reactor Coolant System Water Processing

-- Reactor Building Entries

-- Groundwater Monitoring

-- Public Meetings

Original signed by
Lake H. Barrett

Lake H. Barrett
Deputy Program Director
TMI Program Office

Enclosure: As stated

OFFICE						
SURNAME						
DATE						

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DATE	5/17/82	5/ /82	5/ /82	5/ /82	5/17/82	5/17/82	

NRC TMI PROGRAM OFFICE WEEKLY STATUS REPORT

May 9, 1982 - May 15, 1982

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 (DHR) systems, Mini DHR (MDHR) system.

RCS Pressure Control Mode: Standby pressure control (SPC) system.

Backup Pressure Control Modes: MDHR and DHR system.

Major Parameters (as of 0500, May 14, 1982) (approximate values)

Average Incore Thermocouples: 103°F
Maximum Incore Thermocouple: 129°F

RCS Loop Temperatures:

	A	B
Hot Leg	98°F	101°F
Cold Leg (1)	85°F	84°F
(2)	90°F	86°F

Pressure: 96 psig

Reactor Building: Temperature: 72°F
Water level: Elevation 282.8 ft. (0.15 ft. from floor)
Pressure: -0.35 psig
Airborne Radionuclide Concentrations:

4.5 E-7 uCi/cc H^3 (sample taken 5/4/82)

7.8 E-6 uCi/cc Kr^{85} (sample taken 5/4/82)

5.3 E-10 uCi/cc particulates (sample taken 5/13/82)

1. 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 27, 1980.

During the period May 7, 1982, through May 13, 1982, 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 releases to the environment as measured by licensee installed monitors at discharge stacks are listed below. These releases were well within regulatory limits.

	April 1982	
	Unit II	EPICOR II
Noble Gases (Ci)	$<2.29 \times 10^{-6}$	$<2.97 \times 10^{-7}$
Particulates (Ci)	1.50×10^{-6}	3.15×10^{-7}
Tritium (Ci)	1.80	2.30×10^{-3}

3. Environmental Protection Agency (EPA) Environmental Data

-- The EPA Middletown Office has not received the environmental Kr-85 analytical results for the samples which were taken April 16, 1982, through May 7, 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 period from May 5, 1982 through May 13, 1982.

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 sampler:

Sample	Period	I-131 (uCi/cc)	Cs-137 (uCi/cc)
HP-319	May 5, 1982 - May 8, 1982*	<1.4 E-13	<1.4 E-13

*Note: The NRC continuous air sampling equipment was placed out-of-service on May 8, 1982. Repairs to the equipment are in progress and the unit is expected to be returned to service on May 19, 1982.

5. Licensee Radioactive Material and Radwaste Shipment

-- On Friday, May 7, 1982, five 250 milliliter liquid samples from Unit 1 were mailed to Westinghouse Corporation, Madison, Pennsylvania.

-- On Tuesday, May 11, 1982, 10 drums containing Unit 2 miscellaneous submerged demineralizer system (SDS) samples were shipped to Oak Ridge National Laboratories, Oak Ridge, Tennessee.

Major Activities

1. Submerged Demineralizer System (SDS). Processing of SDS batch 26 (reactor coolant bleed tank water) was completed on May 8, 1982. The performance parameters for this batch are included in Attachment 1. The SDS system is now secured for minor maintenance in preparation for processing of reactor coolant system (RCS) water (see RCS processing). Preparations are being made for the first shipment of an SDS vessel to Richland, Washington. SDS vessel number D-15 contains approximately 4,800 curies of predominately cesium 137 and strontium 90. A special Type B shipping cask has been provided for this shipment. The SDS vessel and the shipping cask cavity will be inerted with nitrogen in order to meet the requirements of the Certificate of Compliance (COC) for shipping. The actual shipment is scheduled to start on May 21, 1982 with arrival at Richland expected on May 25, 1982. The receiver, Pacific Northwest Laboratory (PNL), will use this vessel as part of their DOE-sponsored vitrification research and development program.

2. EPICOR II. The EPICOR II system continued to process SDS effluents during the week and its performance parameters are included in Attachment 1.

3. Reactor Coolant System (RCS) Water Processing. Engineering and construction efforts by the licensee in preparation for RCS processing have been completed. Recovery Operations Plan Change 12, which addresses chemistry specifications for chlorides, dissolved oxygen, and dissolved hydrogen, has been approved by the NRC/TMIPO site office and the Chemical Engineering Branch of Nuclear Reactor Regulation. The functional test of modifications and sampling systems for RCS processing is completed. RCS processing through SDS will occur on an approximately 14 day cycle. The first seven days of the cycle will consist of RCS letdown to the "C" reactor coolant bleed tank (RCBT), concurrent with makeup to the RCS from the "A" RCBT, until approximately 50,000 gallons of RCS water are in the "C" RCBT. The next seven days of the cycle will constitute actual processing of the 50,000 gallon batch from the "C" RCBT through the SDS system. The process will bypass the SDS feed tanks. This seven day feed and bleed cycle followed by the seven day SDS cycle will continue until all the RCS water has been processed. The RCS processing operation is scheduled to begin on May 17, 1982.

4. Reactor Building Entries. The next reactor building entry is scheduled for Thursday, May 20, 1982. Supporting activities for the control rod drive lead screw removal will commence during this entry. Scheduled tasks include radiation surveys of reactor coolant system high point vents and the in containment nitrogen supply system. A dose rate monitoring device will be lowered into various areas inside the "D-rings" (reactor coolant system radiation barriers) to determine whether the radiation levels in the "D-rings" will permit personnel access to attach a tygon tube type water level monitor to the reactor coolant system.

Prior to lead screw removal, the reactor coolant system will be depressurized and the primary water level will be lowered below the tops of the control rod drive housings. The lead screw removal and closed circuit television inspection of the reactor vessel upper internals is scheduled for July 1982.

5. Groundwater Monitoring. The elevated tritium concentrations in groundwater in the vicinity of the borated water storage tank have remained in essentially the same range as identified in previous Weekly Status Reports. Attachment 2 includes a sketch of the groundwater sampling locations (test borings) with the most recent tritium analysis results annotated next to each test boring. The tritium activities noted for wells 2, 3, 10, 16 and 17 were obtained from water samples taken on May 11, 1982. Water samples from the remaining wells were obtained on April 13, 1982 and analyzed by an independent offsite laboratory.

Past Meetings

1. On May 11, 1982, Lake Barrett participated in a panel discussion on TMI issues, which was locally televised in the Central Pennsylvania area. Other panelists included Susan Shanaman, Chairman, Pennsylvania State Public Utilities Commission; General Dewitt Smith, Director, Pennsylvania Emergency Management Agency; Mr. Philip Clark, Executive Vice-President, General Public Utilities; Mr. Steven Sholly, Union of Concerned Scientists; Ms. Kathy McCaughin, Bipartisian Committee to Vote "No", and Mr. Earl Peters, Friends and Family of TMI. The moderator for the panel discussion was Representative James Wright, Chairman of the House Select Committee on TMI. The purpose of the discussion was to provide information to residents of the Dauphin, Cumberland and Lebanon counties, which have referendums on May 18th to answer yes or no to the following question: "Do you favor the restart of TMI Unit 1, which was not involved in the accident of March 28, 1979?"

2. On May 11, 1982, Lake Barrett met with a group of Middletown mothers to discuss various TMI Unit 1 and Unit 2 issues. They expressed their opinion that Unit 1 should not be restarted until Unit 2 is cleaned up.

Future Meetings

1. On May 19, 1982, Lake Barrett will meet in the Middletown Office with several Middletown area residents to discuss TMI issues.

2. On May 20, 1982, Harold Denton, Bernard Snyder and Lake Barrett will testify in Washington, DC, before Senator Alan K. Simpsons' Senate Subcommittee on Nuclear Regulation, Environment and Public Works Committee.

ATTACHMENT 1

SDS PERFORMANCE FOR BATCH NUMBER 26

Radionuclide	Average Influent (uc/ml)	Average Effluent (uc/ml)	Average DF
Cesium 137	1.5	1.5×10^{-3}	1.0×10^{3}
Strontium 90	9.1×10^{-2}	9.8×10^{-3}	9.3

EPICOR II PERFORMANCE
May 7, 1982 - May 14, 1982

Radionuclide	Average Influent (uc/ml)	Average Effluent (uc/ml)	Average DF
Cesium 137	1.5×10^{-3}	4.5×10^{-7}	3.3×10^{3}
Strontium 90	6.2×10^{-3}	$<1.1 \times 10^{-5}$	$>5.6 \times 10^{2}$
Antimony 125	3.5×10^{-4}	$<3.4 \times 10^{-7}$	$>1.0 \times 10^{3}$

TEST BORING H^3 CONCENTRATIONS