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February 12, 1982
NRC/TMI-82-008

50-320

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

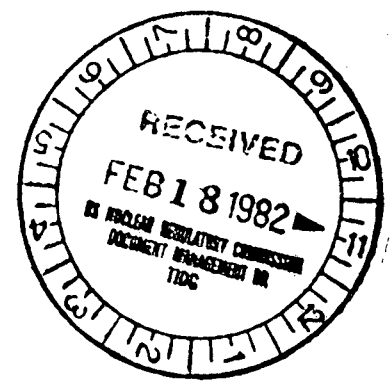
Bernard J. Snyder, Program Director
TMI Program Office

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 February 7, 1982 to February 12, 1982. 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 Exposure
- Submerged Demineralizer System Status
- EPICOR II
- Reactor Building Entries
- Tritium Increase in Ground Water Samples
- Chairman Palladino Visit to TMI
- Public Meetings



Original signed by
Lake H. Barrett

Lake H. Barrett
Deputy Program Director
TMI Program Office

OFFICE	Enclosure: As stated				
SURNAME					
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Harold R. Denton
Bernard J. Snyder

-2-

February 12, 1982

cc w/encl:
EDO
OGC
Office Directors
Commissioner's Technical Assistants
NRR Division Directors
NRR A/D's
Regional Directors
IE Division Directors
TAS
EIS
TMI Program Office Staff (15)
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DATE	2/12/82	2/14/82	2/14/82	2/12/82	2/14/82	2/12/82

NRC TMI PROGRAM OFFICE WEEKLY STATUS REPORT

February 7, 1982 - February 12, 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 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, February 12, 1982) (approximate values)

Average Incore Thermocouples: 104°F

Maximum Incore Thermocouple: 135°F

RCS Loop Temperatures:

	A	B
Hot Leg	95°F	99°F
Cold Leg (1)	76°F	82°F
(2)	79°F	88°F

RCS Pressure: 96 psig

Reactor Building: Temperature: 62°F

Water level: Elevation 284.1 ft. (1.6 ft. from floor)

Pressure: -0.34 psig

Airborne Radionuclide Concentrations:

1.8 E-6 uCi/cc H³
(sample taken 2/8/82)

5.5 E-6 uCi/cc Kr⁸⁵
(sample taken 2/9/82)

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 February 5, 1982, through February 10, 1982, 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 one ten-millionth (0.0000001) of a curie of cesium was discharged.

- 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:

	November		December	
	<u>Unit II</u>	<u>EPICOR II</u>	<u>Unit II</u>	<u>EPICOR II</u>
Noble Gases (Ci)	5.82	5.34	24.4	7.39
Particulates (Ci)	1.01 E-6	4.17 E-5	1.14 E-5	1.56 E-7
Tritium (Ci)	13.0	1.2 E-2	1.14	3.1 E-2

The above releases represent a small fraction of the allowable regulatory limits. These quantities are consistent with previous releases associated with routine operations. Instantaneous airborne effluents are measured on a continuous basis, however, for accurate calculation of total curies released, effluent samples are analyzed in the laboratory and the resulting data evaluated and tabulated.

3. Environmental Protection Agency (EPA) Environmental Data.

- The EPA Middletown Office has not received the analytical results for Kr-85 measurements around the TMI site from the EPA's Counting Laboratory at Las Vegas, Nevada. When these results become available, they will be included in a subsequent report.
- No radiation above normally occurring background levels was detected in any of the samples collected from EPA's air and gamma rate networks during the period from February 3, 1982 through February 11, 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:

<u>Sample</u>	<u>Period</u>	<u>I-131</u> <u>(uCi/cc)</u>	<u>Cs-137</u> <u>(uCi/cc)</u>
HP-306	February 3, 1982 - February 10, 1982	<6.2 E-14	<6.2 E-14

5. License Radioactive Material Radwaste Shipments.

- On Monday, February 8, 1982, a one liter liquid sample from the Unit 1 "A" decay heat removal system was mailed to Babcock and Wilcox (B&W), Lynchburg, Virginia.

- On Wednesday, February 10, 1982, a one liter liquid sample from the Unit 1 waste evaporator and a one liter liquid sample from the "A" waste evaporator condensate storage tank were sent to the Radiation Management Corporation, Philadelphia, Pennsylvania.
- On Wednesday, February 10, 1982, a 250 ml liquid sample from the Unit 1 "A" decay heat removal system was sent to Vermont Yankee, Vernon, Vermont.
- On Wednesday, February 10, 1982, 96 surface samples from the Unit 2 reactor building were sent to EG & G, Scoville, Idaho.

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

December 1981	21 man-rem*
Total 1981 (January-December)	147 man-rem

* Man-rem is an expression for the summation of whole body doses to individuals in a group. Thus, if each member of a population group of 1,000 people were to receive a dose of 0.001 rem (1 millirem), or if two people were to receive a dose of 0.5 rem (500 millirem) each, the total man-rem dose in each case would be one man-rem.

Major Activities

1. Submerged Demineralizer System (SDS). Transfer of approximately 20,000 gallons of water (batch 19) from the reactor building was performed on February 7, 1982. On February 7, processing of batch 19 commenced. On February 9, processing of batch 19 was terminated because of a malfunctioning sample valve. Transfer of batch 20 (32,000 gallons) from the reactor building sump commenced on February 9 and completed on February 10. The SDS was restarted on February 11, 1982. To date approximately 540,000 gallons of water has been transferred from the reactor building sump. SDS performance parameters for batch 19 are enclosed.
2. EPICOR II. The EPICOR II system continued to process SDS effluents during the report period. Performance parameters are enclosed.
3. Reactor Building Entries. There have been no entries into the reactor building (RB) since February 4, 1982. The next entries are scheduled for February 16 and 17, 1982. Major tasks planned for the next two entries include the following:
 - Installation of new fire hoses
 - Power lift installation/load test (device to transit to the polar crane)
 - Portable, gamma spectrometer survey of the 347 ft. elevation
 - Installation of con hoses through penetration R-561

4. Tritium Increase In Ground Water Samples. Tritium levels in water samples from several test borings (test borings 2, 16 and 17) in the vicinity of the borated water storage tank (BWST) have increased substantially in February. The licensee has subsequently increased the sampling frequency to daily sampling of all test borings. The NRC has obtained a ground water sample for independent analysis, and has also contacted EPA to perform a second independent analysis. A map showing the location of the test borings is included as Attachment 2, with figures indicating the highest measured recent concentrations.

The tritium levels detected to date are below the maximum permissible concentration (MPC) for unrestricted areas and pose no hazard to workers or the general public. It is suspected that the increase in ground water activity resulted from a leak of BWST water on January 13, 1982 (see Weekly Status Report dated January 18, 1982). The estimated 50 gallons of leakage contained the following isotopes:

H ³	1.1 x 10 ⁻¹ uCi/ml
Sr ⁹⁰	2.9 x 10 ⁻⁶ uCi/ml
Cs ¹³⁴	1.6 x 10 ⁻⁴ uCi/ml
Cs ¹³⁷	3.6 x 10 ⁻⁴ uCi/ml

Since soil absorbs and slows the migration of these nuclides to varying degrees, the potential for detection of these nuclides in future well samples exists. It is expected that samples taken in the future may contain these nuclides.

Chairman Palladino Visit to TMI

On Tuesday, February 23, 1982, NRC Chairman Nunzio Palladino is scheduled to come to Three Mile Island to meet with the NRC staff and review activities at the site. It is expected that a short press conference for the news media will be held at the NRC Middletown Office following his visit.

Future Meetings

1. On Friday, February 19, 1982, Lake Barrett will meet with the Middletown Mothers to discuss TMI related issues in general.
2. On Friday, February 26, 1982, Lake Barrett will be speaking for the dinner meeting being held by the Engineers Week Joint Planning Council to honor Lehigh Valley's Engineer of the Year and Young Engineer of the Year.
3. On Saturday, March 13, 1982, Lake Barrett will address the Society of Manufacturing Engineers in Williamsport, PA, on the cleanup of TMI and general aspects of nuclear power.

ATTACHMENT 1

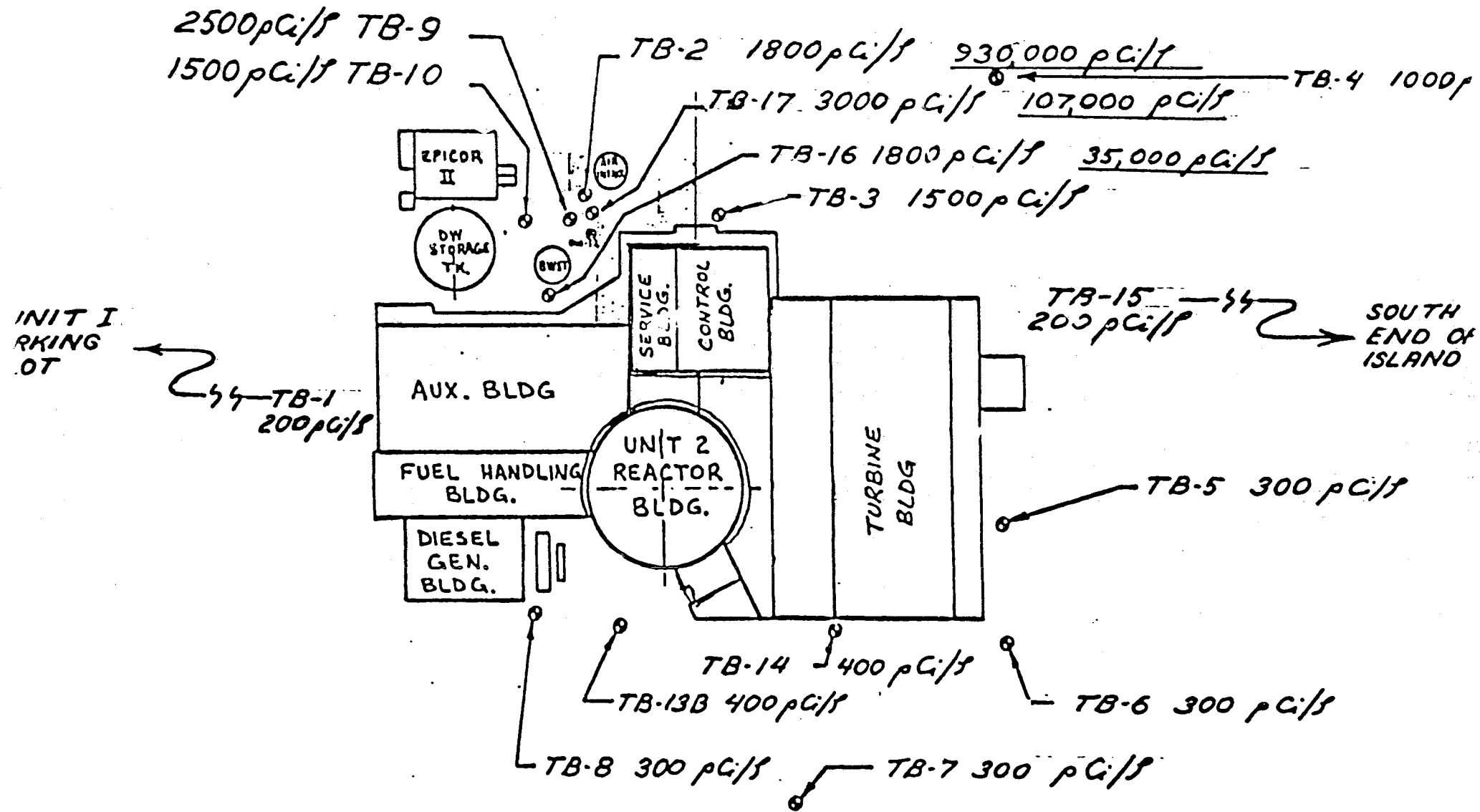
SDS Performance for Batch Number 19

<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	5.4×10^{-4}	2.1×10^5
Strontium 90	4.8	6.4×10^{-3}	7.5×10^2

EPICOR II Performance
February 2, 1982 to February 6, 1982

<u>Radionuclide</u>	<u>Average Influent (uc/ml)</u>	<u>Average Effluent (uc/ml)</u>	<u>Average DF</u>
Cesium 137	6.6×10^{-4}	2.4×10^{-7}	2.8×10^3
Strontium 90	9.6×10^{-3}	5.8×10^{-6}	1.3×10^3
Antimony 125	1.1×10^{-2}	$<4.1 \times 10^{-7}$	$>2.7 \times 10^4$

TEST BORING LOCATIONS



pCi/l VALUES ADJACENT TO EACH TEST BORING INDICATE NOMINAL VALUES OF TRITIUM DETECTED IN THAT BORING

TB's 2, 16, & 17 INCLUDE AN UNDERLINED TRITIUM CONCENTRATION WHICH REPRESENTS THE HIGHEST CONCENTRATION DETECTED IN EARLY FEBRUARY 1982