

August 20, 1984
NRC/THI-84-061

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

Bernard J. Snyder, Program Director
THI Program Office

FROM: William D. Travers, Acting Deputy Program Director
THI Program Office

SUBJECT: HRC THI PROGRAM OFFICE WEEKLY STATUS REPORT FOR
August 12, 1984 - August 18, 1984

Data from effluent and environmental monitoring systems indicated no plant release in excess of regulatory limits. Plant parameters showed no significant changes. The reactor coolant system is open, with the internals indexing fixture and cover in place.

Site activities this period included: reactor building floor scabbling, repositioning equipment after head lift, and decontamination of the auxiliary and fuel handling buildings. Five reactor building entries were made this week. (For more details see appropriate paragraphs below.)

Significant items covered in the enclosure are:

- Reactor Building Activities
- Auxiliary and Fuel Handling Building Activities
- Waste Water Management Activities
- Public Meeting

Summary sheets included in this report are:

- Liquid Effluent Data
- Environmental Data
- Plant Status Data
- Waste Water Processing Data

ORIGINAL SIGNED BY:

William D. Travers
Acting Deputy Program Director
THI Program Office

Enclosure: As stated

THI-84-061

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ENCLOSURE

REACTOR BUILDING ACTIVITIES:

Reactor building floor decontamination and general housekeeping are continuing in the reactor building following the head lift. Floor decontamination using the scabbling device which removes surface paint and the upper layer of concrete is time consuming and the work is typically performed during day shift, five days per week. Licensee radiological engineers have concluded that scabbling reactor building floor surfaces will result in an overall man-rem savings over the course of the cleanup. Scabbling will be the primary activity in the reactor building for the next several weeks.

On August 17, 1984, primary water processing commenced for the first time since the reactor vessel head lift. In this mode, reactor coolant water is pumped from the internals indexing fixture through two parallel trains of the submerged demineralizer system to a reactor coolant bleed tank (RCBT). At the same time borated water is pumped from a second RCBT into the reactor coolant system to maintain a consistent water inventory in the primary system.

AUXILIARY AND FUEL HANDLING BUILDING ACTIVITIES:

Work continues on the "A" fuel pool refurbishment. Efforts are underway to identify an acceptable recipient for tanks which had been installed in the "A" fuel pool to store contaminated water following the accident. Permissible internal contamination levels and transportation requirements will be determined after a recipient is identified.

A portable cement solidification system is being operated in the truck bay. The wastes consist of spent EPICOR resins, leakage containment resins from the submerged demineralizer system, water from the concentrated waste storage tanks and oily water from the decay heat vault sumps. The processed wastes are intended to meet the stability requirements for shallow land burial.

Installation work and testing continues on the makeup and purification demineralizer elution system. A late September startup of this project is expected.

WASTE WATER MANAGEMENT ACTIVITIES:

The submerged demineralizer system (SDS) processed batch 102 from the "C" reactor coolant bleed tank (RCBT) on August 16-17, 1984. The batch was processed through two parallel trains of the SDS in order to prepare for processing of the reactor coolant system directly from the internals indexing fixture. Total volume processed was 5,107 gallons.

EPICOR II processed batch 221 from the "A" RCBT on August 9-11, 1984. Total volume processed was 17,000 gallons.

Batch 222 was processed through EPICOR II on August 11, 1984, from the chemical cleaning building sump. Total volume processed was 3,084 gallons.

See Appendix 4 for a water processing summary.

PUBLIC MEETING:

On September 19, 1984, the Advisory Panel for the Decontamination of Three Mile Island Unit 2 will meet from 7:00 PM to 10:00 PM in the Holiday Inn, 23 South Second Street, Harrisburg, Pennsylvania. The meeting will be open to the public.

Persons desiring to submit topics or questions for consideration by the Advisory Panel are asked to contact, in writing, Mayor Arthur Morris, 120 North Duke Street, Lancaster, Pennsylvania 17602. Persons desiring the opportunity to speak before the Panel are asked to contact Mr. Thomas Smithgall at 2122 Marietta Avenue, Lancaster, Pennsylvania 17603 (telephone 717-291-1041).

APPENDIX 1

LIQUID EFFLUENT DATA

GPU Nuclear

Based on sampling and monitoring, liquid effluents from the TMI site released to the Susquehanna River were determined to be within regulatory limits and in accordance with NRC requirements and the City of Lancaster Agreement.

During the period August 10 through August 16, 1984, liquid effluents contained no detectable radioactivity at the discharge point. Individual effluent sources originating within Unit 2 contained minute amounts of radioactivity. Calculations indicate that less than $2.9 \text{ E-}6$ (0.0000029) curies of cesium-137 was discharged.

Environmental Protection Agency

Lancaster Water Samples:	7 samples
Period Covered:	July 29 - August 4, 1984
Results:	Gamma Scan Negative
TMI Water Samples:	7 samples
Period Covered:	July 29 - August 4, 1984
Results:	Gamma Scan Negative

APPENDIX 2

ENVIRONMENTAL DATA

NRC Environmental Data

The NRC operated continuous outdoor air sampler at the TMI site did not detect any reactor related radioactivity. The air sampler analysis results are listed below.

<u>Sample</u>	<u>Period</u>	<u>Volume</u>	<u>I-131 & Cs-137</u> <u>(uCi/cc)</u>
HP-452	August 8 - 15, 1984	469.7 m ³	<7.5 E-14

APPENDIX 3

PLANT STATUS

Reactor Vessel Configuration: Reactor vessel open with modified internals indexing fixture installed

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

Available Core Cooling/Makeup Sources:

Standby pressure control (SPC) system
Reactor coolant bleed tank (RCBT) water transfer system
Mini decay heat removal (MDHR) system

Major Parameters as of 5:00 AM, August 17, 1984 (approximate values):

Reactor Coolant System:

Loop Temperatures:

	A	B
Hot Leg*	65°F	71°F
Cold Leg (1)	60°F	62°F
(2)	62°F	66°F

Reactor Core:

Average Incore Thermocouples:** 96°F
Maximum Incore Thermocouple:** 134°F
Decay Heat: 16.2 kilowatts

Reactor building Temperature: 61°F
Pressure: -0.05 psig

Airborne Radionuclide Concentrations:

Tritium: 2.3 E-7 uCi/cc H³ (sample 8/13/84)
Particulates: 3.6 E-9 uCi/cc (sample 8/10/84)
predominately Cs-137

*Since the RCS is drained down below these temperature detectors, they no longer are indicative of RCS temperatures.

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

APPENDIX 4WASTE WATER PROCESSING DATASubmerged Demineralizer System (SDS)

<u>Batch</u>	<u>Source</u>	<u>Volume</u>	<u>Processing-Dates</u>
93	Lower Tank Farm	15,381	June 7-15, 1984
98	Reactor Building Sump	27,080	July 12-16, 1984
99	Neutralizer Tank	13,201	July 29- August 5, 1984
100	"C" Reactor Coolant Bleed Tank	20,670	August 5-8, 1984
111	Waste Gas Decay Tank	1513	August 9, 1984

SDS Performance Parameters

<u>Batch</u>	<u>Radionuclide</u>	<u>Average Influent (uc/ml)</u>	<u>Average Effluent (uc/ml)</u>	<u>Percent Removed (%)</u>
93	Cesium 137	4.0 E-2	1.1 E-4	99.71
	Strontium 90	3.6 E+0	2.3 E-3	99.94
98	Cesium 137	8.3 E+0	3.4 E-5	99.99+
	Strontium 90	3.5 E+0	1.3 E-2	99.63
99	Cesium 137	7.1 E-1	1.3 E-4	99.98
	Strontium 90	5.1 E-1	7.4 E-3	98.55
100	Cesium 137	1.1 E-1	9.8 E-5	99.91
	Strontium 90	2.6 E-1	2.4 E-3	99.11
101	Cesium 137	6.9 E-3	3.9 E-5	99.43
	Strontium 90	4.1 E-1	3.0 E-3	99.27

EPICOR 11

<u>Batch</u>	<u>Source</u>	<u>Volume</u>	<u>Processing-Dates</u>
218	"B" Monitor Tank	10,498	July 16-17, 1984
219	"A" Monitor Tank	10,518	July 17-18, 1984
220	"B" Reactor Coolant Bleed Tank	19,962	July 26-28, 1984

EPICOR Performance Parameters

<u>Batch</u>	<u>Radionuclide</u>	<u>Average Influent (uc/ml)</u>	<u>Average Effluent (uc/ml)</u>	<u>Percent Removed (%)</u>
218	Cesium 137	1.0 E-5	1.8 E-7	98.20
	Strontium 90	1.5 E-2	6.6 E-7	99.96
	Antimony 125	2.3 E-2	5.2 E-7	99.99+
219	Cesium 137	1.8 E-5	3.1 E-7	98.28
	Strontium 90	1.9 E-2	1.2 E-5	99.94
	Antimony 125	2.2 E-2	5.4 E-7	99.99+
220	Cesium 137	4.6 E-2	2.2 E-7	99.99+
	Strontium 90	1.5 E-1	7.5 E-6	99.99+
	Antimony 125	1.2 E-1	5.4 E-7	99.99+