

December 3, 1984
NRC/THI-84-085

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

Bernard J. Snyder, Program Director
THI Program Office

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

SUBJECT: NRC THI PROGRAM OFFICE WEEKLY STATUS REPORT FOR
NOVEMBER 25, 1984 - DECEMBER 1, 1984

Data from effluent and environmental monitoring systems indicated no plant release in excess of regulatory limits. Waste processing continued on a routine basis. Plant parameters have shown no significant changes. Other site activities this period included: continued fuel pool "A" refurbishment, building decontamination, and makeup and demineralizer elution, and preparations for plenum jacking.

Significant items covered in the enclosure are:

- Reactor Building Activities
- Auxiliary and Fuel Handling Building Activities
- Groundwater Tritium Monitoring

Summary sheets included in this report are:

- Liquid Effluent and Environmental Data
- Groundwater Tritium Concentrations
- Radioactive Material/Waste Shipments
- Plant Status Data

ORIGINAL SIGNED BY:

William D. Travers
Deputy Program Director
THI Program Office

Enclosure: As stated

8412070497 841203
PDR ADOCK 05000320
R PDR

*IDR-5
TME*

OFFICE ►									
SURNAME ►									
DATE ►									

INTERNAL DISTRIBUTION

EDO
OGC
Office Directors
Commissioner's Technical Assistants
NRR Division Directors
NRR A/D's
Regional Administrators
IE Division Directors
TAS
EIS
THI Program Office Staff (10)
PHS
EPA
DOE
RI Division Directors
Public Affairs, RI
State Liaison, RI
TMPO HQ r/f
THI SITE r/f
CENTRAL FILE
NRC PDR
LOCAL PDR
THI-2 Project
Section File

OFFICE ▶	TMPO <i>DJC</i>	TMPO <i>RC</i>	TMPO <i>AG</i>	TMPO		
SURNAME ▶	DCollins/Imp	RCool	RGrant	WTrayers		
DATE ▶	12/3/84	12/3/84	12/3/84	WIT		

ENCLOSURE

REACTOR BUILDING ACTIVITIES:

Hydraulic jacks are being installed in the reactor vessel for use in initiating the removal of the plenum assembly. The plenum is a 55-ton cylindrical structure which must be removed to access the fuel cavity for defueling. One jack was successfully installed on Friday, November 30, 1984. Structural interference was encountered inside the vessel during the installation of the second jack. The jack was removed for modification. The remaining two jacks are scheduled to be installed on Monday, December 3, 1984.

After all four jacks are in place, the plenum will be jacked to 9 inches. The jacks are designed to free the plenum from any potential binding and also to provide a controlled means to lift the plenum past areas of potential interference. Assuming expeditious resolution of the structural interference problem, jacking to 9 inches is expected to be completed in December, 1984.

AUXILIARY AND FUEL HANDLING BUILDING ACTIVITIES:

Decontamination of the "A" fuel pool inner surfaces continued. The makeup and purification demineralizer elution process has continued. Water spray decontamination of cubicles has continued, including the makeup piping valve alleys in the fuel handling building.

GROUNDWATER TRITIUM MONITORING:

The TMI groundwater monitoring program was instituted in 1980 to detect possible radioactive liquid from TMI-2 into the underlying groundwater. The borated water storage tank (BWST) has experienced equipment leaks since 1979. There have been no other confirmed leakage sources. Excavation in 1981 around the BWST may have caused movement of ground water from under the BWST to the sampling well locations. Major modifications around the BWST have included a curbing and siding around piping to provide collection and preclude radioactivity washout. The most recent leak is postulated to have been from a sample line valve over a month long period, beginning in August 1983. Since the program's inception, tritium (H-3) has been the only radioisotope detected consistently. Tritium was detected in groundwater samples taken within the inner security fence (the protected area) adjacent to the Unit 2 reactor containment building and the BWST. Tritium concentrations in the groundwater have ranged from background (about 300 pico curies per liter (pCi/l))* to 1.1 E6 pCi/l. In all cases, the tritium concentrations have been below the maximum permissible concentration in water for restricted areas.

Periodically, trace concentrations of radioactive cesium and strontium have been detected in some of the monitoring locations. These concentrations were very close to the analytical lower limit of detectability. Typically, for these samples, the radioactivity could not be identified again if the sample were reanalyzed, or if a second sample was taken at a given monitoring location.

Appendix 2 presents the most recent concentrations of tritium in the groundwater at TMI-2.

*a pico curie is 0.000,000,000,001 of a curie or a trillionth of a curie.

APPENDIX 1

LIQUID EFFLUENT AND ENVIRONMENTAL 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 November 23, 1984 through November 29, 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 1.8 E-6 (0.0000018) of a curie of Cs-137 and less than 2.3 E-6 (0.0000023) of a curie of gross beta activity were discharged.

Environmental Protection Agency

Lancaster Water Samples: 7 samples

Period Covered: November 11 - November 17, 1984

Results: Gamma Scan Negative for reactor related radioactivity

TMI Water Samples: 7 samples

Period Covered: November 10 - November 17, 1984

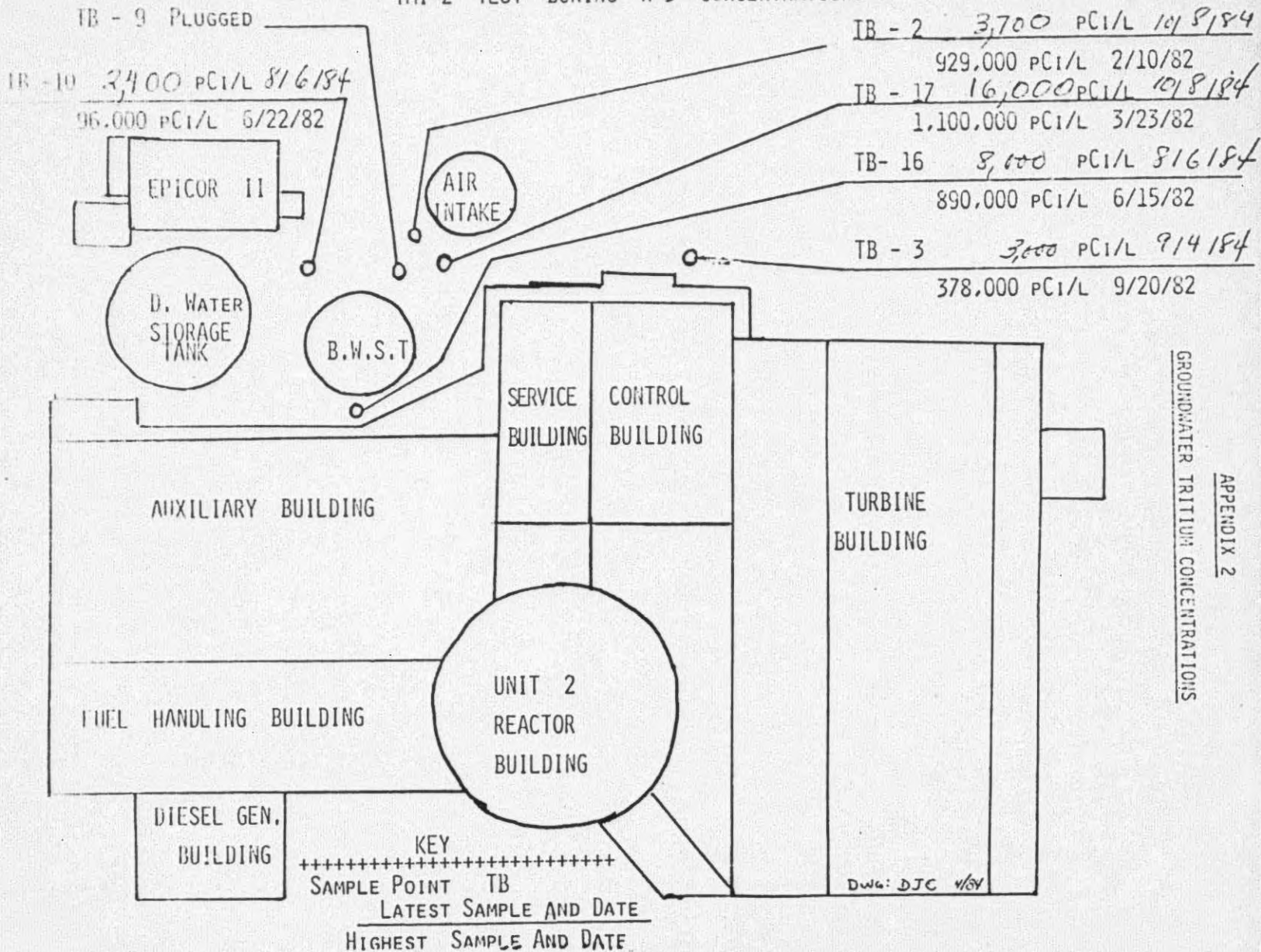
Results: Gamma Scan Negative for reactor related radioactivity

NRC Environmental Data

The NRC operated continuous outdoor air sampler at the TMI site did not detect any reactor related radioactivity. The air sampler parameters are listed below. The analysis results were less than the lower limit of detectability of the analytical instruments: 4.9 E-14 uCi/cc for I-131 and 4.9 E-14 uCi/cc for Cs-137.

<u>Sample</u>	<u>Period</u>	<u>Volume</u>
HP-446	November 16 - November 23, 1984	717.8m ³

TMI-2 TEST BORING H-3 CONCENTRATIONS



GROUNDWATER TRITIUM CONCENTRATIONS

APPENDIX 3

NOVEMBER 1984 SHIPMENTS: RADIOACTIVE MATERIAL/RADIOACTIVE WASTE

- On November 5, 1984, a combined unit waste shipment consisting of a dewatered spent resin liner and 72 barrels of compacted radioactive waste was sent to Hanford, Washington.
- On November 6, 1984, a Unit 2 shipment of radioactively contaminated equipment was sent to the Idaho National Engineering Laboratory at Scoville, Idaho.
- On November 7, 1984, a combined unit contaminated laundry shipment of 88 drums and 3 boxes was sent to Interstate Nuclear Services at Royersford, Pennsylvania.
- On November 8, 1984, a Unit 2 shipment of dewatered spent radioactive resin in a steel liner was sent to Hanford, Washington.
- On November 9, 1984, a Unit 1 radioactive liquid sample shipment was sent to Babcock and Wilcox, Lynchburg, Virginia.
- On November 9, 1984, a Unit 1 radioactive liquid sample shipment was sent to Teledyne Isotopes, Westwood, New Jersey.
- On November 14, 1984, a Unit 1 shipment consisting of an instrument calibration unit was sent to Victoreen, Inc., Cleveland, Ohio.
- On November 14, 1984, a Unit 1 shipment consisting of two steel liners containing depleted resins was sent to Barnwell, South Carolina.
- On November 14, 1984, a combined unit contaminated laundry shipment of 86 drums and 2 boxes was sent to Interstate Nuclear Services at Royersford, Pennsylvania.
- On November 15, 1984, a combined unit shipment consisting of 18 boxes of noncompacted radioactively contaminated waste was sent to Hanford, Washington.
- On November 19, 1984, a Unit 1 shipment consisting of spent dewatered resins in a liner was sent to Barnwell, South Carolina.
- On November 21, 1984, a combined unit contaminated laundry shipment of 51 drums and 5 boxes was sent to Interstate Nuclear Services at Royersford, Pennsylvania.
- On November 29, 1984, two Unit 1 shipments, each consisting of two steel containers of depleted resins, were sent to Hanford, Washington.

APPENDIX 4

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 6:00 AM, November 30, 1984 (approximate values):

Reactor Coolant System:

Loop Temperatures:

	A	B
Cold Leg (1)	60°F	68°F
(2)	60°F	68°F

Reactor Core:

Average Incore Thermocouples:* 95°F
Maximum Incore Thermocouple:* 104°F
Decay Heat: 14.5 kilowatts

Reactor Building: Temperature: 63°F
Pressure: -0.07 psig

Airborne Radionuclide Concentrations:

Tritium: 3.8 E-9 uCi/cc (sample 11/30/84)
Particulates: 1.8 E-10 uCi/cc (sample 11/29/84)
predominately Cs-137

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