July 25, 1983
NRC/TMI-83-047

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 FOR
July 17 - July 23, 1983

Data from effluent and environmental monitoring systems indicated no plant releases in excess of regulatory limits. Waste shipments and water processing tasks continued on a routine basis. Plant parameters showed no significant changes. General clean-up and preparations for headlift continued. The reactor coolant system is scheduled to be depressurized next week to prepare for underhead inspections.

Major activities this week were ongoing decontamination of drains and systems in the Auxiliary Building, continued decon facility construction, "A" spent fuel pool refurbishment, procedure review, preparations for underhead characterization, and continued followup of polar crane issues. Four Reactor Building entries supported miscellaneous tasks. (For more details see appropriate paragraphs below.)

Significant items included in the enclosure are:

-- Auxiliary and Fuel Handling Activities
-- Reactor Building Activities
-- Polar Crane Status
-- Spent Fuel Pool "A" Refurbishment
-- Waste Management Activities
-- Public Meeting

Data summary sheets included in this report are:

-- Liquid Effluents
-- Environmental Data
-- Radioactive Material/Radwaste Shipment Data
-- Water Processing Data
-- Plant Status Data

Original signed by
Lake H. Barrett

Lake H. Barrett
Deputy Program Director
TMI Program Office

Enclosure: As stated

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ENCLOSURE

AUXILIARY AND FUEL HANDLING BUILDING ACTIVITIES:

The major ongoing activity in the Auxiliary and Fuel Handling Buildings (AFHB) continues to be the decontamination of the 282' elevation. No remote decontamination was performed since the robot malfunctioned during its last use. Cubicle decon work may resume once the robot is cleaned and repaired. Cleaning of the Auxiliary and Fuel Handling Building floor drains have been terminated due to budgetary constraints. Shielding was installed around a highly radioactive pipe in the waste evaporator cubicle to reduce dose rates for maintenance work.

Routine trash compaction and tool separation/decontamination continued in support of other tasks and activities presently in progress.

Expansion of the decontamination facility continued with the partial installation of the stainless steel floor and service air and water system. The duct work is in place for the ventilation system. Supporting procedures governing the operation and use of the newly purchased decontamination equipment remain in the licensee's review chain. Construction of the facility should be completed in late August.

REACTOR BUILDING ACTIVITIES:

Four reactor building entries were completed during the week of July 17, 1983 and three entries are scheduled for the week of July 24, 1983. On Monday, July 25, 1983, the implementation of procedures to depressurize and lower the water level in the reactor coolant system will commence in preparation for the reactor vessel Underhead Characterization Study. The primary system water level will be lowered in stages to permit the removal of one control rod drive mechanism (CRDM) and eventually to expose the top of the upper plenum assembly for dose rate measurements. A contingency closure has been provided for the pressure boundary at the disassembled CRDM nozzle, however it is anticipated that the reactor coolant system will remain depressurized and partially drained following the removal of the CRDM.

The NRC has completed the safety evaluations and procedure reviews of the initial tasks associated with the underhead characterization. Approved procedures are in place for CRDM removal, for lowering the primary system water to a level approximately one foot below the top of the upper plenum assembly (10 feet above the core region) and for taking a series of radiation measurements in this configuration. During this time, a closed circuit television inspection will be performed of the plenum surfaces and the underside of the reactor head. Debris/swipe samples will be obtained from the surface of the plenum. An ultrasonic device will be used to obtain a topographical outline of the damaged core.

As part of the underhead characterization task, the NRC has established a contract with PNL to review major elements of this task (including radiation measurements, Cs plate-out on the plenum and other related chemistry phenomenon). Information related to this and other underhead characterization studies is available at the NRC Middletown Office.

The NRC is conducting a safety evaluation of GPUN's plans to obtain a debris sample from the loose rubble in the core region. This safety evaluation addresses criticality issues, ALARA and radiological considerations, pryophoricity, etc.

GPU Nuclear's schedule for the Underhead Characterization Study includes the following:

-- Commence depressurization/draindown - July 25, 1983

-- Remove CRDM - August 10, 1983

-- Underhead radiation measurements - August 18-29, 1983

-- Core Topography - September 5, 1983

-- Core debris sample - September 9, 1983

Data obtained during the Underhead Characterization Study will serve as a major source of information for planning reactor vessel head removal concepts and procedures.

The TMIPO staff continues to closely monitor GPUN's efforts to reduce occupational radiation exposures. GPUN has a special program to implement actions to minimize Reactor Building occupational exposures as part of its overall program to maintain all radiation exposures to As Low As Reasonably Achievable (ALARA) levels. GPUN will brief TMIPO staff (and PNL consultants) at 1:00 PM on July 28, 1983, at the site on the status of its programs.

POLAR CRANE STATUS:

The TMI Program Office has resumed activities associated with the review of the Safety Evaluation for the Polar Crane Load Test and associated procedures. The staff forwarded a letter to the licensee on July 18, 1983, requesting additional information that is required for the NRC to complete its review. After the review of information already received and that which is being requested, the staff will make a determination on the acceptability of the load test as proposed by GPUNC.

To date, the staff has not received a response to the letter dated July 8, 1983, requesting additional information on the head and internals handling indexing fixture (tripod). The licensee must obtain NRC approval of all corrective actions before the tripod can be used for load test and subsequent headlift. The licensee has requested a meeting with NRC staff on August 5, 1983, to discuss the current status, including B&W stress analyses of the tripod fixture.

FUEL POOL "A" REFURBISHMENT:

Decontamination and disposal of the steam eductor removed from the lower tank farm have been initiated. The sump sucker pipe is being rerouted around the tank farm shield blocks. The leak test procedure for the new pipe has been

reviewed and approved by NRC. The rails of the Fuel Handling Building crane have been realigned, repairs and preparations for the load test of the shield block lifting lugs are progressing.

The licensee submitted a license amendment asking for deletion of the reserve waste tankage requirement; formal noticing of this amendment by NRC occurred on July 18 in the Federal Register.

In the interim, the licensee also requested removal of the upper and lower tank farm from the reserve tankage requirement and the addition of approximately 100,000 gallon reserve tankage, established from the freeboard of 6 additional tanks including the EPICOR off-spec tank (CC-T-1) and clean receiving tank (CC-T-2). The NRC staff approved this request recognizing a reserve tankage margin (> factor of 2) for unexpected events and the need for tank farm removal as part of the "A" pool refurbishment in preparation for future defueling and fuel storage.

WASTE MANAGEMENT ACTIVITIES:

1. SDS Liner Shipments. No SDS shipments were made this week. Preparations are being made for the eleventh SDS shipment (D20026) which is scheduled for August 2, 1983. This waste liner, which contains approximately 9,700 curies, will not require a gas passification recombiner system for shipping purposes, because the curie loading and associated gas generation rates are sufficiently low to insure non-combustible gas conditions during handling and shipment. At the recommendation of Rockwell Hanford, a 236 gram catalyst charge will be inserted in D20026 for long term stability purposes and the extensive vacuum-drying will also be performed. Prior to shipment, the licensee will be required to monitor and sample the D20026 liner to demonstrate non-combustible gas conditions for a period of over twice the expected shipping period (~ 14 days).

2. EPICOR Demineralizer Shipments. As reported in the July 18, 1983 Weekly Status Report, all 50 EPICOR II prefilters have been shipped from TMI to the Idaho National Engineering Laboratory (INEL). The EPICOR system has been subsequently used to process the effluent from the SDS system (see previous Weekly Status Report, water processing - Appendix 4). To date there have been a total of 31 low level EPICOR demineralizers that have been generated from processing SDS effluents. These demineralizers, which contain from 0.5 to 4 curies of radioactivity, have been temporarily stored onsite at both the solid waste storage and the southeast storage facilities. The licensee has initiated activities to ship these 31 EPICOR demineralizers to the Hanford, Washington, commercial burial facility over the remainder of 1983. The shipping preparations will include re-dewatering at the EPICOR building and placement of the liners (for > type A quantities) into shipping casks for transport and disposal.

PUBLIC MEETING:

The Advisory Panel for the Decontamination of Three Mile Island Unit 2 will meet on July 28, 1983 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. The Panel will discuss TMI-2 cleanup activities. The TMI Unit 2 licensee and Federal agencies involved in the cleanup will provide a status report. The Advisory Panel will also entertain public comment regarding the cleanup of TMI-2. Persons or organizations desiring to comment during the Advisory Panel Meeting are asked to write to Mr. Joel Roth, 4705 Carlisle Pike, Mechanicsburg, PA 17055.

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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 July 15, 1983, through July 21, 1983, the 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 8.3 E-8 (0.00000008) of a curie of Cs-137 was discharged.

Environmental Protection Agency

Lancaster Water Samples:	7 samples
Period Covered:	June 26 - July 2, 1983
Results:	Gamma Scan Negative
TMI Water Samples:	5 samples
Period Covered:	July 1 - July 9, 1983
Results:	Gamma Scan Negative

APPENDIX 2

ENVIRONMENTAL DATA

EPA Environmental Data

The EPA measures Kr-85 concentrations at several environmental monitoring stations and reported the following results:

Location	June 24, 1983 - July 8, 1983 (pCi/m^3)
Goldsboro	28
Middletown	25
Yorkhaven	30
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 July 8, 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 July 12, 1983, through July 20, 1983.

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-376	July 13, 1983 - July 20, 1983	<6.0 E-14	<6.0 E-14

APPENDIX 3

SHIPMENTS

RADIOACTIVE MATERIALS/RADIOACTIVE WASTE

-- On July 21, 1983, 86 drums of contaminated laundry from Units 1 and 2 were shipped to Interstate Uniform Service, New Kensington, PA.

APPENDIX 4

WATER PROCESSING DATA

Submerged Demineralizer System (SDS)

SDS was shutdown during the week for maintenance.

EPICOR II

EPICOR II was shutdown during the week.

APPENDIX 5

PLANT PARAMETERS

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 5:00 AM, July 22, 1983) (approximate values)

Average Incore Thermocouples*: 98°F*
Maximum Incore Thermocouple*: 118°F

RCS Loop Temperatures:

	A	B
Hot Leg	94°F	93°F
Cold Leg (1)	81°F	79°F
(2)	82°F	80°F

RCS Pressure: 64 psig

Reactor Building: Temperature: 81°F
Pressure: -0.3 psig
Airborne Radionuclide Concentrations:

3.3 E-7 uCi/cc H^3 (Tritium)
(sample taken 7/21/83)

2.6 E-9 uCi/cc particulates
(predominately Cs-137)
(sample taken 7/21/83)

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