August 22, 1983
NRC/TMI-83-052

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 AUGUST 14 - AUGUST 20, 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 head lift continued. The reactor coolant system has been depressurized and RCS draindown to uncover the plenum began on August 19, 1983. Visual examination and sampling of the plenum surfaces was completed during this period.

Major activities this week were "A" spent fuel pool refurbishment, procedure review, underhead characterization operations, and continued followup of polar crane issues. Decontamination of auxiliary and fuel handling building surfaces and cubicles progressed at a reduced pace. Three reactor building entries were made in support of miscellaneous tasks. (For more details see appropriate paragraphs below.)

Significant items included in the enclosure are:

-- Reactor Building Activities
-- Polar Crane Status
-- Spent Fuel Pool "A" Refurbishment
-- Auxiliary and Fuel Handling Activities
-- 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
-- Reactor Vessel and Internals

Lake H. Barrett
Deputy Program Director
TMI Program Office

Enclosure: As stated

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ENCLOSURE

REACTOR BUILDING ACTIVITIES:

Three reactor building entries were completed during the week of August 14, 1983. The Underhead Characterization Study was the primary activity during the entries. As a prerequisite to the underhead characterization, the reactor coolant system (RCS) water level has been lowered to the 324.5 ft. elevation, which is approximately 2 ft. above the plenum (see Appendix 6). With the water at 324.5 ft., a closed circuit television (CCTV) camera was used to examine a portion of the top surface of the plenum for potentially pyrophoric material. The visual inspection revealed a thin layer (approximately 1mm) of fine sediment or scale on most of the plenum surfaces inspected. Approximately 5% of the surface of the plenum was inspected around the center CRDM (H-8) guide tube and no significant deposits of debris were noted in this area. Following the visual inspection, two samples of material from plenum surface were obtained and tested for pyrophoricity. The plenum visual inspection and surface debris sampling to resolve the pyrophoricity concern were completed on Tuesday, August 16, 1983. The pyrophoricity tests proved negative. No evidence of distortion of the plenum assembly structure was observed.

Radiation measurements under the reactor vessel head were made using an ionization chamber and a string of thermoluminescent dosimeters (TLDs). On Friday, August 19, 1983, the RCS water was lowered to the 321.5 ft. elevation, approximately 1 ft. below the top surface of the plenum approximately 10 feet over the top of the core in preparation for the next phase of data acquisition.

Data obtained from the underhead radiation measurements is being evaluated by the licensee.

Next week, following the RCS level stabilization at 1 ft. below the top of the plenum surface, an additional CCTV inspection of the plenum surface and the underside of the reactor vessel head will be made. Extensive radiation measurements inside the reactor vessel will be performed using the ion chamber and TLD strings. In succeeding weeks, the damaged core topography will be mapped and six core debris samples will be extracted from the core to complete the Underhead Characterization Study.

NOTE: Video tapes of the plenum inspection and other cleanup activities are available for viewing by the general public at the NRC Middletown Office, 100 Brown Street, on Wednesday evenings. The NRC Middletown Office hours are Tuesdays - 12:00-2:00 PM, Wednesdays - 5:00-8:00 PM and Thursdays - 3:00-5:00 PM.

POLAR CRANE STATUS:

On July 18, 1983 the TMIPO staff requested additional information from the licensee on the reactor building polar crane. GPU Nuclear Corporation responded to the NRC's questions on August 16, 1983. The NRC is currently evaluating this information in addition to previously received information for determination of the acceptability of the load test as proposed by GPU.

On August 9, 1983 the TMIPO staff also forwarded a letter to the licensee requesting additional information on the tripod load analysis and non-destructive tests of the more highly stressed welds. The NRC received a response on August 18, 1983 and is currently evaluating the information. The licensee is required to obtain NRC approval before the tripod can be used for the polar crane load test and subsequent headlift.

SPENT FUEL POOL "A" REFURBISHMENT:

The removal of concrete shield blocks from around the side of the tank farm started on August 7, 1983, and continued this week. The next scheduled activity is the rerouting of the offgas liquid separator bottom drain. Liquid from this drain consists of entrained liquids, condensate and liquid from various other system drains being separated for processing. This liquid will be rerouted from the tank farm to the miscellaneous waste holdup tank (MWHT) or the "B" reactor coolant bleed tank (RCBT). The work is planned to be completed by September 9, 1983.

Procedures for tank and piping decontamination and removal, and operation of the submerged demineralizer system (SDS) with direct feed from the reactor building sump, reactor coolant system or internals indexing fixture are in the review process.

The Safety Evaluation Report (SER) for the "A" spent fuel pool refurbishment and the revised Technical Evaluation Report (TER) for the SDS, which take into account the tank farm removal and piping modifications, are currently being reviewed by the TMIPO staff.

AUXILIARY AND FUEL HANDLING BUILDING ACTIVITIES:

Decontamination activities in the auxiliary and fuel handling buildings have been slow during the past week due to funding priorities. No new areas of scabbling were initiated, however the reactor coolant evaporator room, first of four cubicles to be decontaminated, was manually flushed and hand scrubbed. Following decontamination of the walls they will be painted and decontamination of the floor by scabbling will begin. Three other 282 ft. auxiliary building cubicles are scheduled for similar decontamination operation within the next four weeks.

Scabbling of open areas and corridors in the fuel handling building are scheduled to start again next week and be completed in two weeks. Presently, decontamination activities also include maintaining the areas already completed and released.

WASTE MANAGEMENT ACTIVITIES:

1. SDS Liner Shipments. Shipment of the thirteenth SDS waste liner (D-20029) will be delayed because of a problem with the catalyst insertion technique. The licensee is presently evaluating this problem. Liners are loaded with catalytic recombiner pellets to maintain non-combustible gas conditions during the handling and shipment period. Liner D-20029 contains approximately 13,000 curies of radioactivity. At this time no other liners have been scheduled for shipment.

2. EPICOR Demineralizer Shipments. Four lower level EPICOR demineralizers, F-20, F-25, F-34 and F-39, were shipped from TMI to Hanford, Washington, on August 19, 1983. F-20, F-25 and F-34 (maximum contact reading 150 mR/hr) were shipped as part of an LSA shipment, while F-39, because of curie loading, was transported in a shipping cask. Four more demineralizers, F-31, F-32, F-37 and F-22, have been dewatered and are being prepared for shipment.

PUBLIC MEETING:

On August 17, 1983, the Three Mile Island Advisory Panel conducted a public meeting in Harrisburg, Pennsylvania. The purpose of the meeting was to: 1) decide on issues to present to the NRC Commissioners at a meeting scheduled for September 16, 1983, in Washington, DC, and 2) plan the agenda for the next several public meetings to be held in Harrisburg, Pennsylvania. Issues to be discussed with the Commissioners next month include: 1) a request for funds to form working groups among members of the Advisory Panel and to pay for occasional technical experts to advise the Panel on specific issues and 2) status of the investigation into the TMI-2 cleanup allegations.

Topics for discussion for the next several Advisory Panel meetings include recertification of the polar crane, head lift procedures and occupational exposure related to the cleanup. The next public meeting in Harrisburg is scheduled for September 28, 1983 and will cover issues pertaining to the recertification of the polar crane.

The Panel also agreed to devote more attention to obtaining input and views from the residents and citizens groups of the Three Mile Island area. Persons or groups that have questions pertaining to the TMI-2 cleanup that would like to have them considered or addressed by the Advisory Panel can send these questions to Mr. John Minnich, Chairman, Dauphin County Courthouse, P.O. Box 1295, Harrisburg, PA 17108. Persons or groups desiring the opportunity to speak before the Advisory Panel on TMI-2 cleanup related items are asked to contact in writing, Mr. Joel Roth, 4705 Carlisle Pike, Mechanicsburg, PA 17055.

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 12, 1983, through August 18, 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 1.4 E-6 (0.0000014) of a curie of Cs-137 was discharged.

Environmental Protection Agency

Lancaster Water Samples:	8 samples
Period Covered:	July 24 - July 31, 1983
Results:	Gamma Scan Negative
TMI Water Samples:	6 samples
Period Covered:	July 30 - August 6, 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	July 22, 1983 - August 5, 1983 (pCi/m^3)
Goldsboro	21
Middletown	22
Yorkhaven	24
TMI Observation Center	25

-- 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 August 8, 1983 through August 17, 1983.

NRC Environmental Data

Results from the NRC continuous air sampler monitoring of the TMI site environment are as follows:

Sample	Period	I-131 (uCi/cc)	Cs-137 (uCi/cc)
HP-380	August 10, 1983 - August 17, 1983	<6.4 E-14	<6.4 E-14

APPENDIX 3

SHIPMENTS

RADIOACTIVE MATERIALS/RADIOACTIVE WASTE

-- On August 15, 1983, a 1-13C-II type B shipping cask containing SDS liner D-20022 from Unit 2 was shipped to DOE, Rockwell Hanford Operations, Richland, Washington.

-- On August 17, 1983, one drum containing a leadscrew support tube sample from Unit 2 was shipped to Babcock and Wilcox, Lynchburg, Virginia.

-- On August 18, 1983, 103 drums of contaminated laundry from Units 1 and 2 were shipped to Interstate Uniform Service, New Kensington, Pennsylvania.

-- On August 19, 1983, a shipment of LSA material consisting of three EPICOR liners F-20, F-25 and F-34 and four steel boxes were shipped to U.S. Ecology, Hanford burial site, Richland, Washington.

-- On August 19, 1983, one box containing one piece of seat ring from Unit 1 was shipped to Babcock and Wilcox, Lynchburg, Virginia.

-- On August 19, 1983, a HN-100 type B shipping cask containing EPICOR F-39 was shipped to U.S. Ecology, Hanford burial site, Richland, Washington.

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 STATUS

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 5:15 AM, August 19, 1983) (approximate values)
Average Incore Thermocouples*: 113.9°F**
Maximum Incore Thermocouple*: 134°F

RCS Loop Temperatures:

	A	B
Hot Leg	81°F	85°F
Cold Leg (1)	95°F	85°F
(2)	96°F	85°F

RCS Pressure: 0 psig

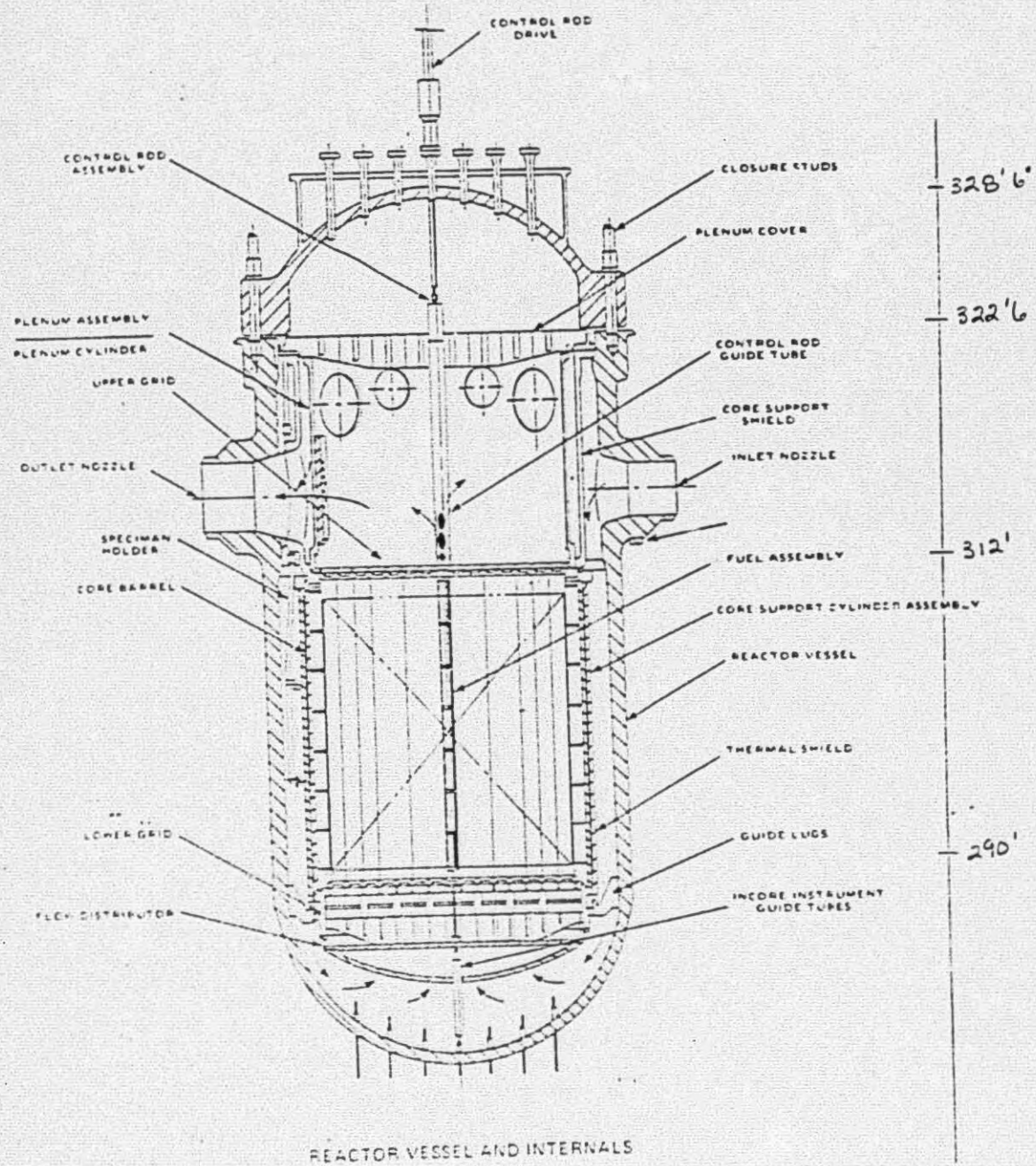
Reactor Building: Temperature: 83°F
Pressure: -0.15 psig
Airborne Radionuclide Concentrations:

3.1 E-7 uCi/cc H^3 (Tritium)
(sample taken 8/16/83)

4.8 E-9 uCi/cc particulates
(predominately Cs-137)
(sample taken 8/19/83)

*Uncertainties exist as to the exact location and accuracy of these readings.
**Due to a computer outage, the calculation was performed by hand and therefore includes an additional 5°F.

APPENDIX 6



REACTOR VESSEL AND INTERNALS