June 6, 1983
NRC/TMI-83-036

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 MAY 29 - June 4, 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. Head lift remains at least several months away. As schedules develop, they will be reported. Major activities this week included issue of NRC comments to licensee on the Underhead Characterization Safety Evaluation Report, ongoing Auxiliary and Fuel Handling Building decontamination, and continued following of polar crane issues. Four reactor building entries supported miscellaneous tasks. (For more details see appropriate paragraph below).

Significant items included in the enclosure to this report are:

-- Auxiliary and Fuel Handling Activities
-- Reactor Building Activities
-- Polar Crane Status
-- Defueling Preparation Activities
-- Waste Management Activities
-- Schedule of Future Activities

Data summary sheets included in this report are:

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

/Phillian D Travers for/
Lake H. Barrett
Deputy Program Director
TMI Program Office

Enclosure: As stated

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ENCLOSURE

AUXILIARY AND FUEL HANDLING BUILDING ACTIVITIES:

Tasks in the Auxiliary and Fuel Handling Building (AFHB) areas during the week of May 30, 1983, consisted of routine trash compaction, and tool and equipment decontamination. Ongoing activities included decontamination of the chemical addition system and the nitrogen system, cleaning the FHB drains and concrete surface scarifying/scabbling.

In the Auxiliary Building construction continued to progress on the expansion addition to the tool and equipment decontamination facility. This expanded facility will house newly purchased specialized decontamination equipment, which will increase the scope and capacity of the operation. Completion of the facility is projected for mid-July.

REACTOR BUILDING ACTIVITIES:

Four reactor building entries were completed during the week of May 29, 1983. Hydrolaser decontamination of surfaces and components on the 305' elevation and trash removal were the most man-hour intensive tasks inside the building.

Two significant steps in the Dose Reduction Program were accomplished with the completion on Thursday, June 2, 1983, of decontamination of the reactor building air coolers and removal of an experimental resin column on Friday, June 3, 1983.

The experimental resin column, which contains shielding and weighs approximately 650 pounds, had been used to test the effectiveness of zeolite resin material used in the proposed submerged demineralizer system resin (SDS). The SDS was eventually used to process and decontaminate the reactor building sump water. The primary radionuclides and their present loadings are: 0.33 Ci of Cs-134 and Cs-137 and 0.05 Ci of Sr-90, with an average contact reading of 300 mR/hr. The test column was shielded and stored onsite awaiting a variance from the burial site which will allow encapsulation in concrete instead of the more usual homogenous solidification prior to burial.

Four reactor building entries are scheduled for the week of June 5, 1983. Decontamination and trash removal will continue to be the predominant tasks inside the building. A safety inspection is scheduled on Friday, June 10, 1983, to evaluate the effectiveness of a program instituted to correct industrial safety concerns which were identified by the NRC and the licensee safety department.

POLAR CRANE STATUS:

The polar crane general operating procedure is still under review by the NRC staff. Five ton hoist procedures are still being reviewed on a case-by-case basis. The NRC Office of Investigation is continuing their review of allegations made by various GPU workers on various aspects of polar crane refurbishment.

DEFUELING PREPARATION ACTIVITIES:

In support of the eventual head lift and defueling activities, NRC reviewed the licensee's Safety Evaluation Report for Radiation Characterization under the reactor vessel head. Following this initial review, NRC issued a letter to the licensee requesting further clarification of 14 items. The licensee responses are expected during the upcoming week (June 5, 1983).

Refurbishment of the "A" spent fuel pool continued. (See Weekly Status Report dated May 23, 1983.)

WASTE MANAGEMENT ACTIVITIES:

1. EPICOR II Prefilter (PF) Shipments. Two EPICOR II prefilters (PF-30 and PF-14) were shipped from TMI to the Idaho National Engineering Laboratory (INEL) this week. These shipments represent 40, in a group of 50, that have been sent to INEL over the past year. Two prefilters are scheduled for shipment next week. As discussed in the May 27, 1983, Weekly Status Report, modifications will be made to the prototype gas sampler before liner nitrogen inerting and gas sampling is accomplished on the last four EPICOR prefilters. These modifications are scheduled to be completed in mid-June.

2. SDS Liner Shipments. No SDS shipments were made this week. Preparations are continuing for the shipment of the tenth and eleventh SDS liners (D20026 and D10011). Currently D20026 is being loaded with a catalytic recombiner and will be monitored for combustible gas generation over the next two weeks. D10011 is currently being dewatered and vacuum dried. Because of the repairs to the fuel handling building crane (see the May 23, 1983, Weekly Status Report), the next SDS shipment is scheduled for June 14, 1983.

SCHEDULE OF FUTURE ACTIVITIES:

1. Depressurization and lowering the primary system water level to support the next phase of underhead data acquisition is scheduled for the week of June 20, 1983.

2. Removal of one control rod drive mechanism (CRDM) to open a penetration into the reactor vessel for the next phase of data acquisition is scheduled for early July 1983.

   NOTE: CRDM removal procedures are being modified to permit this task to be performed without the use of the polar crane.

3. Underhead data acquisition tasks are scheduled to commence during mid July 1983. Proposed data acquisition tasks include: core topography mapping, radiation measurements, visual inspections, core sampling, and lead screw support tube cutting to obtain a stainless steel sample from inside the reactor vessel.

# APPENDIX 1

## LIQUID EFFLUENT DATA

### GPU Nuclear

Liquid effluents from the TMI site released to the Susquehanna River, after sampling and monitoring, were within regulatory limits and in accordance with NRC requirements and the City of Lancaster Agreement.

During the period May 27, 1983, through June 2, 1983, the effluents contained no detectable radioactivity at the discharge point, and individual effluent sources originating within Unit 2 contained no detectable radioactivity. Calculations indicate that less than nine one hundred-millionths (0.00000009) of a curie of cesium was discharged.

# APPENDIX 2

## ENVIRONMENTAL DATA

### EPA Environmental Data

-- The EPA Middletown Office has not received the environmental Kr-85 analytical results for the samples which were taken subsequent to May 13, 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 May 25, 1983, through June 1, 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-372 | May 26, 1983 - June 2, 1983 | <7.5 E-14 | <7.5 E-14 |

# APPENDIX 3

## SHIPMENTS

## RADIOACTIVE MATERIALS/RADIOACTIVE WASTE

-- On June 1, 1983, one CNSI 8-120-3 (Type B) shipping cask containing Unit 2 EPICOR Prefilter No. PF-30 was shipped to EG&G, Scoville, Idaho.

-- On June 2, 1983, one box containing a one-liter sample from the Unit 1 decay heat removal system was mailed to Teledyne, Westwood, New Jersey.

-- On June 2, 1983, one CNSI 8-120-4 (Type B) shipping cask containing Unit 2 EPICOR Prefilter No. PF-14 was shipped to EG&G, Scoville, Idaho.

-- On June 3, 1983, 81 drums containing contaminated laundry from Units 1 and 2 were shipped to Interstate Uniform, New Kensington, Pennsylvania.

# APPENDIX 4

## WATER PROCESSING DATA

### Submerged Demineralizer System (SDS)

SDS has completed processing of the eleventh batch of reactor coolant system (RCS) water on May 30, 1983. This batch was comprised of approximately 45,300 gallons. The performance parameters are given below.

SDS Performance Parameters
May 23, 1983 to May 30, 1983

| Radionuclide | Average Influent (uc/ml) | Average Effluent (uc/ml) | Percent Removed |
|---|---|---|---|
| Cesium 137 | $3.6 \times 10^{-1}$ | $1.9 \times 10^{-4}$ | 99.95 |
| Strontium 90 | 3.9 | $7.6 \times 10^{-3}$ | 99.80 |

### EPICOR II

EPICOR II is currently in a shutdown mode.

# 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 5:30 AM, June 3, 1983) (approximate values)

Average Incore Thermocouples*: 91°F
Maximum Incore Thermocouple*: 135°F

RCS Loop Temperatures:

| | A | B |
|---|---|---|
| Hot Leg | 86°F | 84°F |
| Cold Leg (1) | 74°F | 76°F |
| (2) | 76°F | 75°F |

RCS Pressure: 64 psig

Reactor Building: Temperature: 72°F
Pressure: -0.3 psig
Airborne Radionuclide Concentrations:

5.8 E-7 uCi/cc $H^3$ (Tritium)
(sample taken 6/2/83)

5.1 E-9 uCi/cc particulates
(predominately Cs-137)
(sample taken 6/2/83)

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