

July 16, 1984
NRC/TMI-84-053

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

Bernard J. Snyder, Program Director
TMI Program Office

FROM: Philip J. Grant, Acting Deputy Program Director
TMI Program Office

SUBJECT: NRC TMI PROGRAM OFFICE WEEKLY STATUS REPORT FOR
July 8, 1984 - July 14, 1984

Data from effluent and environmental monitoring systems indicated no plant release in excess of regulatory limits. Waste processing and shipments continued on a routine basis. Plant parameters showed no significant changes. The reactor coolant system is depressurized and reactor coolant system level is approximately 321'6".

Site activities this period included: reactor building entries in support of technical specification requirements and head lift preparations; auxiliary and fuel handling building decontamination; "A" spent fuel refurbishment; purification demineralizer elution equipment installation; and procedure review. (For more details see appropriate paragraphs below.)

Significant items covered in the enclosure are:

- Reactor Building Activities
- Auxiliary and Fuel Handling Building Activities
- Waste Management
- Public Meetings

Data summary sheets included in this report are:

- Liquid Effluent Data
- Environmental Data
- Radioactive Material/Radwaste Shipment Data
- Plant Status Data

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ORIGINAL SIGNED BY:

Philip J. Grant
Acting Deputy Program Director
TMI Program Office

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TMI*

Enclosure: As stated

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ENCLOSURE

REACTOR BUILDING ACTIVITIES:

Reactor vessel head lift preparations are scheduled to be completed during the week of July 15, 1984. It is anticipated that the head lift schedule will be accelerated as a result of the early completion of the head lift preparatory activities. Head lift has been targeted for early August. However, pending completion of all remaining supporting activities, the head lift could be performed in late July.

One of the final pre-head lift activities will be the "parking" of the control rod drive lead screws. Prior to head lift, the lead screws must be raised (parked) to the top of the service structure above the reactor vessel head. In the "parked" position, the bottom tips of the 22 ft. long lead screws will clear the reactor vessel head flange. The reactor vessel head and service structure will be lifted as a unit and transferred to the head storage stand on the 347 ft. elevation of the reactor building. Lead shielding blankets have been hung around the perimeter of the service structure to minimize the expected radiation level increase when the lead screws are in the "parked" position.

Dose rates in restricted areas of the reactor building are predicted to increase to several R/hr during the head transfer. Fiberglass water shields, about 12 feet tall, have been installed around the head storage stand on the 347 ft. elevation as shielding. These, in conjunction with the lead shielding already installed on the service structure are expected to lower the radiation levels around the head on the storage stand to pre-head lift levels. New load tested rigging for the head lift has been mounted on the reactor vessel head to replace rigging which has been in the reactor building.

The Internals Indexing Fixture (IIF) will be installed over the open reactor vessel soon after head lift. With the IIF in place, reactor coolant level will be raised and a lead shielded platform cover emplaced. It is expected that radiation levels will be reduced to pre-head lift levels.

The senior resident inspector and a radiation specialist from the TMIPO will make a backshift entry to the reactor building on July 18, 1984 to independently determine the adequacy of head lift preparations. They will inspect welding and mechanical preparations and will independently measure radiation levels, obtain airborne radioactivity samples, and evaluate the suitability of the licensee's radiation surveys.

TMIPO is nearing completion of its review of the head lift safety evaluation report and technical specification modifications to permit head lift. NRC approval is required prior to head lift.

AUXILIARY AND FUEL HANDLING BUILDING ACTIVITIES:

Installation of shielding around lines associated with the makeup and purification demineralizer elution system continued this week. TMI Program Office staff will require review and approval of the licensee's safety evaluation report (SER) and operating procedures prior to implementation.

Work continued on the "A" spent fuel pool refurbishment in the fuel handling building. Decontamination efforts in the auxiliary building included low pressure water spray in the makeup pump cubicles and the reactor coolant bleed tank room.

WASTE MANAGEMENT ACTIVITIES:

The submerged demineralizer system (SDS) began processing about 40,000 gallons of waste water directly from the reactor building sump (batch 98) on July 12, 1984. The sump water contains approximately 10 uCi/cc of Cs-137.

SDS processed batch 97 from the "A" monitor tank on July 6-7, 1984. This batch consisted of the reprocessing of batch 96, which was terminated when high Sr-90 concentrations were detected in the SDS effluent. Batch 97 processed a total water volume of 7,773 gallons.

SDS will continue processing decontamination water from the lower tank farm in the "A" fuel pool. The water has been generated as a result of the ongoing decontamination of the two 25,000 gallon tanks in the lower tank farm.

EPICOR II processed batch 216 from the "B" monitor tank on July 7-8, 1984. Total volume processed was 7,786 gallons.

PUBLIC MEETINGS:

1. On July 12, 1984, Phil Grant met with Mayor Robert Reid of Middletown to discuss head lift activities.
2. On July 12, 1984, the Advisory Panel for the Decontamination of Three Mile Island Unit 2 held a meeting in Harrisburg, Pennsylvania. Dr. W. Kirk, Director TMI Field Station, U.S. Environmental Protection Agency (EPA) reported on the results of the interagency TMI-2 radiological monitoring program review. The radiological monitoring programs conducted by the NRC, the Commonwealth of Pennsylvania and the licensee will remain essentially unchanged. The EPA monitoring program will incorporate new sample methodology in a number of sampling programs. The changes will in many cases increase the theoretical detection limits of the sampling. The Advisory Panel was asked by Dr. Kirk to review the proposed changes and provide comments to EPA by the middle of August 1984.

J. Devine, TMI-2 Recovery Technical Planning Director, GPUNC, provided a discussion on the licensee's continuing efforts to define the endpoint in the cleanup effort. The licensee's goal at TMI-2 is to eliminate any radiation release capability and place the facility in a fully stable and secure condition so that a decision can be made as to the disposition of the facility. According to Mr. Devine, options under consideration are refurbishment, dismantling and interim safe storage.

E. Kintner, Executive Vice President, GPUNC, provided an update on TMI-2 cleanup funding levels. Anticipated funding for calendar year 1985 is \$120 million. Mr. Kintner expressed optimism that the \$1 billion required for the cleanup is "within striking distance."

E. Kearney, Senior Vice President of the Edison Electric Institute (EEI) summarized EEI's efforts to date to secure voluntary contribution for the cleanup effort from its members which are investor owned utility companies. Mr. Kearney stated that recent actions on the part of EEI will make \$25 million a year available to GPUNC for cleanup of TMI-2 beginning in 1985.

At the conclusion of the meeting, the Panel received comments and statements from members of the public.

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 6 through July 12, 1984, 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 $1.9 \text{ E-}7$ (0.00000019) of a curie of Cs-137 and less than $3.4 \text{ E-}7$ (0.00000036) of a curie of gross beta activity was discharged.

Environmental Protection Agency

| | |
|--------------------------|---------------------|
| Lancaster Water Samples: | 7 samples |
| Period Covered: | June 24 - 30, 1984 |
| Results: | Gamma Scan Negative |
| | |
| TMI Water Samples: | 7 samples |
| Period Covered: | June 23 - 30, 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</u> <u>(uCi/cc)</u> | <u>Cs-137</u> <u>(uCi/cc)</u> |
|---------------|------------------------|----------------------|---------------------------------|----------------------------------|
| HP-427 | July 5 - July 11, 1984 | 219.3 m ³ | <1.6 E-13 | <1.6 E-13 |

APPENDIX 3

RADIOACTIVE MATERIALS/RADWASTE SHIPMENT DATA

- On July 11, 1984, a combined Unit 1 and 2 shipment of radioactively contaminated laundry was sent to Interstate Nuclear Service, Royersford, Pennsylvania.
- On July 12, 1984, a Unit 1 sample was sent to Teledyne Isotopes, Westwood, New Jersey.

APPENDIX 4

PLANT STATUS

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, July 13, 1984 (approximate values):

Reactor Coolant System:

Loop Temperatures:

| | A | B |
|--------------|------|------|
| Hot Leg** | 72°F | 78°F |
| Cold Leg (1) | 69°F | 73°F |
| (2) | 70°F | 74°F |

Pressure: Open to reactor building atmosphere

Reactor Core:

Average Incore Thermocouples*: 98°F
Maximum Incore Thermocouple*: 145°F
Decay Heat: 16.5 kilowatts

Reactor Building: Temperature: 71°F
Pressure: -0.02 psig

Airborne Radionuclide Concentrations:

Tritium: 1.5 E-9 uCi/cc H³ (sample 7/9/84)
Particulates: 5.8 E-9 uCi/cc (sample 7/6/84)
predominately Cs-137

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

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