

SEP 14 1988

Docket Nos. 50-289; 50-320

MEMORANDUM FOR: Lee H. Bettenhausen, Chief, Projects Branch No. 1, Division
of Reactor Projects

FROM: Curtis J. Cowgill, Chief, Reactor Projects Section 1A, DRP

SUBJECT: TMI STATUS REPORT FOR THE PERIOD AUGUST 6 - SEPTEMBER 10, 1988

Enclosed is the TMI Resident Office monthly status report, which covers both TMI-1 and TMI-2. This report is to provide NRC management and the public with highlights of significant events at TMI-1 and TMI-2 from an NRC regulatory perspective.

ORIGINAL SIGNED BY
LEE H. BETTENHAUSEN



Curtis J. Cowgill, Chief
Reactor Projects Section 1A

Enclosure: As Stated

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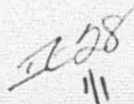
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TMI MONTHLY STATUS REPORT -

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Lee H. Bettenhausen

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TMI MONTHLY STATUS REPORT -

09/14/88

ENCLOSURE

TMI-1 AND TMI-2 STATUS REPORT FOR THE PERIOD AUGUST 6 - SEPTEMBER 10, 1988

1. TMI-1

a. Facility Operations Summary

During the report period, the licensee completed the 7R refueling outage and returned the plant to service. The reactor was taken critical on August 14, 1988, and the main generator was put on line on August 16. Full power was achieved on August 20, 1988. As of September 10, 1988, the TMI-1 reactor was at 100 percent power with Tave at 579 F and Reactor Coolant System (RCS) pressure at 2155 psig.

b. Items of Special Interest

Outage Completion/Plant On Line

On August 20, 1988, the TMI-1 reactor reached full power operation. This marked the completion of a 60-day outage that commenced on June 17, 1988. The licensee completed refueling, along with minor modification work that was noted in the last status report. The plant heatup/startup activities were monitored by the resident inspectors on a two shift basis from August 12-18, 1988. Additionally, a team of inspectors was on site from August 8-19, 1988, to review the plant readiness for startup. The report of their activities will be issued at a later date. The licensee completed testing of plant modifications during this period, such as the new power supply to the Integrated Control System/Non-Nuclear Instrumentation (ICS/NNI) and the new Smart Automatic Selector Switch (SASS) control system.

Reactor Coolant Pump Trip/Reactor Trip

During the plant heatup, while the reactor was still not critical, a trip of all four Reactor Coolant Pumps (RCP's) and a subsequent Reactor Protection System (RPS) actuation occurred while ICS/NNI testing was in progress. As part of the testing, re-energization of the ICS auto power caused an actuation of the RCP seal cooling interlock, which tripped all four operating RCP's. When the first pump was restarted, the RPS actuated which caused the four withdrawn safety rod groups to be inserted. Both conditions were later evaluated by the licensee and corrected. This event will be detailed in NRC Inspection Report No. 50-289/88-18. Also, a Licensee Event Report will be issued at a later date.

2. TMI-2a. Facility Activities Summary

During this reporting period, cutting of the grid forging began. The grid forging is the third of five plates that comprise the Lower Core Support Assembly (LCSA) that is to be removed to provide access for defueling the lower head of the reactor vessel. Decontamination of plant surfaces and systems continues. Three plant areas have been isolated from routine use and placed in an interim status as meeting Post-Defueling Monitored Storage (PDMS) conditions set forth in a recently submitted Safety Analysis Report (SAR). Five other plant areas are scheduled for verification to determine if they meet the interim PDMS isolation criteria set by the licensee, but not yet approved by NRC.

b. Items of Special InterestDefueling Operations

Upon completion of clearing loose debris from the grid forging, defueling crews installed the plasma arc cutting equipment in the vessel and resumed cutting operations. Initially thirty-three in-core guide tubes and twenty support posts were severed, then removed from the vessel to preclude interference with cutting the grid forging. To date, twenty-three cuts have been made in the northwest quadrant of the forging. An estimated total of twenty-six cuts are required to completely sever this quadrant. Of a total of seventy-seven cuts needed to cut the grid forging into four sections, twenty-seven have been completed.

Progress has been slowed by several factors. During the cutting operation, the plasma cutting and cover gases acted as an airlift in the forging to move loose debris from the flow holes and to be deposited in the bridge drive system of the cutting equipment. This required the cutting operation to be shut down; the bridge removed from the vessel; the bridge components disassembled, cleaned, lubricated, and reassembled; and the bridge re-installed in the vessel. Additionally, bridge contamination impeded work progress. Extensive decontamination of the bridge was done prior to removal from the vessel. However, as the liquid contamination dried on the bridge, loose contamination levels increased. This requires extensive decontamination of the work areas where the bridge is handled during repairs. Various departments are evaluating different equipment and techniques to resolve these problems. Additionally, the material suspended as a result of the airlift effect has interfered directly with the plasma arc cutting process, causing re-cuts to be made.

While performing plasma arc cutting, it has been observed that small amounts of Kryton gas (Kr-85) are released when the ceramic fuel fragments are heated. The quantities released to the reactor building and subsequently to the atmosphere through the monitored vent path are quite small and well within the regulatory limits.

The licensee is conducting surveys to determine fuel quantities in other portions of the Reactor Coolant System (RCS). In parallel with these surveys, various defueling techniques are being evaluated should fuel be found to be present.

No shipments of casks containing core debris have been made during this reporting period.

Decontamination/Dose Reduction Activities

Scabbling, steam cleaning, and hands-on decontamination continue in the auxiliary and fuel handling buildings. To date, 120 of 143 cubicles have been decontaminated to end point criteria. The remaining cubicles contain contaminated plant systems that first must be cleaned before the cubicle is decontaminated. Flushes of these systems are being performed to lower dose rates in these cubicles.

Filling and draining of the block wall in the reactor building (RB) basement has been completed. An evaluation is being performed to determine the effectiveness of the fill-and-drain operation.

Attempts to transfer highly contaminated resins from the "A" and "B" make-up (MU) demineralizers have been unsuccessful. Two attempts to employ a hydrolance device through the resin discharge piping into the "A" MU demineralizers have also been unsuccessful. Presently, no efforts will be made to transfer material until a thorough examination is conducted to determine the quantities and consistency of the remaining material.

The licensee continues to assess specific plant areas for placement of these areas into an interim PDMS condition as defined by their SAR. To date, three areas have been verified by the licensee to meet the interim PDMS criteria and have been isolated from routine access to assure that they would not become recontaminated, nor be impacted by other plant operations. These areas are the seal return cooler/filter room, the 2-1E switch gear room, and the 2-2E switch gear room. Five other areas are scheduled for verification and, eventually, isolation from the balance of plant.

Management Changes

Subsequent to the resignation of Franklin R. Standerfer on September 1, 1988, Michael B. Roche was named Vice President and Director of TMI-2. The turnover process from Standerfer to Roche began immediately and is

expected to be completed in early October. Roche had formerly been the Vice President and Director of Radiological and Environmental Controls of GPU Nuclear.

Anomalous Reuter-Stokes Readings

The licensee reported to the Commonwealth of Pennsylvania the following malfunctions or anomalous readings on various Reuter-Stokes radiation monitors in letters dated August 14, 17 and September 1, 1988.

"Electronic malfunctions on July 24, 28 and 29 were responsible for four individual unit malfunctions and the recording of anomalous values. There were no significant gaseous releases from Three Mile Island during the subject time periods."

"On August 14, 1988 at 1410 EST the Reuter-Stokes unit at the North Gate of Three Mile Island began to report anomalous exposure rates. The unit continued to report the anomalous values until August 15, 1988 at 1430, when the 300 volt battery was changed."

"The cause of the anomalous values was a defective 300 volt battery. Since the battery was replaced, we have not seen anomalous values reported from the unit."

"An alarm level was exceeded at Station 7 (Becker Farm) on Saturday, August 27 for the period of 1055 - 1100 EST. The reported exposure was 1.87 μ R/hr."

"Because the winds were not blowing toward the station, TMINS was ruled out as the cause for the elevated reading. The occurrence was more likely caused by an electronic malfunction or noise on the telephone line."

3. NRC Staff Activities

The NRC staff assigned on site consisted of the senior resident inspector, three resident inspectors, a project manager (for TMI-2), and a secretary.

During this period, Region I issued the following inspection reports.

TMI-1 (50-289)

- 88-13 on August 16, 1988, on routine operational activities. One violation was identified concerning vendor manual control.
- 88-14 on August 8, 1988, concerning radiological environmental monitoring. No violations were identified.
- 88-15 on August 3, 1988, concerning an operator licensing examination.

- 88-19 on August 17, 1988, concerning radiological controls program. No violations were identified.
- 88-20 on August 18, 1988, concerning the Once-Through Steam Generator inspection and maintenance program. No violations were identified.

TMI-2 (50-320)

- 88-09 on July 8, 1988, on the implementation of the radiological controls program. Two violations were identified. One for failure to perform an adequate survey that resulted in a high concentration of airborne radioactive material. The second violation was for a failure to properly implement procedures that resulted in a worker falling into the reactor vessel.
- 88-11 on August 8, 1988, on the implementation of the radiological environmental monitoring program. No violations were identified.
- 88-12 on September 6, 1988, on TMI-2 defueling/decontamination activities. No violations were identified.

Recovery Operations Plan Change

On August 30, 1988, the NRC staff issued Recovery Operations Plan (ROP) Change No. 40. This change allows GPUN to change the surveillance interval on the effluent monitor for the Waste Handling and Packaging Facility (WHPF). This change becomes effective when an improved monitor is installed on the WHPF vent. The change will make the surveillance requirements for the new monitor consistent with similar monitors installed in the facility.

4. Public Meetings

On September 7, 1988, the Advisory Panel on the Decontamination of TMI-2 met in Harrisburg, Pennsylvania. The NRC staff gave a presentation on revised exposure estimates for immediate versus delayed cleanup. The panel voted to recommend to the NRC commissioners that Post-Defueling Monitored Storage (PDMS) not be implemented. The panel members felt that at this time there was not sufficient information to demonstrate that PDMS was a preferred choice due to a lack of specific information on the timing and funding of decommissioning.

The panel is tentatively scheduled to meet with the NRC commissioners in Rockville, Maryland, on October 25, 1988. After the meeting is confirmed, this information will be updated in the next status report.