

JAN 09 1990

Docket Nos. 50-289
50-320

MEMORANDUM FOR: Edward C. Wenzinger, Chief
Projects Branch No. 4
Division of Reactor Projects

FROM: Curtis J. Cowgill, Chief
Reactor Projects Section 4B
Division of Reactor Projects

SUBJECT: TMI STATUS REPORT FOR THE PERIOD NOVEMBER 28, -
DECEMBER 18, 1989

Enclosed is the last 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. The monthly status report for the period May 16 - June 18, 1989 stated that the TMI status report would be discontinued when TMI-2 Defueling was completed. With the completion of bulk defueling the defueling process is essentially complete. Based on this information the NRC sees no further value in continuing these reports.

Original Signed By:

Elmo L. Collins

for
Curtis J. Cowgill, Chief
Reactor Projects Section 4B
Division of Reactor Projects

Enclosure: As Stated

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TMI STATUS RPT 11/28-12/18/89 - 0001.0.0
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ENCLOSURE

TMI-1 AND TMI-2 STATUS REPORT FOR THE PERIOD

NOVEMBER 28 - DECEMBER 18, 1989

1. TMI-1

a. Facility Operations Summary

During this reporting period, TMI-1 operated at full power until November 29, 1989. On that date, a reactor trip occurred as a result of an electrical problem experienced in the Turbine Electro Hydraulic Control System. This was the first automatic shutdown of the TMI-1 reactor in 13 months. Upon diagnosing the cause of the reactor trip, the reactor was restarted achieving criticality at 3:00 am on December 1, 1989. Following restart, the plant achieved full power and remained at 100% power until December 16, 1989. On December 16, 1989, a planned reduction to 95% power occurred as a result of normal fuel burn-up. An additional 5% reduction in power will occur every three or four days until it is operating at about 70% by January 5, 1990. At that time, the plant will be taken off line until March 4, 1989 to conduct refueling/maintenance activities.

2. TMI-2

a. Facility Activities Summary

The licensee temporarily halted Defueling on November 28, 1989, after a worker received an unplanned exposure during the removal of a piece of equipment from the Unit 2 reactor vessel. The exposure occurred to the skin on the palm of the workers hand and is estimated to be less than one rem. The regulatory limit for this type of exposure is 18.75 rem per calendar quarter.

Radiological work practices were reviewed to preclude a reoccurrence. Following an investigation into the causes of the event and the implementation of corrective actions, defueling was resumed on December 7, 1989.

On Saturday, December 16, 1989, the licensee completed bulk defueling of the TMI-2 reactor vessel. Approximately 300,000 lbs of core debris and intermixed materials were removed. Several hundred pounds of finely divided fuel debris remain, principally as a dust layer on horizontal surfaces.

Defueling crews will remove this remaining fuel by vacuuming brushing and water flushing. These activities should be completed by early January 1990. After two weeks of video verification of defueling completion, the reactor vessel will be turned over to an international research group for reactor vessel lower head sampling. The one month long research effort will obtain metallurgical samples from instrument penetrations and the reactor vessel lower head.

3. NRC Staff Activities

The NRC staff assigned on site during this period consisted of a senior resident inspector, three resident inspectors and a project manager for TMI-2.

a. Enforcement Conference

On November 22, 1989, an Enforcement Conference was held between NRC and GPU Nuclear Management at the NRC Region I offices in King of Prussia, PA. The purpose of the conference was to discuss the nature of the events that resulted in the overexposure of two workers on September 25, 1989 and licensee's actions taken to preclude a reoccurrence.

On Monday, December 4, 1989, the enforcement conference was reconvened in the NRC Region I office with the licensee. The purpose of the enforcement conference was to review the potential for commonalities between the September 25 extremity overexposure and the event which occurred on November 28, 1989. The November 28 event did not result in an overexposure, but the high dose rates involved (greater than 300 Rad/hr beta) created a hazard.

The licensee informed the NRC of their analysis of the principal causes, contributing factors, and planned corrective actions. Although some contributing factors were common, the events were largely separate and distinct. The licensee's corrective actions included upgraded training, procedure review and upgrade, personnel skills and qualification review, and positive communication methods.

b. Regional Management Site Visit

On November 30, 1989, NRC Region I management visited the site to evaluate the causes and plant conditions that resulted in a worker receiving an unanticipated exposure while removing a piece of equipment from the reactor vessel. The results of this evaluation will be documented in report no. 50-320/89-13.

c. Inspection Reports

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

--TMI-1 Inspection Report 50-289/89-81 addressing routine safety inspection activities for the emergency preparedness exercise.

--TMI-1 and TMI-2 Inspection Reports 50-289/89-22 and 50-320/89-10 addressing routine safeguards inspection. One violation was issued concerning security personnel qualifications.

--TMI-2 Inspection Report 50-320/89-08 addressing a routine safety inspection.

d. NRR Licensing Actions

On November 27, 1989, the NRC office of Nuclear Reactor Regulation (NRR) issued a safety evaluation (SE) and approval letter for GPUN to use the polar crane auxiliary hook over the seal table. This allows the licensee to use the crane to partially withdraw incore instrument strings from the reactor vessel. Withdrawal of the instrument strings is a preliminary activity in the reactor vessel lower head sampling program.

On November 28, 1989, the NRR staff issued a SE and approval letter for the reactor vessel lower head sampling program. This program is part of an international research effort in core melt-reactor vessel interactions. Samples from the reactor vessel lower head, including instrument penetrations will be cut out using a metal disintegration machine. This activity will take place after the completion of defueling the TMI-2 reactor vessel.

Organization plan change Number 21 was issued on November 8, 1989. This change approves a corporate level realignment of GPU Nuclear.

4. Public Meetings

The next meeting of the Advisory Panel for the Decontamination of TMI-2 has been postponed until spring of 1990. The meeting will be scheduled after the panel members and NRC staff receive the final Defueling Completion Report from GPU Nuclear. The time, date and location will be announced via press releases.