UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

January 26, 1981
NRC/TMI-81-005

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U.S. NUCLEAR REGULATORY COMMISSION

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

Bernard J. Snyder, Program Director,
TMI Program Office

FROM: Lake H. Barrett, Acting Deputy Program Director,
TMI Program Office

SUBJECT: NRC TMI PROGRAM OFFICE WEEKLY STATUS REPORT

Enclosed is the status report for the period of January 18 - 24, 1981.

Lake H. Barrett
Acting Deputy Program Director
TMI Program Office

Enclosure: As stated

cc: EDO
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NRC TMI PROGRAM OFFICE WEEKLY STATUS REPORT

Week of January 18-24, 1981

Plant Status

Core Cooling Mode: Heat transfer from the reactor coolant system (RCS) loops to reactor building ambient.

Available Core Cooling Modes: Long-term cooling "B" (once through steam generator-B); decay heat removal systems.

RCS Pressure Control Mode: Standby pressure control (SPC) system.

Backup Pressure Control Mode: One decay heat removal pump to supply pressure in conjunction with variable recirculation back to the borated water storage tank (BWST).

Major Parameters (as of 0500, January 23, 1981) (approximate values)
Average Incore Thermocouples: 124°F
Maximum Incore Thermocouple: 156°F

RCS Loop Tempratures:

	A	B
Hot Leg	121°F	124°F
Cold Leg (1)	68°F	68°F
(2)	68°F	69°F

RCS Pressure: 105 psig

Reactor Building: Temperature: 61°F
Water level: Elevation 290.6 ft. (8.1 ft. from floor) via penetration 401 manometer
Pressure: -0.4 psig (Heise)
Concentration: 1.9×10^{-4} uCi/cc (Kr-85) (sample taken 1/21/81)

Effluent and Environmental (Radiological) Information

1. Liquid effluents from TMI site released to the Susquehanna River after processing, were made within the regulatory limits and in accordance with NRC requirements and City of Lancaster Agreement dated February 27, 1980.

   During the period January 1, 1981, to January 24, 1981, minute amounts of contamination with an origin from Unit 2 were discharged from the TMI site. The NRC TMI Program Office staff verified that no accident related water, as defined in the City of Lancaster Agreement dated February 27, 1980, was discharged from Unit 2. Although the concentrations of radioactive effluent were not detectable at the discharge point, calculations indicated that less than two millionths (0.000002) of a curies of cesium-137 (Cs-137) was discharged. This represents less than 0.0001% of the permissable total liquid effluent activity as specified in Technical Specifications for other operational commercial power reactors.

2. EPA Environmental Data. Results from EPA monitoring of the environment around the TMI site were as follows:

-- The EPA measured Krypton-85 (Kr-85) concentrations (pCi/m^3) at several environmental monitoring stations and reported the following results:

Location	January 9 - January 16, 1981 (pCi/m^3)
Bainbridge	19
Goldsboro	25
Observation Center	22
Middletown	23

All of the above levels of Kr-85 are considered to be background levels.

-- 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 January 16, 1981, through January 22, 1981.

3. 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-251	January 15, 1981-January 21, 1981	<9.7 E-14	<9.7 E-14

No reactor related radioactivity was detected.

-- Environmental TLD measurements for the period November 26, 1980, to January 9, 1981, indicate gamma radiation to be at the natural background levels. Fifty-four TLD's registered doses ranging from 0.18 mR/day to 0.31 mR/day. Average dose was 0.23 mR/day. These dose rates are consistent with natural background radiation in the TMI area.

4. Licensee Radioactive Material and Radwaste Shipments. The following shipments were made:

-- On Monday, January 19, 1981, a 40 ml Unit 2 reactor coolant sample was sent to Babcock and Wilcox (B&W), Lynchburg, Virginia.

-- On Friday, January 23, 1981, three boxes containing sixteen Unit 2 air sample filters, a Unit 1 250 ml sample taken from the decay heat removal system, and twenty Unit 2 air sample filters and smear papers, were mailed to Teledyne Isotopes, Westwood, New Jersey.

Major Activities

1. Reactor Building Purge/Entry. The sixth reactor building entry continues to be scheduled for February 3 and 5, 1981. The major activities to be performed include installation of a closed circuit television system, work on the source range monitor, and a decontamination test. The day between the entries will be used to perform circuit checks and prepare personal equipment needed by members of the entry team.

2. Submerged Demineralizer System (SDS). The SDS construction is approximately 70% complete and initial testing of completed portions of the SDS is in progress. The onsite TMI Program Office is closely following developments in this area to reduce any potential technical regulatory delays in the event the decision is made to allow use of the SDS to process water. Consistent with this philosophy, the increased inspection efforts on the SDS installation are planned.

3. Contaminated Building Expansion Joint. The licensee submitted a report to the onsite TMI Program Office staff on January 19, 1981, which concluded that the source of the contamination is the seal injection cubicle in the auxiliary building and not the reactor building. The staff is currently reviewing this report.

4. Ground Water Monitoring Status. Following the detection of trace quantities of cesium in monitoring well (MW)-2, the licensee assigned analysis priority to water samples from MW-2. The most recent analysis by a licensee contracted laboratory included results of water samples taken on January 14, 1981. The January 14, 1981, sample taken from MW-2 contains 81 picocuries per liter (8.1×10^{-8} uCi/cc) of cesium-137 (Cs-137) and 3.7 picocuries per liter (3.7×10^{-8} uCi/cc) of Cs-134. The maximum permissable concentration (MPC) for soluble cesium in water in unrestricted areas is 2×10^{-5} uCi/cc for Cs-137 and 9×10^{-6} uCi/cc for Cs-134.

   The analysis of water samples taken from other wells through November 26, 1980, has not shown significant variation from the previously reported tritium activity. All wells continue to indicate tritium levels above natural background. Tritium concentration ranged from a low of 130 pci/l in MW-1 to a high of 4,690 pci/l in MW-17. The licensee's investigation to determine the source of the radioactivity in MW-2 is continuing, and is being closely monitored by the onsite TMI Program Office staff.

5. Onsite Analytical Laboratory. On January 16, 1981, the onsite TMI Program Office staff identified several safety and radiological inadequacies in the licensee's onsite analytical laboratory. The safety and radiological problems were brought to the licensee management's attention. Subsequently the licensee agreed to shutdown the onsite analytical laboratory pending completion of corrective action. Until then, the licensee will continue to send the reactor coolant system samples to the licensee's contractor laboratory in Lynchburg, Virginia.

Meetings Attended

On Thursday, January 22, 1981, Lake Barrett and Richard Conte attended a public briefing at the Forum in Harrisburg. The briefing was sponsored by the Department of Environmental Resources (DER) concerning the status of decontamination at Three Mile Island Unit 2 (TMI-2). Robert Arnold and Gale Hovey of the TMI Nuclear Generating Station, provided an updated review covering the following areas: cork seal contamination, contamination in sumps of a waste storage module, ground water contamination, new method of cooling the TMI-2 reactor, recent correspondence between General Public Utilities (GPU) and the NRC, disposal of the processed cleaned up accident water at TMI-2 and future entries into the TMI-2 containment building. After their presentation, Lake Barrett gave a status report on the NRC's efforts towards solving problems related to disposal of TMI-2 higher radioactivity level waste. He stated that the TMI site is not appropriate for ultimate disposal of radioactive waste and summarized recent NRC correspondence to the Department of Energy (DOE), which expressed the desirability of greater DOE involvement in waste disposal. Additionally he stated that it was the NRC staff's position that NRC licensing procedures would not apply to DOE facilities, which may process, store or dispose of TMI waste provided that the facilities were used primarily for defense related activities.

After the presentations, the meeting was opened for a question and answer session with the press and the local public. Major areas of concern centered around the cesium in the on-site monitoring wells and requests for further information regarding site hydrological data. It was also suggested, to improve communications, that a special 24 hour/per day "rumor control" telephone line be developed by the licensee for area residents to call so they could obtain accurate information regarding activities at TMI.

Future Meetings

1. On Thursday, January 29, 1981, Lake Barrett will meet with the Mayor of Lancaster to discuss the status of TMI-2.

2. The NRC's Advisory Panel for the Decontmination of Three Mile Island Unit 2, will hold meetings in Harrisburg, on February 4, 11 and 19, 1981. The public is invited to observe all three of these meetings, which will be held at the Forum of the Education Building on Commonwealth and Walnut Streets. Each of these meetings are scheduled to begin at 7:00 p.m. and end at 10:30 p.m.