

DISTRIBUTION
TMIPO HQ r/f
TMI SITE r/f
~~CENTRAL FILE~~
NRC PDR
LOCAL PDR
Site Operations File

April 9, 1982
NRC/TMI-82-020

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



Enclosed is the status report for the period of April 4, 1982 to April 9, 1982. Major items included in this report are:

- Liquid Effluents
- NRC and EPA Environmental Data
- Radioactive Material and Radwaste Shipments
- Submerged Demineralizer System Status
- EPICOR II
- Reactor Coolant System Water Processing
- Reactor Building Entries
- Unit 1 Developments
- Purification System Filter Shipments
- NRC-DOE Memorandum of Understanding
- Groundwater Monitoring Status
- Public Meetings

Lake H. Barrett
Deputy Program Director
TMI Program Office

8205030457

OFFICE	TMIPB GK/Man/jes	Enclosure: TMIPB stated RConte	TMIPB MShanbaky	TMIPB R Bellamy	TMIPB tBarrett
SURNAME	4/9/82	4/9/82	4/9/82	4/9/82	4/9/82
DATE					

cc w/encl:

EDO

OGC

Office Directors

Commissioner's Technical Assistants

NRR Division Directors

NRR A/D's

Regional Directors

IE Division Directors

TAS

EIS

TM1 Program Office Staff (15)

PHS

EPA

DOE

Projects Br. #2 Chief, DRPI, RI

DRPI Chief, RI

Public Affairs, RI

State Liaison, RI

OFFICE							
NAME							
DATE							

April 4, 1982 - April 9, 1982

Plant Status

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

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

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

Backup Pressure Control Modes: Mini decay heat removal (MDHR) system.
Decay heat removal (DHR) system.

Major Parameters (as of 0500, April 9, 1982) (approximate values)

Average Incore Thermocouples: 101°F

Maximum Incore Thermocouple: 128°F

RCS Loop Temperatures:

	A	B
Hot Leg	97°F	100°F
Cold Leg (1)	84°F	85°F
(2)	91°F	92°F

RCS Pressure: 104 psig

Reactor Building: Temperature: 63°F
Water level: Elevation 283.2 ft. (0.5 ft. from floor)
Pressure: -.59 psig
Airborne Radionuclide Concentrations:
2.0 E-7 uCi/cc H³
(sample taken 3/31/82)
4.1 E-6 uCi/cc Kr⁸⁵
(sample taken 3/30/82)

1. Effluent and Environmental (Radiological) Information

Liquid effluents from the 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 April 2, 1982, through April 8, 1982, the effluents contained no detectable radioactivity at the discharge point and individual effluent sources, which originated within Unit 2, contained no detectable radioactivity.

2. Environmental Protection Agency (EPA) Environmental Data.

- The EPA Middletown Office has not received the environmental Kr-85 analytical results for the samples which were taken March 12, 1982, through April 2, 1982, from the EPA's Counting Laboratory at Las Vegas, Nevada. When these results become available, they will be included in a subsequent report.
- No radiation above normally occurring background levels was detected in any of the samples collected from EPA's air and gamma rate networks during the period from March 31, 1982, through April 8, 1982.

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:

<u>Sample</u>	<u>Period</u>	<u>I-131</u> <u>(uCi/cc)</u>	<u>Cs-137</u> <u>(uCi/cc)</u>
HP-314	April 1, 1982 - April 7, 1982	< 7.2 E-14	< 7.2 E-14

4. Licensee Radioactive Material Radwaste Shipments.

- On Wednesday, April 7, 1982, one cask (1/2 Super Tiger Protective Overpack) containing Unit 2 make-up system filters and reactor building samples was shipped to the Idaho National Engineering Laboratory, Scoville, Idaho.
- On Wednesday, April 7, 1982, five liquid samples (various flush samples) from Unit 1 were shipped to the Westinghouse Electric Corporation Laboratory, Waltz Mills, Pennsylvania.

Major Activities

1. Submerged Demineralizer System (SDS). The SDS is shutdown for minor maintenance.
2. EPICOR II. The EPICOR II System is shutdown because of lack of water to be processed.
3. Reactor Coolant System (RCS) Processing. Engineering efforts are still in progress for processing the RCS. Fabrication and construction efforts are underway for needed hardware modifications. The NRC TMI/PO site office has approved approximately 30 percent of the procedures needed for RCS processing. The remaining procedures are under review. The NRC TMI/PO is awaiting receipt of a request by the licensee to revise the Recovery Operations Plan to incorporate changes to accommodate RCS processing.

4. Reactor Building Entries. The reactor building entry scheduled for April 7, 1982, was cancelled when it was decided to perform minor maintenance and housekeeping on entry support facilities and equipment. The next reactor building entry has been scheduled for Wednesday, April 14, 1982. During this entry installation will commence on a pump designed to remove the remaining water (approximately 30,000 gallons) from the basement of the reactor building for processing through the Submerged Demineralizer System. Work will also commence to remove HPR-214, the reactor building dome radiation monitor. HPR-214 will be shipped off site for laboratory analysis.

5. TMI Unit 1 Developments. The licensee presented plans to the NRC staff for repairing defective tubes in the Once Thru Steam Generators (OTSG's) in Unit 1. The repairs which could be completed in approximately five months will involve both tube plugging and tube rolling. The tube plugging, which permanently removes tubes from service, could involve up to 500 tubes in both OTSG "A" and "8". The licensee stated that up to 10,000 tubes could require rolling. The proposed tube rolling would be completed remotely by either mechanical or hydraulic expansion techniques. By performing this type of repair these 10,000 tubes will be maintained in service.

The actual tube rolling and expansion may be completed during June through August, 1982. Upon completion, leak testing and eddy current examinations will be performed. The licensee also will perform examinations of the reactor coolant system and reactor core internals. The results of these tests will be assessed to insure that other components were not affected by the corrosion problem.

6. Purification System Filter Shipment. Five filters which were removed from the letdown and makeup systems (RCS purification system) were shipped on Wednesday, April 7, 1982, to EG&G Laboratories in Idaho for analysis. The filters had been in the RCS purification system during the accident in March, 1979.

7. NRC-DOE Memorandum of Understanding on TMI Wastes. The U.S. NRC and U.S. DOE agreed to a revision to the existing Memorandum of Understanding (MOU) concerning disposition of solid nuclear wastes from TMI-2 cleanup. The original MOU was signed July 15, 1981. Revision 1, signed March 15, 1982, identified significant changes in the proposed disposition of the reactor fuel and the makeup and purification system demineralizer resins. The DOE has agreed that the entire reactor core will be shipped to a DOE facility for selected research and development. Ultimate disposition will be negotiated between DOE and the owner, GPU Nuclear.

The DOE has also agreed to take possession of the makeup and purification system demineralizer resins which will be part of a research and development program.

A copy of the revised MOU was transmitted by Department of Energy Secretary, James B. Edwards, to the Governor of Pennsylvania, Dick Thornburgh, on April 7, 1982. The transmittal also included an Agreement in Principle between DOE and GPU for acquisition of the entire TMI-2 reactor core by DOE. The DOE will conduct a research and development program to examine the damaged reactor core with the objective of gaining additional understanding of degraded core performance and contributing to nuclear reactor safety on a generic basis. A copy of Mr. Edwards' letter, the MOU, and the Agreement in Principle are attached.

8. Ground Water Monitoring Program. The analyses of ground water samples taken from on-site test borings in February and March have been received. The most recent analyses results are shown on Attachment 1. A sample taken from test boring 17 on March 23, 1982, contained the highest tritium concentration of any sample taken to date (1,100,000 pCi/l). The previous highest reading for test boring 17 was 678,000 pCi/l, for a sample taken February 25, 1982. The previous highest reading for any test boring was for test boring 2, with a level of 954,000 pCi/l, for a sample taken February 12, 1982. More recent samples from test boring 2 have shown reduced levels of tritium, down to 30,900 pCi/l for a sample taken March 23, 1982.

Test boring 3 has also shown increased levels of tritium, increasing from 2500 to 24,700 pCi/l for a sample taken March 23, 1982, compared to a March 9, 1982 sample.

All of the test borings that show increased levels of tritium are located near the borated water storage tank. The aquatic environment in the TMI area did not show any apparent increase in tritium concentrations. The maximum permissible concentration of tritium in unrestricted areas, established by 10 CFR Part 20, is 3,000,000 pCi/l. No other radioisotopes except tritium were detected in the February and March samples.

The licensee has increased his surveillance frequency of the on-site test borings, and has also instituted a systematic program to identify the source of the tritium. As a confirmatory measure, the NRC has taken samples from the test borings and is currently performing independent analyses.

Future Meetings

1. On Wednesday, April 14, 1982, Lake Barrett will be the keynote speaker for the Southern Pennsylvania Association of Occupational Health Nurses, to be held at the Holiday Inn in York.
2. On Thursday, April 22, 1982, the TMI Advisory Panel for the decontamination of TMI Unit 2 will hold a meeting in Harrisburg at the Holiday Inn located at Second and Chestnut Street, to discuss the current status of the plant cleanup program.
3. A meeting is scheduled on April 14, 1982, at 7:00 p.m. between the NRC staff and members of Three Mile Island Alert and Newberry Township TMI Steering Committee. The purpose of the meeting is to obtain input to the scoping process for the psychological stress related to TMI-1 restart. The meeting will be held at the Newberry Township Hall, Newberry Township, PA.

TEST BORING H³ CONCENTRATIONS

(clockwise)

1260

pc/l TB-9

pc/l TB-10

TB-2 30,900 pc/l

TB-17 1,100,000 pc/l

TB-16 218,000 pc/l

TB-3 24,700 pc/l

UNIT I
ARMING
LOT

TB-1
110 pc/l

TB-15
500 pc/l
500 pc/l
(clockwise)

TB-5 705 pc/l

TB-6 549 pc/l

TB-7 488 pc/l

TB-8 655 pc/l

TB-14 809 pc/l

TB-13B 478 pc/l

EPICOR II

DW STORAGE TX

SERVICE BLDG.

CONTROL BLDG.

AUX. BLDG

UNIT 2
REACTOR
BLDG.

FUEL HANDLING
BLDG.

DIESEL
GEN.
BLDG.

TURBINE
BLDG