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May 16, 1983
NRC/TMI-83-030

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 May 8, 1983, through May 14, 1983. Major items included in this report are:

-- Liquid Effluents

-- Airborne Effluents

-- EPA and NRC Environmental Data

-- Radioactive Material and Radwaste Shipments

-- Submerged Demineralizer System Status

-- EPICOR II Status

-- SDS Liner Shipments

-- EPICOR II Prefilter Shipments

-- Reactor Building Entries

-- Polar Crane

-- Purification Demineralizer Disposal Status

-- Neutron Detector Source Check

-- Public Meeting

Lake H. Barrett
Deputy Program Director
TMI Program Office

OFFICE ▶	Enclosure: As stated					
NAME ▶						
DATE ▶						

cc w/encl:
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Office Directors
Commissioner's Technical Assistants
NRR Division Directors
NRR A/D's
Regional Administrators
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TAS
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TMI Program Office Staff (15)
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RI Division Directors
Public Affairs, RI
State Liaison, RI

OFFICE	TMIPO	TMIPO	TMIPO	TMIPO	TMIPO		
NAME	KBarr/lmm	JO'Neill	AAsaro	[illegible]	LBarrett		
DATE	5/16/83	5/16/83	5/16/83	5/16/83	5/16/83		

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NRC TMI PROGRAM OFFICE WEEKLY STATUS REPORT

May 8, 1983 - May 14, 1983

Plant Status

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

Available Core Cooling Mode: Mini Decay Heat Removal (MDHR) system.

RCS Pressure Control Mode: Standby Pressure Control System.

Major Parameters (as of 5:00 AM, May 13, 1983) (approximate values)
Average Incore Thermocouples*: 91°F
Maximum Incore Thermocouple*: 135°F

RCS Loop Temperatures:

	A	B
Hot Leg	87°F	85°F
Cold Leg (1)	74°F	74°F
(2)	74°F	75°F

RCS Pressure: 64 psig

Reactor Building: Temperature: 69°F
Pressure: -0.2 psig
Airborne Radionuclide Concentrations:

3.5 E-7 uCi/cc H^3 (Tritium)
(sample taken 5/11/83)

1.4 E-9 uCi/cc particulates
(predominately Cs-137)
(sample taken 5/11/83)

1. Effluent and Environmental (Radiological) Information

Liquid effluents from the TMI site released to the Susquehanna River, after sampling and monitoring, were within the regulatory limits and in accordance with NRC requirements and City of Lancaster Agreement.

During the period May 6, 1983, through May 12, 1983, the effluents contained no detectable radioactivity at the discharge point and individual effluent sources, which originated within Unit 2, contained minute amounts of radioactivity. Calculations indicate that less than twelve-millionths (0.000012) of a curie of cesium was discharged.

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

2. Airborne Effluents

Airborne releases to the environment as measured by licensee installed monitors at discharge stacks are listed below. These releases were well within regulatory limits.

	March 1983	
	Unit 2 Building	EPICOR II
Noble Gases (Ci)	9.25	2.81
Particulates (Ci)	2.02 E-6	9.06 E-8
Tritium (Ci)	3.58	6.20 E-3

3. 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 subsequent to April 15, 1983, from the EPA's Counting Laboratory at Las Vegas, Nevada. These results will be included in a subsequent report.

-- 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 May 4, 1983, through May 12, 1983.

4. NRC Environmental Data

-- 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-369	May 6, 1983 - May 12, 1983	<7.3 E-14	<7.3 E-14

5. Licensee Radioactive Material and Radwaste Shipments

-- On May 9, 1983, one drum containing pressurizer swipe samples taken from Unit 1 was shipped to Babcock and Wilcox, Lynchburg, Virginia.

-- On May 9, 1983, one box containing two 1,000 milliliter liquid samples from Unit 1 was sent to Teledyne, Westwood, New Jersey.

-- On May 10, 1983, five boxes containing Westinghouse steam generator equipment from Unit 1 were shipped to Westinghouse, Pittsburgh, Pennsylvania.

-- On May 10, 1983, 92 drums containing contaminated laundry from Units 1 and 2 were shipped to Interstate Uniform, New Kensington, Pennsylvania.

-- On May 11, 1983, three drums containing resistor banks removed from the Unit 2 polar crane were shipped to EG&G, Scoville, Idaho.

-- On May 12, 1983, one drum containing two Unit 2 RCBT-A samples was sent to Science Applications, Rockville, Maryland.

-- On May 13, 1983, two Unit 1 Hittman liners containing solidified evaporator bottoms were shipped to U.S. Ecology, Hanford burial site, Richland, Washington.

Major Activities

1. Submerged Demineralizer System (SDS). SDS completed processing the tenth batch of reactor coolant system (RCS) water on May 11, 1983. This batch consisted of approximately 48,300 gallons; performance parameters are included in Attachment 1.

2. EPICOR II. EPICOR II is currently in a shutdown mode.

3. SDS Liner Shipments. The licensee is continuing preparations for shipment of the ninth (in a group of 13) SDS waste liner (D10014). This spent zeolite liner, which contains approximately 59,800 curies, was vacuum dried, loaded with a catalytic recombiner and is presently being monitored to insure non-combustible gas conditions during the shipment period to Hanford, Washington. Shipment is tentatively scheduled for May 17, 1983. The DOE and GPU are currently developing agreements for the acceptance of future spent SDS liners. Because of scheduled repairs and maintenance on the fuel handling building crane, which is used for SDS cask and liner handling, the next shipment will not occur until late June 1983.

4. EPICOR II Prefilter (PF) Shipment. No EPICOR II PF shipments were made this week. Two prefilters (PF-21 and PF-37) are scheduled for shipment next week. The EPICOR II PF venting and nitrogen inerting tool, which is used to sample and inert each PF prior to shipment, has performed well with minimal maintenance. GPU anticipates shipment of the remaining 13 prefilters to the Idaho National Engineering Laboratory (INEL) by the end of July 1983.

5. Reactor Building Entries. Four reactor building entries were completed during the week of May 8, 1983. The work effort during the entries was focused on localized decontamination and general area cleanup tasks. Calibration of the source range neutron monitors using an Americium-Beryllium (Am Be) neutron source (see paragraph 8 below), and an industrial safety inspection of the reactor building were also performed. Five reactor building entries are scheduled for the week of May 15, 1983.

6. Polar Crane Activities. Polar crane load testing and operations are still delayed pending resolution of NRC procedural comments. GPU's preliminary schedules indicate that they will be ready to resubmit these procedures to the NRC in early June.

7. Purification Demineralizer Disposal Status. The DOE and GPU are continuing characterization studies on the internal conditions of the two spent resin purification demineralizer vessels. Initial fiber-optics inspection and resin sampling activities were completed in early May, including sample shipment to Oak Ridge National Laboratory (ORNL) for detailed analysis on resin sluicability, degradation and chemical/radiochemical content.

The visual inspection of the "A" demineralizer (described in the April 18, 1983, Weekly Status Report) was performed with the use of a new fiber-optics probe and guide sleeve. The physical conditions and the pathway of the fiber-optics probe/guide sleeve are shown in Attachment 2. The probe was inserted through the resin fill line, by the diaphragm fill valve and upper feed nozzle lateral, down the stainless steel vessel wall and across the surface of the resin bed. A large void channel was identified in the resin bed, above the resin sluice outlet line, and is currently being evaluated as to its significance. The surface of the resin bed contained both a thin white film (presumably boric acid crystals) and a thicker (¼") crusty, gray film. The resin bed appears agglomerated (clumps of resin) below the surface layer, which could effect resin sluicability. No liquid was identified in the "A" vessel, however, approximately 1 foot of water was identified above the resin bed in the "B" vessel.

Additional inspections on both demineralizer vessels are planned for the near future. A meeting is scheduled in mid-May by GPU, DOE and their contractors to discuss disposal options and the resin sample results before a final decision is made on the eventual handling and disposal methodology.

8. Source Check of Source Range Nuclear Instruments. On May 13 an Americium-Beryllium (Am Be) neutron source was taken into the Reactor Building to verify that one of the source range nuclear instruments (NI-1) is operating correctly. This is the first time following the March 28, 1979, accident that this type of source check has been performed at TMI-2.

The verification procedure consists of placing the neutron source in the vicinity of the source range detectors to determine whether the instruments will respond to the neutrons emitted from the source. The instrument output is then measured as various voltages are applied to determine the condition of the neutron detector and to establish what voltage should be applied. Preliminary evaluation of the data obtained indicates that the detectors for NI-1 are operating satisfactorily. NI-2, the second source range nuclear instrument, is scheduled to be tested and checked during the week of May 16, 1983.

The NI-1 and NI-2 cables and electronics had been previously verified to be operating satisfactorily. NI-1 and NI-2 are used in the plants' present condition to monitor reactor subcriticality.

Future Meeting

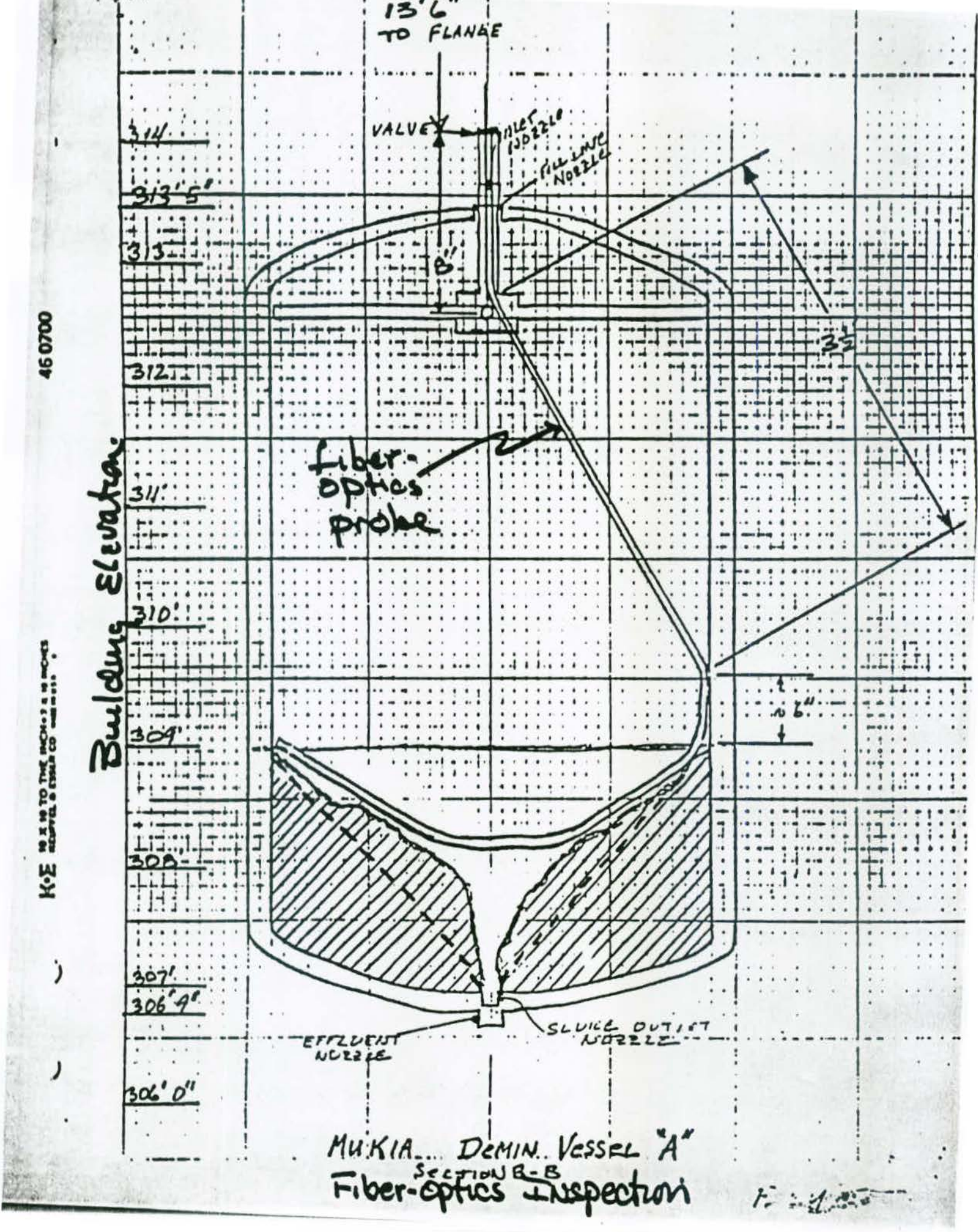
On May 19, 1983, Lake H. Barrett will meet with the Concerned Mothers of Middletown to discuss TMI related issues.

ATTACHMENT 1

SDS PERFORMANCE PARAMETERS

May 4, 1983 to May 11, 1983

Radionuclide	Average Influent (uc/ml)	Average Effluent (uc/ml)	Average DF
Cesium 137	4.5×10^{-1}	2.0×10^{-4}	2.2×10^{3}
Strontium 90	5.3	1.4×10^{-2}	3.8×10^{2}



MU'KIA... DEMIN. VESSEL "A"
SECTION B-B
Fiber-optics Inspection