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May 22, 1981
NRC/TMI-81-030

POOR ORIGINAL

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 May 17 - 22, 1981.

Lake H. Barrett
Acting Deputy Program Director
TMI Program Office

Enclosure: As stated

cc: EDO
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DATE	5/22/81	5/27/81	5/21/81	5/24/81	5/22/81	5/22/81

NRC FORM 318 (10-80) NRCM 0240

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NRC TMI PROGRAM OFFICE WEEKLY STATUS REPORT

Week of May 17 - 22, 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 Modes: Mini Decay Heat Removal (MDHR) System.
Decay Heat Removal (DHR) System.

Major Parameters (as of 0400, May 22, 1981) (approximate values)
Average Incore Thermocouples: 116°F
Maximum Incore Thermocouple: 142°F

RCS Loop Temperatures:

		A	B
Hot Leg		111°F	114°F
Cold Leg	(1)	65°F	66°F
	(2)	66°F	66°F

RCS Pressure: 98 psig

Reactor Building: Temperature: 67°F
Water level: Elevation 290.8 ft. (8.3 ft. from floor) via penetration 401 manometer
Pressure: -0.4 psig
Concentration: 1.1×10^{-5} uCi/ml Kr-85 (Sample taken 5/18/81)

Effluent and Environmental (Radiological) Information

1. 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 May 15, 1981, through May 21, 1981, the effluents contained no detectable radioactivity at the discharge point although individual effluent sources which originated within Unit 2 contained minute amounts of radioactivity. Calculations indicate that less than 1 millionth (0.000001) of a curie of Cs-137 was discharged. This represents less than 0.00001% of the permissable total liquid activity as specified in Technical Specifications for operational commercial reactors.

2. Airborne effluents from the TMI site released to the environment, after processing, were made within the regulatory limits and in accordance with NRC requirements

During the reporting period January 1, 1981 - March 31, 1981, the licensee reported the following gaseous releases:

	Curies
Noble Gases	25.3
Particulates	.0.000015
Tritium	33.0

The above release represent a small fraction of the allowable regulatory limits. The instantaneous airborne effluents are measured on a continuous basis, however for accurate calculation of total curies released, effluent samples are analyzed in the laboratory and the data evaluated. On the basis of the data from these samples, a draft effluent report is issued monthly by the licensee. Airborne effluent information will be provided in the weekly status report on a monthly basis.

3. Environmental Protection Agency (EPA) Environmental Data. Results from EPA monitoring of the environment around the TMI site were as follows:

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

Location	May 8 - May 15, 1981 (pCi/m^3)
Goldsboro	22
Observation Center	33
Middletown	29
Yorkhaven	27

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

The installation of tritium (H^3) monitoring devices has been completed at the above listed locations. It is expected that H^3 environmental results will be routinely reported by EPA in about four to six weeks.

-- 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 14, 1981, through May 21, 1981.

4. 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-268	May 13, 1981 - May 20, 1981	<8.8 E-14	<8.8 E-14

5. Licensee Radioactive Material and Radwaste Shipments

-- On Monday, May 18, 1981, a 40 ml Unit 2 reactor coolant sample was sent to Babcock and Wilcox (B&W) Lynchburg, Virginia.

-- On Tuesday, May 19, 1981, the U.S. Department of Energy (DOE) shipped an EPICOR-II resin liner (PF-16) from Unit 2 to Battelle Columbus Laboratories in Columbus, Ohio. (The liner and resin will undergo examination and testing at the laboratory.)

-- On Wednesday, May 20, 1981, one 4' x 4' EPICOR-II dewatered resin liner (liner DF-12) from Unit 2 was shipped to U.S. Ecology, Richland, Washington.

Major Activities

1. Submerged Demineralizer System (SDS). Preparation of the Safety Evaluation Report (SER) by the TMI Program Office is in progress although some necessary information has not yet been received. On May 13, 1981, the licensee submitted a revised schedule for providing the needed information. The revised schedule indicates the information will be provided by May 29, 1981.

   Functional tests are complete with the exception of a few items which are undergoing engineering evaluation and further testing. Operator training on components not involved with the outstanding functional testing has been initiated. The operator training does not involve processing of contaminated water.

2. Shipment of EPICOR-II Prefilter (PF-16) to Battelle Columbus Laboratories (BCL). As part of a DOE sponsored resin characterization study, PF-16 was shipped to the BCL in West Jefferson, Ohio, on May 19, 1981. This research effort is to supplement the development of technology for safely processing contaminated resins and to evaluate liner material compatability. PF-16 was part of the 1st stage EPICOR-II treatment process for the accident generated water collected in the Auxiliary Building.

   Prior to shipment, special preparations were made to ensure that PF-16 did not contain significant quantities of nonradioactive gases that could be generated by organic resin degradation (e.g., H_2, hydrocarbon gases, etc.) While gas generation was indicated (a result of the approximately 16 month on-site storage period),

the PF-16 liner pressure was reduced to atmospheric. Ro increase in airborne activity levels was detected during this procedure. The liner was then placed in a type "B" shipping cask which is designed to withstand a transportation accident. The shipping cask weighs 32 tons and is constructed of steel and lead. The PF-16 liner is constructed of steel with thickness ranging from 1/4 inch to 5/8 inches and contains approximately 1,150 curies of radioactive cesium and strontium.

The shipment arrived safely at BCL without incident after the one day trip. The research effort will start immediately and is expected to last over a 2 1/2 year period.

3. Reactor Building (RB) Entry and Purge. The eleventh entry into the Unit 2 RB is scheduled for Thursday, May 28, 1981. Tentative plans call for the completion of six tasks:

   -- Installation of safety equipment on the polar crane.

   -- Installation of a portable, shielded gamma spectrometer system.

   -- Troubleshoot and repair of the Gai-Tronics (an installed communications system within the Containment Building).

   -- Survey of the "D Ring" area, preventive maintenance of certain valves, and photography of the PORV (pressure operated relief valve).

   -- Complete the hose connections to the SDS surface suction pump.

   -- Troubleshoot and repair an electrical panel (lighting) on the 347' elevation.

   If all tasks are attempted, 18 men will enter the RB. Complete plans for all proposed tasks will be reviewed by the TMI Program Office prior to the entry.

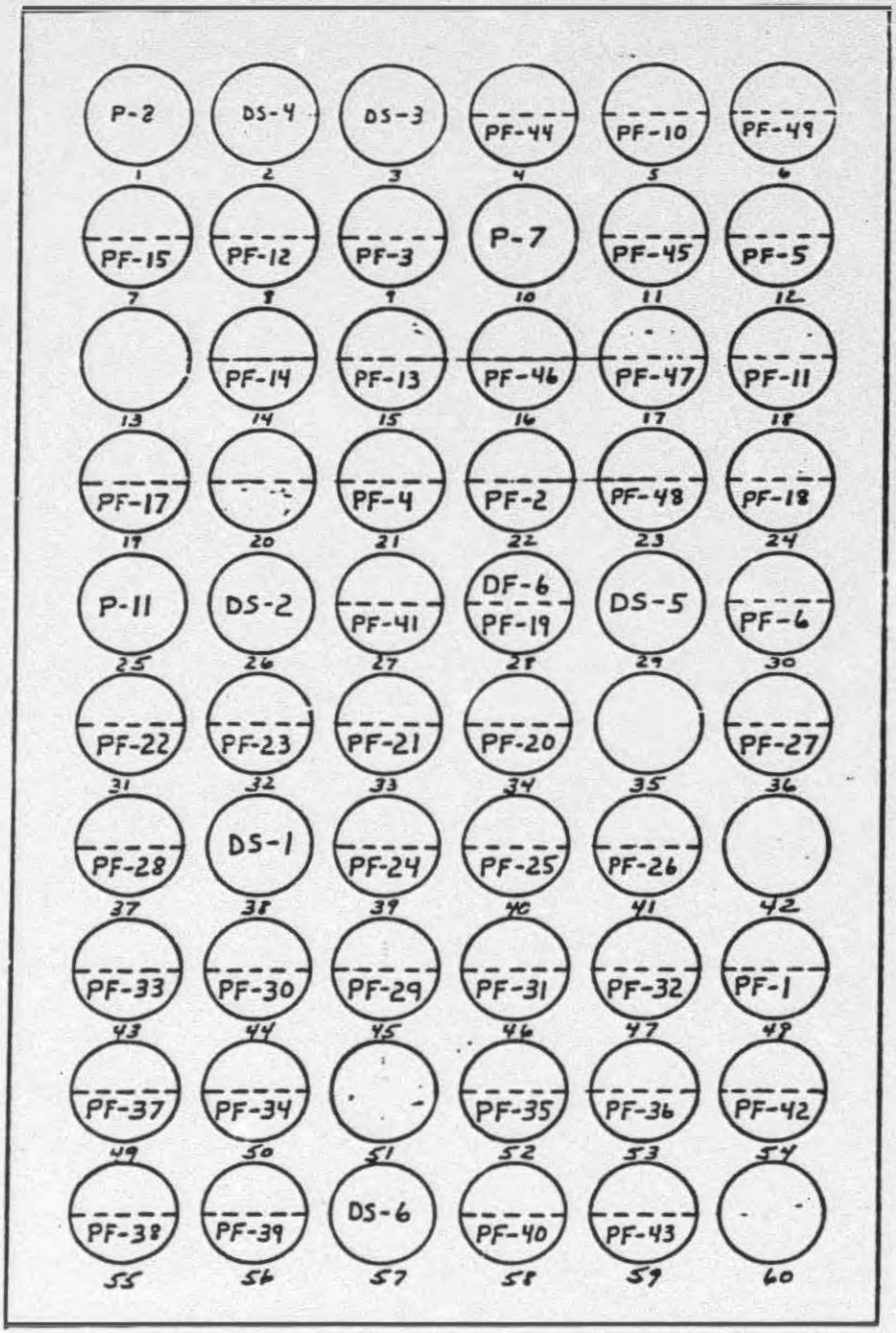
   An RB purge will commence one day prior to entry. It is expected that less than three curies of Kr-85 will be released during the purge.

4. Solid Waste Staging Facility Sump Contamination. The licensee continues to collect weekly samples of water from the solid waste staging facility sump. These samples are analyzed for radioactive isotope contents as a method for early indication of liner degradation. To date the results of the analysis has been stable and do not indicate liner degradation.

   The "A" staging module, in service since January 1980, now has 55 spent-resin liners; the 8 module, in service since December 1980, now has 18 spent-resin liners. Graphic displays of Modules A and 8 are attached.

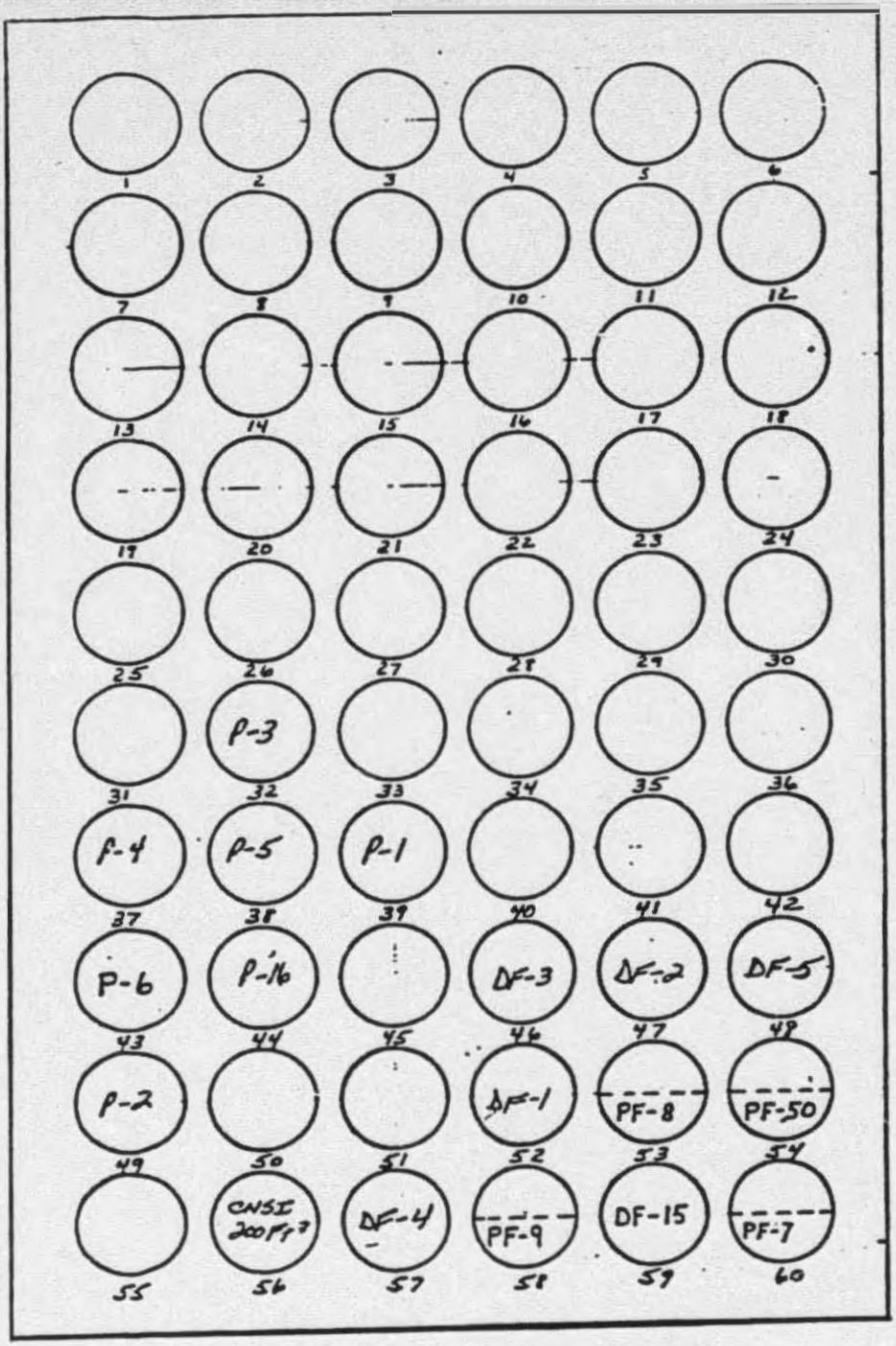
Future Meetings

On Thursday, June 4, 1981, the Advisory Panel for the Decontamination of TMI Unit 2 will meet from 7:00 p.m. to 10:00 p.m. in the City Council Chambers, Kendig C. Bare Public Safety Building, 208 North Duke Street, Lancaster. At this meeting, which is open for public observance, the Panel will discuss Radiation Worker Exposure and Health Effects.



MODULE A

Attachment 1



MODULE B

Attachment 2