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NRC PDR
LOCAL PDR
Site Operations
File

March 14, 1983
NRC/TMI-83-012

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 March 6, 1983, through March 12, 1983. Major items included in this report are:

- Liquid Effluents
- EPA and NRC Environmental Data
- Radioactive Material and Radwaste Shipments
- Submerged Demineralizer System Status
- EPICOR II Status
- Reactor Building Entries
- SDS Liner Shipment Preparations
- EPICOR II Prefilter Shipment
- Purification Demineralizer Disposal Status
- Groundwater Monitoring Program
- Public Meetings

LD
Lake H. Barrett
Deputy Program Director
TMI Program Office

Enclosure: As stated

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| OFFICE | | | | | | | |
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| DATE | | | | | | | |

Harold R. Denton
Bernard J. Snyder

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March 14, 1983

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

| | | | | | | | |
|--------|------------|----------|----------|---------|-----------|--|--|
| OFFICE | TMIPD | TMI2PS | TMI2PS | TMIPD | TMIPD | | |
| RNAME | L Gage/Imp | BQ'Neill | A Fasano | P Grant | L Barrett | | |
| DATE | 3/14/83 | 3/14/83 | 3/14/83 | 3/14/83 | 3/14/83 | | |

NRC TMI PROGRAM OFFICE WEEKLY STATUS REPORT

March 6, 1983 - March 12, 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, March 11, 1983) (approximate values)

Average Incore Thermocouples*: 91°F

Maximum Incore Thermocouple*: 133°F

RCS Loop Temperatures:

| | A | B |
|--------------|------|------|
| Hot Leg | 88°F | 86°F |
| Cold Leg (1) | 77°F | 78°F |
| (2) | 79°F | 78°F |

RCS Pressure: 64 psig

Reactor Building: Temperature: 72°F

Pressure: -0.22 psig

Airborne Radionuclide Concentrations:

2.2 E-7 uCi/cc H³
(sample taken 3/11/83)

8.0 E-9 uCi/cc particulates
(sample taken 3/8/83)

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 March 4, 1983, through March 10, 1983, the effluents contained no detectable radioactivity at the discharge point and individual effluent sources, which originated within Unit 2, contained no detectable radioactivity.

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

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 subsequent to February 18, 1983. These results, which are being provided by the EPA's Counting Laboratory at Las Vegas, Nevada, 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 monitoring networks during the periods from March 2, 1983, through March 10, 1983.

3. NRC Environmental Data

- 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-360 | March 2 - March 10, 1983 | <6.2 E-14 | <6.2 E-14 |

4. Licensee Radioactive Material and Radwaste Shipments

- On March 7, 1983, one box containing two 250 milliliter liquid samples taken from Unit 1 was mailed to Babcock and Wilcox, Lynchburg, Virginia.
- On March 7, 1983, one box containing one 1,000 milliliter liquid sample taken from Unit 1 was mailed to Teledyne Corporation, Westwood, New Jersey.
- On March 8, 1983, 89 drums containing contaminated laundry from Units 1 and 2 were shipped to Interstate Uniform Service, New Kensington, Pennsylvania.
- On March 9, 1983, one CNSI-8-120-3 (Type B) shipping cask containing Unit 2 EPICOR Prefilter No. PF-43, was shipped to EG&G, Scoville, Idaho.
- On March 9, 1983, one CNSI-8-120-4 (Type B) shipping cask containing Unit 2 EPICOR Prefilter No. PF-39, was shipped to EG&G, Scoville, Idaho.
- On March 9, 1983, two steel liners containing solidified evaporator bottoms taken from Unit 1 were shipped to U.S. Ecology, Hanford burial site, Richland, Washington.
- On March 10, 1983, 28 wooden boxes containing concrete blocks taken from Unit 2 were shipped to U.S. Ecology, Hanford burial site, Richland, Washington.

- On March 11, 1983, one box containing Unit 1 reactor building spray drain line smears was mailed to Babcock and Wilcox, Lynchburg, Virginia.
- On March 11, 1983, one box containing one 1,000 milliliter liquid sample taken from Unit 1 was mailed to Teledyne Corporation, Westwood, New Jersey.

Major Activities

1. Submerged Demineralizer System (SDS). SDS is currently in a shutdown mode. Approximately 14,500 gallons of reactor coolant system water have been staged to the 'C' reactor coolant bleed tank, and approximately 36,000 gallons of reactor building sump water have been staged to the SDS tank farm, to await SDS processing.
2. EPICOR II. EPICOR II processed 1,360 gallons of water from the "B" contaminated drain tank (steam generator draindown water) on March 5, 1983; its performance parameters are included in Attachment 1.
3. Reactor Building Entries. Five reactor building entries were completed during the week of March 6, 1983. The lifting rig for the polar crane load test was assembled inside the reactor building, in preparation for the polar crane load test which is scheduled for the week of March 21, 1983. The polar crane, originally designed for a 500-ton capacity, has been refurbished since the accident and will be load tested to approximately 200 tons for the specific task of lifting the 170 ton reactor vessel head. Five concrete missile shields, which are presently positioned above the reactor vessel and the pressurizer, will be used as the test weights for the load test.

Five reactor building entries are scheduled for the week of March 13, 1983. Tasks to reduce the dose rate on the 305 ft. elevation will be the primary activities during these entries. The reactor building air coolers, which are a significant source of radiation near the personnel entry point on the 305 ft. elevation, will be decontaminated externally and internally by an operator working from a high-reach platform. High pressure, high temperature water will be the decontamination technique. In addition, stairwells and metal equipment hatches will be shielded to decrease the dose contribution at the 305 ft. elevation from the high radiation sources in the reactor building basement.

4. SDS Liner Shipments. The licensee is continuing preparations for the shipment of the sixth (in a group of twelve) waste zeolite SDS liners. As with previous shipments, this spent SDS liner (D10018) will be vacuum dried, loaded with a catalytic recombiner, and monitored to demonstrate non-combustible gas conditions. This shipment is tentatively scheduled for March 17, 1983.

5. EPICOR II Prefilter (PF) Shipments. Two EPICOR prefilter shipments (PF-39 and PF-43) were made this week to the Idaho National Engineering Laboratory (INEL) in Scoville, Idaho. These shipments represent a total of 31 prefilters (out of a group of 50) that have been sent to INEL. At the current schedule of approximately four shipments per month, the licensee anticipates the remaining prefilters will be shipped off site by August 1983.

No shipments are scheduled next week.

6. Purification Demineralizer Disposal Status. Problems with inserting the fiber-optics system through the diaphragm resin fill valve (see the March 7, 1983, Weekly Status), have delayed the licensee's plan to perform a detailed visual examination of the "A" purification demineralizer vessel. A special guide sleeve is being fabricated to resolve these insertion problems.

Arrangements are being made to ship the "B" purification demineralizer sample (which was collected on March 4, 1983) to the Oak Ridge National Laboratory.

7. Groundwater Monitoring Program. Periodic sampling of TMI groundwater began in January 1980 in an effort to detect any potential leakage from the contaminated water in the basement of the reactor building. The monitoring program accumulated data has not indicated any leakage from the reactor building. The program did identify some groundwater contamination which resulted from previous leakage from the borated water storage tank (BWST).

A leakage collection trough and more sensitive level indication equipment were added to the BWST. The effectiveness of these corrective measures continues to be evaluated by the groundwater monitoring program.

Attachment II includes a sketch of six of the groundwater sampling locations in the immediate area of the BWST. The most recent recorded tritium concentration and the highest recorded tritium concentration are noted at each location. Pre-TMI monitoring data indicate that surface water, drinking water and precipitation in the TMI area will contain an average of 300 pCi/L of tritium with values as high as 600 pCi/L within the expected range. The highest TMI groundwater contamination was recorded in test boring 17 on March 23, 1982 (1.1×10^6 pCi/L). The monitoring locations are in an area considered "restricted" and the maximum permissible concentration (MPC) for tritium in restricted areas is 1×10^5 pCi/L.

Future Meetings

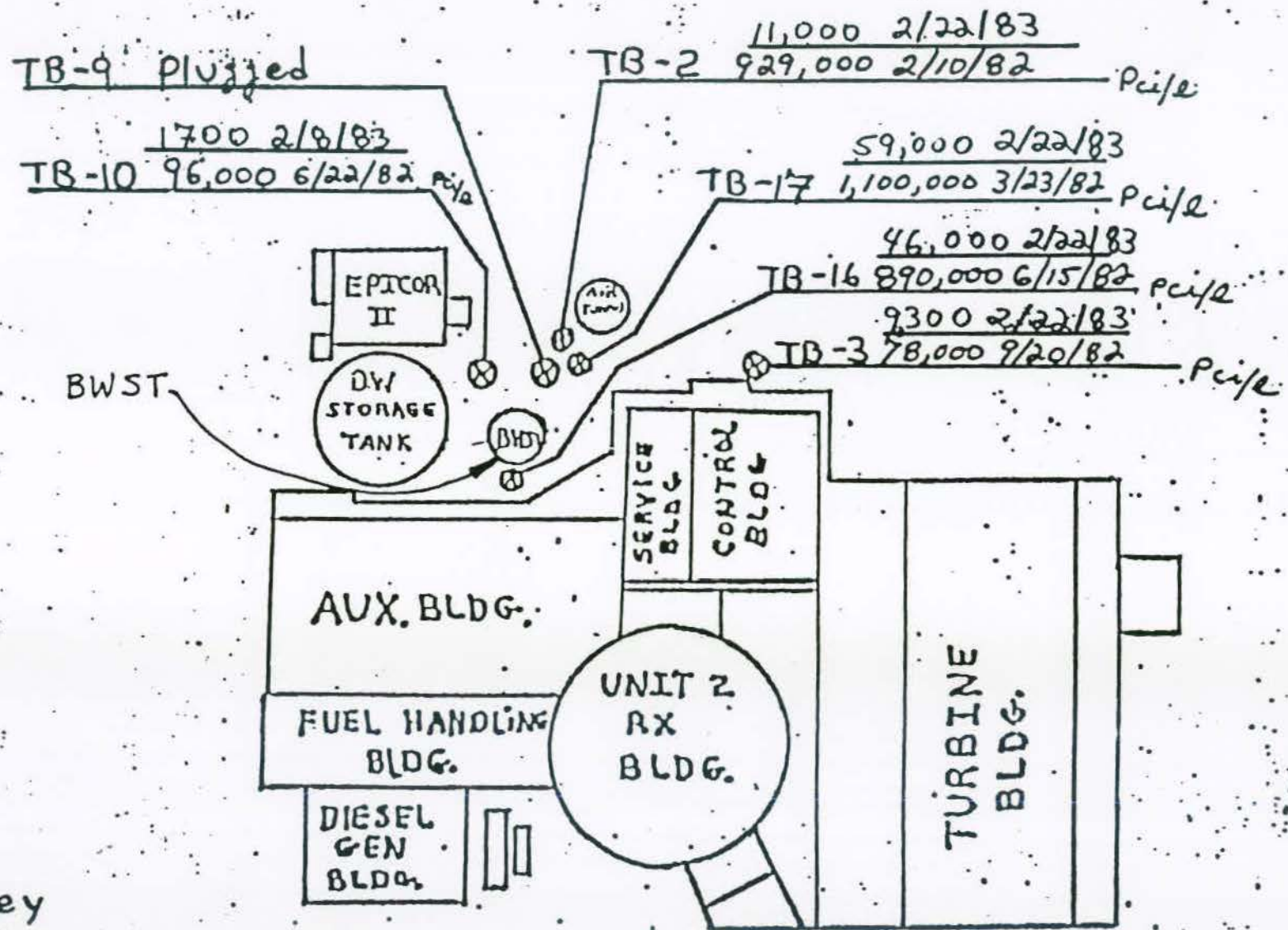
1. On March 14, 1983, Lake H. Barrett will meet with the Concerned Mothers of Middletown to discuss TMI related issues.
2. On March 17, 1983, the Advisory Panel for the decontamination of TMI Unit 2 will hold a meeting at 7:00 PM, at the Holiday Inn, 23 South Second Street, Harrisburg, Pennsylvania.

ATTACHMENT I

EPICOR II PERFORMANCE PARAMETERS
March 5, 1983

| <u>Radionuclide</u> | <u>Average Influent (uc/ml)</u> | <u>Average Effluent (uc/ml)</u> | <u>Average DF</u> |
|---------------------|---|---|-----------------------|
| Cesium 137 | 1.1×10^{-6} | 7.1×10^{-7} | 1.5 |
| Strontium 90 | $<1.7 \times 10^{-5}$ | $<1.6 \times 10^{-5}$ | 1.1 |
| Antimony 125 | $<1.2 \times 10^{-6}$ | $<7.7 \times 10^{-7}$ | 1.5 |

U-2 TEST BORING. H-3 CONCENTRATION



Key

Analysis of Latest Sample / date
Analysis of highest sample / date