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OFFICE	Enclosure: As stated									
SURNAME										
DATE										

April 18, 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

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TMI Program Office Staff (15)

PHS

EPA

DOE

RI Division Directors

Public Affairs, RI

State Liaison, RI

OFFICE	TMIPQ w/8	TMIPQ lb	TMIPQ	TMIPQ	TMIPQ		
NAME	LGage/Imp	BO'Neill	Asano	PGrant	LBarrett		
DATE	4/18/83	4/18/83	4/18/83	4/ /83	4/ /83		

NRC TMI PROGRAM OFFICE WEEKLY STATUS REPORT

April 10, 1983 - April 16, 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 5:30 AM, April 15, 1983) (approximate values)

Average Incore Thermocouples*: 90°F

Maximum Incore Thermocouple*: 133°F

RCS Loop Temperatures:

	A	B
Hot Leg	88°F	86°F
Cold Leg (1)	74°F	77°F
(2)	75°F	76°F

RCS Pressure: 64 psig

Reactor Building: Temperature: 70°F

Pressure: -0.1 psig

Airborne Radionuclide Concentrations:

3.2 E-8 uCi/cc H³
(sample taken 4/11/83)

2.2 E-9 uCi/cc particulates
(sample taken 4/11/83)

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 April 8, 1983, through April 14, 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 four millionths (0.000004) of a curie of cesium, and less than twenty-five millionths (0.000025) of a curie of tritium were discharged.

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

2. NRC TLD Results

The NRC TLD (Thermoluminescent Dosimeter) Environmental Direct Radiation Monitoring Network at TMI consists of 56 offsite locations. Two sets of TLDs are placed at each location. Each set contains two lithium borate and two calcium sulfate phosphors. Both sets are read on a quarterly basis. In January 1982, eight onsite NRC locations were added to the monitoring network. The onsite TLDs are used for comparison with licensee onsite TLD monitoring results.

During April through September 1982, the NRC offsite locations provided readings that indicated gamma radiation was between 0.15 - 0.26 mR/day. These dose rates are consistent with natural background radiation in the TMI area. These results of the NRC Direct Radiation Monitoring Network were reported in NUREG 0837, Volume 2, Nos. 2 and 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 March 18, 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 April 6, 1983, through April 14, 1983.

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:

<u>Sample</u>	<u>Period</u>	<u>I-131</u> <u>(uCi/cc)</u>	<u>Cs-137</u> <u>(uCi/cc)</u>
HP-365	April 6 - 14, 1983	<6.3 E-14	<6.3 E-14

5. Licensee Radioactive Material and Radwaste Shipments

- On April 11, 1983, one CNSI 8-120-3 (Type B) shipping cask containing Unit 2 EPICOR Prefilter No. PF-38, was shipped to EG&G, Scoville, Idaho.
- On April 13, 1983, one drum containing dust collected from the Unit 1 "B" steam generator air filter was shipped to Battelle Columbus, West Jefferson, Ohio.

- On April 13, 1983, 96 drums containing contaminated protection clothing from Unit 1 and Unit 2 were shipped to Interstate Uniform Service, New Kensington, Pennsylvania.
- On April 15, 1983, one 1-13C-II (Type 3) shipping cask, containing SDS liner No. D20028, was shipped to Rockwell Hanford Operations, Richland, Washington.

Major Activities

1. Submerged Demineralizer System (SDS). In preparation for the eventual removal of the SDS tank farm, testing of a tank farm bypass flow path began on April 13, 1983. This test involves the routing of reactor building sump water directly from the sump through the SDS process filters without passing through, or staging to, the tank farm. This test will comprise of approximately 30,000 gallons of sump water and is expected to be completed on April 19, 1983. Performance parameters will be included in next week's report.
2. EPICOR II. EPICOR II processed approximately 11,000 gallons of water from the EPICOR II off-spec receiving tank (CCT-1) and approximately 21,000 gallons of SDS effluents during the past week. The performance parameters are included in Attachment 1.
3. Reactor Building Entries. Two of the scheduled three reactor building entries were completed during the week of April 10, 1983. One reactor building entry is scheduled for the week of April 18, 1983. Work in the reactor building has been reduced while polar crane refurbishment and procedure development activities continue. During this past week's entries, petri dishes were positioned for further tests to determine if there is a significant reduction in airborne particulate activity when the recirculation fans are secured. In addition, lead blankets were added to the shielding around the open stairwell at the 305 foot elevation.

The licensee is making preparation for the second phase of data acquisition under the reactor vessel head. Because of delays with the polar crane, the licensee is establishing procedures and hardware to remove a control rod drive mechanism (CRDM) without removal of the missile shields. The removal of a CRDM will create an inspection port for the next phase of data acquisition. The CRDM removal is tentatively scheduled for mid-June 1983.

The NRC-requested meeting with GPU to discuss reactor building dose reduction and ALARA programs will be taking place at 10:00 AM, April 18, 1983, in Mr. Denton's Bethesda office.

4. SDS Liner Shipments. The seventh SDS waste liner (D20028), in a group of thirteen, was shipped from TMI to the Rockwell Hanford facility (Richland, Washington) on April 15, 1983. This 10-cubic foot zeolite liner, which contains approximately 86,000 curies of mixed fission

products (predominately Cesium 137, Strontium 90, and their daughter products) was loaded with a catalytic recombiner to maintain non-combustible conditions during the handling and shipment period. The next SDS waste liner is tentatively scheduled for shipment on April 28, 1983.

5. EPICOR II Prefilter (PF) Shipments. The EPICOR II prefilter PF-38, which was shipped last week but returned to the TMI site because of a truck transmission problem, was reshipped on April 11, 1983. This shipment represents a total of 34 prefilters (in a group of 50) that have been shipped to the Idaho National Engineering Laboratory (INEL). Two EPICOR prefilters (PF-28 and PF-34) are scheduled for shipment next week.

6. Purification Demineralizer Disposal Status. The visual inspection of the "A" purification demineralizer vessel was completed on April 12, 1983, with the use of a new fiber-optics probe and guide sleeve. The surface of the resin bed contained both a thin white film (presumably boric acid crystals) and a thicker (approximately 1/4-inch) crusty, gray film. An amber granular resin material was identified below these surface layers. The estimated resin bed volume of 30-cubic feet agreed well with the external dose profile completed earlier this year. No liquid was identified above or below the surface layers. Based on the external gamma-scans, the "A" vessel contains approximately 3,400 curies of Cesium 137. The licensee currently plans to resample the "A" and "B" vessels next week with a modified mechanical sampling device (see the March 7, 1983, Weekly Status Report).

The amber liquid sample from the "B" vessel, which was shipped to Oak Ridge National Laboratory (ORNL) for analysis last week, contained suspended solids, but no apparent spherical resin bead material. This sample will be chemically and radiochemically analyzed. Future resin samples from next week's vessel sampling will be shipped to ORNL for detailed analysis as well as test for chemical elution, resin sluicability and resin degradation.

7. Polar Crane. The eighteen items raised by the NRC TMI Program Office in the disapproval of the heavy-load test procedure and the three remaining items on the polar crane operating procedure are being evaluated by GPU. GPU has not yet established a firm schedule for resubmittal of these procedures. In the interim, GPU is submitting, for NRC approval, unit work instructions for those operations inside the reactor building which require the use of a 5 ton hoist in conjunction with the polar crane (in a limited capacity) to perform general construction-type work. (See April 11, 1983, Weekly Status Report.)
8. 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 which indicated no 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 2 includes a sketch of six of the groundwater sampling locations in the immediate area of the BWST. The most recently recorded tritium concentration and the highest recorded tritium concentration are noted at each location. Pre-accident TMI monitoring data indicate that surface water, drinking water and rain 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 Meeting

On April 25, 1983, Lake H. Barrett will meet with the Concerned Mothers of Middletown to discuss TMI related issues.

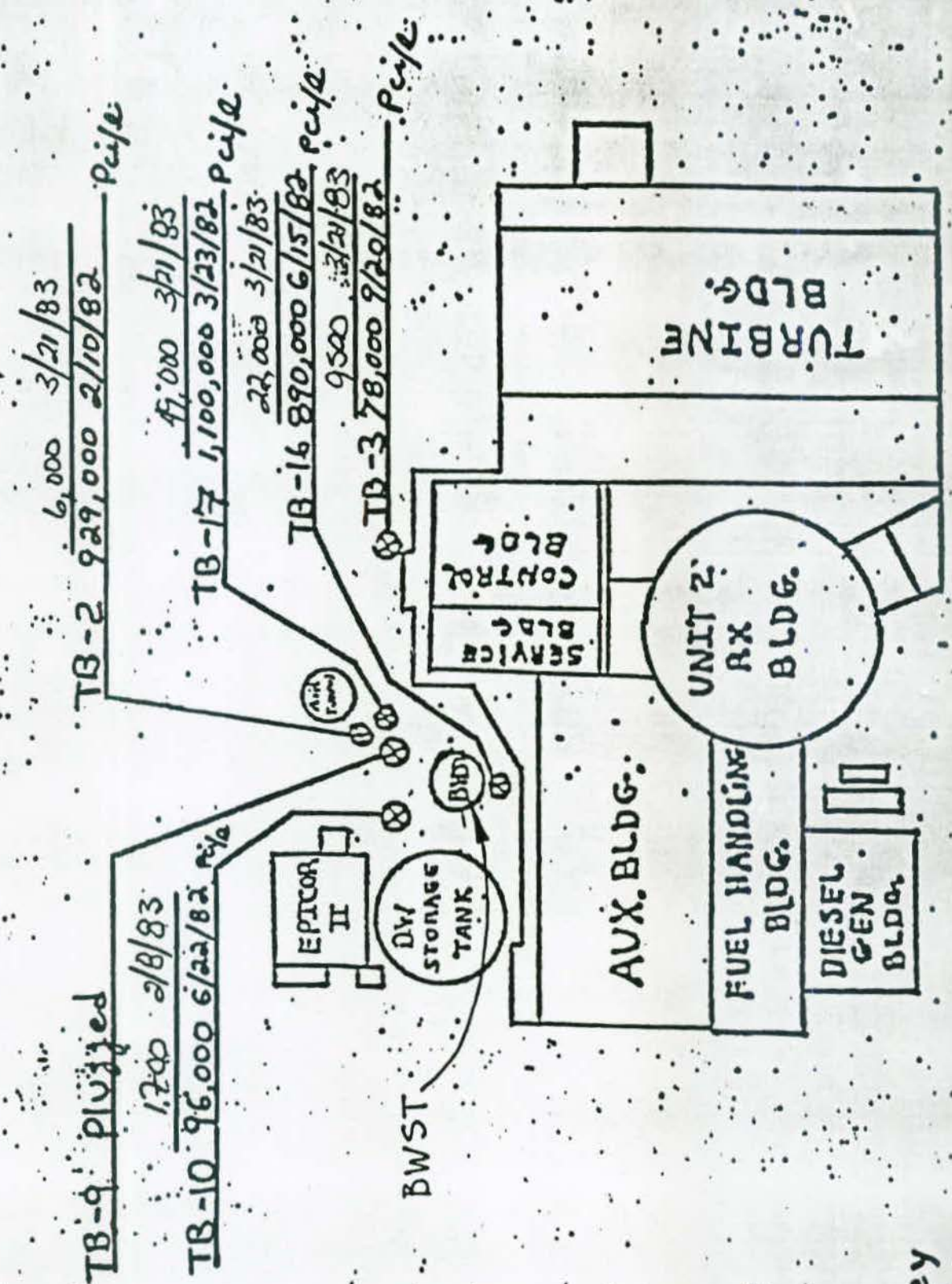
ATTACHMENT 1

EPICOR II PERFORMANCE PARAMETERS

APRIL 7, 1983 to APRIL 14, 1983

<u>Radionuclide</u>	<u>Average Influent (uc/ml)</u>	<u>Average Effluent (uc/ml)</u>	<u>Average DF</u>
Cesium 137	4.3×10^{-5}	$<2.0 \times 10^{-7}$	$>2.1 \times 10^2$
Strontium 90	2.4×10^{-3}	2.3×10^{-5}	1.0×10^2
Antimony 125	1.5×10^{-3}	$<3.6 \times 10^{-7}$	$>4.2 \times 10^3$

...ED I DUKLING ... COINCLIN ...



Key

Analysis of latest sample / date
 Analysis of highest sample / date