

June 11, 1984
NRC/TMI-84-040

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 FOR
June 3, 1984 - June 9, 1984

GPU and Bechtel North American Power Corporation announced on June 7, 1984 the transfer of Bahman K. Kanga as Director of TMI-2. Mr. Kanga's successor will be Mr. Franklin Standerfer, who joins GPU Nuclear on July 23, 1984. Data from effluent and environmental monitoring systems indicated no plant releases in excess of regulatory limits. Waste processing continued on a routine basis. Plant parameters have shown no significant changes.

Other site activities this period included: preparations for head lift in August 1984, reactor building air cooling system work and auxiliary and fuel handling building decontamination and tank removal. (For more details see appropriate paragraphs below.)

Significant items covered in the enclosure are:

- GPU Director Change
- Reactor Building Activities
- Auxiliary and Fuel Handling Building Activities
- Waste Management
- Groundwater Monitoring
- Public Meeting

Data summary sheets included in this report are:

- Liquid Effluent Data
- Environmental Data
- Radioactive Material/Radwaste Shipment Data
- Reactor Building Scabbling Experiment Data
- Groundwater Monitoring Data
- Plant Status Data

8406200564 840611
PDR ADOCK 05000320
R PDR

ORIGINAL SIGNED BY:

Lake H. Barrett
Deputy Program Director
TMI Program Office

*TDAR-5
TMIA*

Enclosure: As stated

OFFICE	SURNAME	DATE					

INTERNAL DISTRIBUTION

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
TMIHQ HQ r/f
TMI SITE r/f
CENTRAL FILE
NRC PDR
LOCAL PDR
TMI-2 Project
Section File

OFFICE	TMIPQ <i>DC</i>	TMIPQ <i>AF</i>	TMIPQ <i>PG</i>	TMIPQ <i>L</i>		
SURNAME	DCollins/Imp	AFasano	PG	LBarrett		
DATE	6/11/84	6/11/84	6/11/84	6/11/84		

ENCLOSURE

GPU NUCLEAR DIRECTOR CHANGE:

GPU Nuclear Corporation (GPUNC) and Bechtel North American Power Corporation jointly announced on June 7, 1984 that Bahman K. Kanga, who has served for two years as Director of the Three Mile island Unit 2 cleanup, will transfer during August 1984 to an assignment within the Bechtel organization. Mr. Franklin Standerfer will join GPUNC on July 23, 1984 to replace Mr. Kanga as Director, TMI-2. Mr. Standerfer has served as Assistant Manager for Defense and Energy Programs at the US Department of Energy's Richland Operations Office.

REACTOR BUILDING ACTIVITIES:

Reactor Coolant System draindown to approximately 6 inches below the reactor vessel flange is scheduled to commence on June 15, 1984, in preparation for head lift. This RCS draindown is similar to that conducted in the fall of 1983 for underhead characterization studies. The primary system had been pressurized to 60 psig during the past several months to enhance letdown flow and the water processing rate. Primary system water was processed through the Submerged Demineralizer System to reduce contamination levels prior to head lift. During the bleed and feed type processing of the Reactor Coolant System, the system boron concentration was increased from approximately 3700 ppm to over 5000 ppm. The system boron concentration was increased as a precautionary measure to protect against inadvertent criticality during core alterations.

Daily reactor building entries will be made during the next week starting June 10, 1984 to prepare for the August reactor vessel head lift and to continue dose reduction operations. Entries are scheduled to commence on the Sunday afternoon and Monday morning shifts, to perform routine maintenance and surveillance.

The most man hour intensive activity in the reactor building this week was a large area scabbling experiment on the 347' elevation. Execution of the task required near round-the-clock entries to sequentially perform the pre-job thermoluminescent dosimeter (TLD) placement and radiation surveys, scabble, clean, seal, paint and post-job TLD placement and radiation surveys. The task involved the removal of the paint and upper 1/8" of concrete floor in a 650 square ft. test area (see Appendix 4) in an effort to reduce the general area radiation levels where the majority of personnel will work during head lift and defueling operations. TLD and survey instrument measurements were made before and after the scabbling operation to evaluate its effectiveness. Pre-job radiation exposure TLD data showed an average dose rate of 65 mR/hr. Preliminary data from post-job surveys showed an average dose rate of near 35 mR/hr for a 43% reduction.

Based on the success of this dose reduction effort, plans are being made to scabble the entire 347' elevation. Head lift preparations inside the reactor building are not expected to be intense during the next several weeks and scabbling is expected to be a major work effort. The desirability of scabbling the 305' elevation floor of the reactor building is being evaluated.

AUXILIARY AND FUEL HANDLING BUILDING ACTIVITIES:

Work continued on refurbishment of the "A" fuel pool. As previously reported, one tank has been removed, sealed, and stored in the Southeast Acres storage area. A second tank was removed and placed on the shield slabs above the pool. The licensee is renegotiating contracts for disposition of the tanks since the intended recipient will no longer receive them. Additional tanks will not be removed from the "A" pool area until disposition is resolved. Alternatives being considered include identification of new recipients or onsite decontamination of the tanks to allow release for non-radioactive applications. Other work in the "A" pool continues, including flushing of the lower tanks, and decontamination and removal of the fuel transfer carriages.

Progress continues on installation of the Reactor Building Chiller System. Two 100-ton air conditioning units are being installed to provide supplemental external cooling for the Reactor Building Normal Cooling Water (RBNCW) System. The RBNCW supplies the reactor building air coolers. The supplemental cooling system piping was connected to the piping for the RBNCW in the fuel handling building this week. The system is expected to be tested and operational about July 1, 1984.

Decontamination activities continued in the auxiliary and fuel handling buildings this week. Installation continued on the makeup and purification demineralizer elution system.

WASTE MANAGEMENT ACTIVITIES:

The Submerged Demineralizer System (SDS) completed batch 92 (50,616 gallons) on June 7, 1984. SDS batch 94 is composed of about 6,500 gallons of water in the lower tank farm in the "A" fuel pool, resulting from the decontamination of the upper tanks. Batch 94, started on June 7, 1984, is being processed through the pre- and final filters, the zeolite filters and a cation sand filter.

EPICOR II remains shut down and is being readied for processing next week.

GROUNDWATER MONITORING:

The TMI groundwater monitoring program was instituted to detect possible radioactive liquid leakage from TMI-2 into the ground. Since the monitoring program commenced in January 1980, tritium has been the only radioisotope detected consistently in the groundwater on TMI. It was detected adjacent to the TMI-2 reactor containment building and the borated water storage tank (BWST). These locations are within the inner security fence. Tritium concentrations in the groundwater have ranged from background (approximately 300 pCi/L) to 1.1 E6 pCi/l. In all cases, the tritium concentrations have been below the maximum permissible concentration for restricted areas. Periodically, trace concentrations of radioactive cesium and strontium have been detected in some of the monitoring locations. When detected, the cesium and strontium concentrations were very close to the analytical lower limit of detection and typically, the radioactivity was not seen when the sample was reanalyzed or when a second sample was taken at a given monitoring location.

During the period August to September 1983 there was apparently leakage of approximately 200 gallons of water from the borated water storage tank (BWST) sample cabinet. The ground adjacent to the sample cabinet was found to be slightly contaminated. Two 55-gallon drums of contaminated dirt were removed. Tritium levels in test borings (TB) 2, 16 and 17 showed increasing tritium trends during the period of September through October 1983. Tritium levels in TB 17, which showed the largest increase, were 17% of the peak levels found in March 1982. The tritium levels continue to decline, indicative of no new contamination.

Appendix 5 is a sketch of the groundwater monitoring locations in the immediate area of the BWST. The most recently recorded tritium concentrations are noted in each location. Pre-accident TMI monitoring data indicate the surface water, drinking water and rain in the TMI area will contain an average of 300 pCi/l of tritium with values as high as 600 pCi/l. The monitoring locations are in an area considered "restricted" and the maximum permissible concentration for tritium in restricted areas is 1 E8 pCi/l.

PUBLIC MEETINGS:

1. On June 14, 1984, the Advisory Panel for the Decontamination of Three Mile Island, Unit 2 will meet from 7:00 PM to 10:00 PM in the Holiday Inn, 23 South Second Street, Harrisburg, Pennsylvania. The meeting will be open to the public. At this meeting the Advisory Panel will receive a presentation from GPU Nuclear Corporation on the planned reactor vessel head lift. The licensee will also provide the current funding plan for the cleanup. Alternative methods of funding and completing the cleanup will also be presented. Persons that have questions pertaining to the TMI-2 cleanup that would like to have them considered or addressed by the Advisory Panel are asked to contact, in writing, Mayor Arthur Morris, 120 Duke Street, Lancaster, PA 17602. Persons desiring the opportunity to speak before the Advisory Panel are asked to contact Mr. Thomas Smithgall at 2122 Marietta Avenue, Lancaster, PA 17603 (telephone 717-291-1041).
2. On June 20, 1984, Dr. Bernard Snyder and Lake Barrett will meet with the Concerned Mothers of Middletown in the NRC's office located at 100 Brown Street, Middletown, to discuss issues pertaining to TMI.

APPENDIX 1

LIQUID EFFLUENT DATA

GPU Nuclear

Based on sampling and monitoring, liquid effluents from the TMI site released to the Susquehanna River were determined to be within regulatory limits and in accordance with NRC requirements and the City of Lancaster Agreement.

During the period June 1 through June 7, 1984, the effluents contained no detectable radioactivity at the discharge point. Individual effluent sources originating within Unit 2 contained minute amounts of radioactivity. Calculations indicate that the discharges were less than 1.4 E-7 (0.0000014) of a curie of gross beta activity was discharged.

Environmental Protection Agency

Lancaster Water Samples:	7 samples
Period Covered:	May 20 - 26, 1984
Results:	Gamma Scan Negative
TMI Water Samples:	7 samples
Period Covered:	May 19 - 25, 1984
Results:	Gamma Scan Negative

APPENDIX 2

ENVIRONMENTAL DATA

EPA Environmental Data

-- The EPA measures Kr-85 concentrations at several environmental monitoring stations and reported the following results:

<u>Location</u>	<u>April 13 - 27, 1984</u> (pCi/m ³)	<u>April 27 - May 11, 1984</u> (pCi/m ³)
Goldsboro	26	26
Middletown	26	25
Yorkhaven	26	25
TMI Observation Center	26	32

-- The EPA gamma radiation detection system continuously monitors for increases above naturally occurring radioactivity and residual fallout radioactivity at 13 stations in the TMI area. During this period the EPA has attributed the measurements to naturally occurring radioactivity and/or residual fallout radioactivity.

Period Covered: May 1 - May 31, 1984

<u>Location</u>	<u>Direction</u> (degrees)	<u>Distance</u> (miles)	<u>Average</u> (millirem)	<u>Integrated</u> <u>Dose</u> (millirem)
03 Harrisburg International Airport, Middletown	325	3.5	No data available	
05 Londonderry Township Bldg	040	2.6	.007	5.20
09 Newville	100	3.0	.009	6.70
11 Falmouth	130	2.9	.008	5.90
13 Falmouth	150	3.0	.009	6.70
17 York Haven	180	3.0	.006	4.70
20 Woodside	205	2.5	.006	4.50
31 Goldsboro	270	1.5	.010	7.30
34 Plainfield	305	2.7	.006	4.60
35 Royalton	068	3.5	.009	6.50
36 TMI Observation Center	095	0.5	.007	5.40
39 EPA TMI Field Station, Middletown	356	2.8	.006	4.50
40 Newberrytown	136	3.0	.007	5.20
41 Yocumtown	275	4.0	.007	5.20

-- EPA results of airborne particulate samples collected at the same locations as the gamma radioactivity monitors (above) during the period May 1 - May 31, 1984 were all less than 0.02 picocuries per cubic meter of air, the minimum detectable concentrations for EPA's analytical instruments.

NRC Environmental Data

A continuous outdoor air sampler operated by the NRC at the TMI site did not detect any reactor related radioactivity. The air sampler results are listed below.

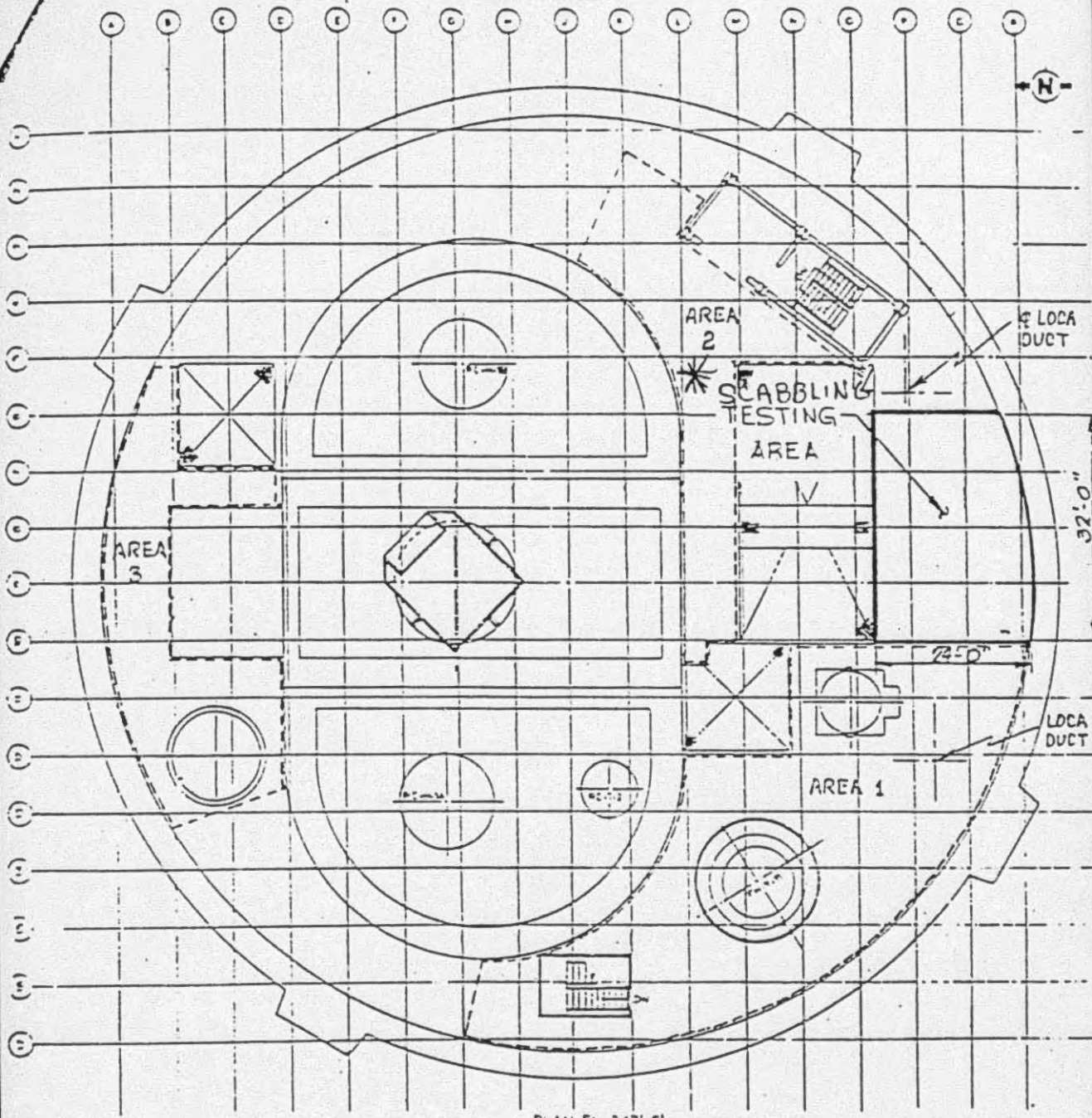
<u>Sample</u>	<u>Period</u>	<u>I-131 (uCi/cc)</u>	<u>Cs-137 (uCi/cc)</u>
HP-422	May 30 - June 6, 1984	<1.2 E-13	<1.2 E-13

APPENDIX 3

RADIOACTIVE MATERIALS/RADWASTE SHIPMENT DATA

- On June 4, 1984, two Unit 1 shipments consisting of four solidified evaporator bottoms were sent to the US Ecology Waste Disposal Facility at Hanford, Washington.
- On June 5, 1984, a Unit 1 shipment consisting of a reactor coolant pump impeller and shaft was sent to Quadrex Corporation at Oak Ridge, Tennessee.
- On June 6, 1984, a combined Unit 1 and 2 shipment consisting of radioactively contaminated laundry, was sent to Interstate Nuclear Services at New Kensington, Pennsylvania.

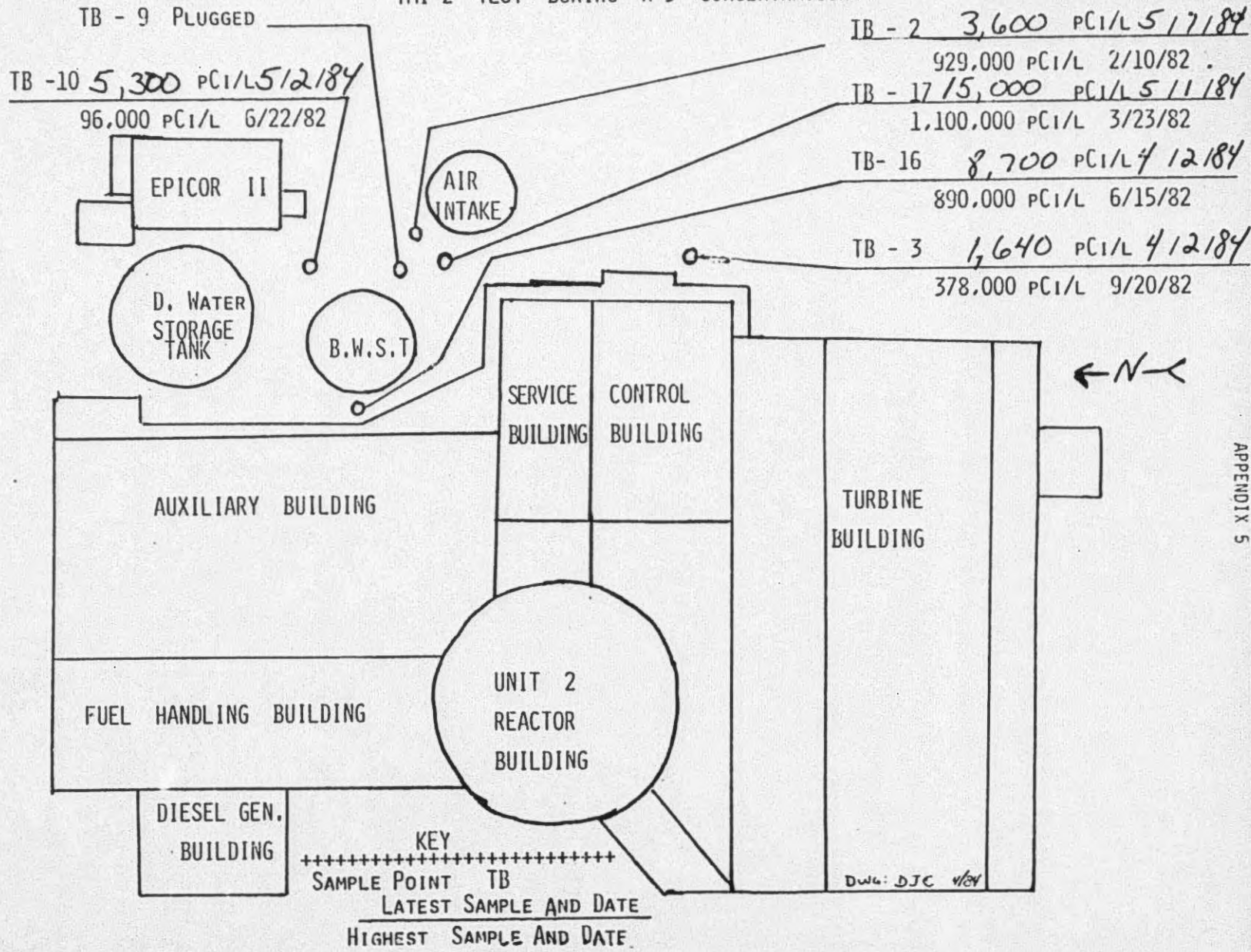
APPENDIX 4



PLAN EL. 347'-6"

RB Scabbling Experiment

TMI-2 TEST BORING H-3 CONCENTRATIONS



DWG: DJC 4/84

APPENDIX 6

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 (SPC) System

Major Parameters as of 5:00 AM, June 8, 1984 (approximate values):

Average Incore Thermocouples*: 94°F

Maximum Incore Thermocouple*: 136°F

RCS Loop Temperatures:

	A	B
Hot Leg	79°F	82°F
Cold Leg (1)	71°F	78°F
(2)	70°F	75°F

Reactor Core Decay Heat: 17 KiloWatts

RCS Pressure: 59 psig

Reactor Building: Temperature: 74°F

Pressure: -0.1 psig

Airborne Radionuclide Concentrations:

9.4 E-8 uCi/cc H³ (Tritium)
(sample taken 6/4/84)

2.2 E-9 uCi/cc particulates
(predominately Cs-137)
(sample taken 6/5/84)

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