ag to Harry

Met Ed / GPU

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July 9, 1979

NRC/TMI Special Inquiry Group
Attn: Mitchell Rogovin, Director
U.S. Nuclear Regulatory Agency
Washington, D.C. 20555

Dear Mr. Rogovin:

Ref: NIFTM 790626-01

Enclosed please find a partial response to the question enclosed with your letter to me of June 26, 1979. Responses to the remaining sections of the question will be sent by July 13, 1979.

Sincerely,

J. G. Herbein
Vice President-G[illegible]ration

JGH:LWH:dr
Enclosures

cc: E. Blake

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ENCLOSURE 1

List of Requested Information

1. a. Provide status of Unit 2 on March 27 and 28, 1979.

(1) March 27

Three Mile Island Unit Two was at 97% power (872 MWe) with the Integrated Control System in full automatic. Rod groups one thru five were fully withdrawn, rod groups six and seven were 95% withdrawn and rod group eight was 27% withdrawn. Reactor Coolant System total flow was approximately 138 million pounds per hour flow, and the Reactor Coolant System pressure was 2155 psig. Reactor Coolant System average temperature was 582°F, and the boron concentration was 1027 ppm. The gross beta/gamma reading for the primary coolant was .3783 μci/ml and the primary leakage rate was .4 gpm. The average core burn up was 93 EFPD.

(2) March 28

Conditions in the primary remained very much the same as above until 4:00 a.m. on March 28. At that time the following conditions in the secondary existed:

	Steam Generator A	Steam Generator B
Loop Feedwater	5.7459 MPPH*	5.7003 MPPH*
Operating Level	56%	57.4%
Startup Level	158.8 inches	163.4 inches
Steam Pressure	910 psig	889.6 psig
Feedwater Temperature	462.7 F	462.7 F
Steam Temperature	595 F	594 F

* MPPH - Million Pounds Per Hour

Steam Generator Feedwater Pumps (FW-P-1A and FW-P-1B) were in service, Condensate Booster Pumps (CO-P-2A, CO-P-2B and CO-P-2C) were in service, and Condensate Pumps (CO-P-1A and CO-P-1B) were in service.

Reactor Coolant Makeup Pump B (MU-P-1B) was in service supplying makeup and Reactor Coolant Pump Seal injection flow. Normal Reactor Coolant System letdown flow was approximately 70 gpm. The Reactor Coolant System boron concentration was approximately 1030 parts per million. The Pressurizer Spray Valve (RC-V1) and the pressurizer heaters were in manual control while spraying the pressurizer to equalize boron concentrations between the pressurizer and the remainder of the Reactor Coolant System. The pressurizer safety valves discharge header thermocouples were in the range of 190 F due to leakage thru one of the Pressurizer Safety Valves (RC-R1A and RC-R1B).

1. b. Equipment out of service on March 27 and 28, 1979

(1) Chlorine Evaporator (CL-2-1)

(2) Condensate Flow Transmitter (CO-FT-070)

(3) Clearwell Tank (WT-T-2)

(4) Mechanical Room Fan Coil Unit (AH-C-24)

(5) Soiled Exhaust Pre-filter (AH-F-27)

(6) Feedwater Heater 3A Sight Glass

(7) Temporary Sodium Hydroxide Pump (WT Caustic Tank)

(8) Heater Drain Pump B (HD-P-1B)

(9) Reactor Building Normal Cooling (RB-21A-2)

(10) Heater Drain Valve (HD-V-65B)

(11) Control Building Fan Coil Unit (AH-C-52B HTR)

(12) Control Building Fan Coil Unit (AH-C-52D)

(13) Evaporative Cooler (RB-L-183)

(14) Mechanical Draft Cooling Tower Fan 2-3

(15) Make Up Skid Acid Block and Bleed Valves (R8, 9 & 10)

(16) Heater Drain Limit Switch (HD-LS-327) on Heater Drain Tank (HG-T-1)

(17) Main Stream Thermostat (MS-U35B) on Turbine Bypass Line

(18) Reactor Coolant Hot Leg Drain (RC-U-4)

(19) Fire Door Between Auxiliary and Fuel Storage Building

(20) Ammonia Pump A (AM-P-1A)

(21) Breaker 24 (spare) 2-4V vital power supply

(22) Auxiliary building sump tank (WDL-T-5)

(23) Sodium Thiosulfate Tank (DH-T-3)

(24) Make Up System Pressure Transmitter (MU-2-PT)

1. c. Surveillance Testing in Progress

To be supplied at a later date

1. d. Limiting Plant Conditions on March 27 and March 28, 1979

To be supplied at a later date

1. e. Procedures being revised as of March 28, 1979

See Enclosure 2 "Procedure Change Requests"

Enclosure 3 "Temporary Change Notices"

Enclosure 4 "Unit 2 Procedure Index"

1. f. Pending Regulatory Action as of March 28, 1979

The following Technical Specification Change Requests (TSCR) had been submitted, and were being reviewed by NRC:

a) TSCR #003 re: the adequacy of patrolling fire watches vs. continuous watches

b) TSCR #006 re: misc. changes to the administration section of TMI-2 Technical Specifications

c) TSCR #016 re: defeating fast transfer of Station BOP loads upon the failure of an aux. transformer

d) TSCR #17 re: operability of control rod reed switch position indicator channels

d) TSCR #20 re: minimum number of incore detectors needed for quadrant power tilt measurements

e) TSCR #10 re: frequency for performing heat balances

In addition, NRC was reviewing Met Ed submittals regarding Met Ed's proposed course of action in several areas. Many of these proposals were made in response to MRC requests for action in the affected area. These areas include the following:

1) Reactor Bldg. Purge Value Analysis

NRC request: 11/29/78 Met-Ed Response: 3/16/79

2) Single Auxiliary Transformer operation

NRC request: 8/18/78 (verbal) Met-Ed Response: 8/29/78

3) ISI Program Met-Ed Submittal: 7/25/79

1f. (Continued)

NRC Inspection Report Open Item List

Insp. Rpt. No.	Subject
78-10-03	ANSI N45.2.9
78-16-01	TLD Performance vs ANSI Standards
78-16-02	Re-evaluate PM of Air Sampling Units
78-16-03	ΔT Instrument Calibration Data
78-16-04	Settling Basins For Yard Drains
78-29-01	Test Procedure 600 5 PR 2700
78-30-01	AR Setpoints vs Tech Spec
78-32-02	Test Procedures 800/11 & 800/31
78-32-03	Test Procedures 800/35, 800/5, 800/18 800/36, SP 800/8, 80023, 800/2, 800/12 and 800/22
78-32-05	AP 1013 Temporary Mechanical Modification
78-32-08	PAI 2 · 78-033
78-31-04	Survey Top of Reactor Bldg Before Allow Access
78-36-01	Improperly and/or Inadequate Completed OP procedures
78-36-02	Annotations other than TCN's - Not Acceptable
78-36-03	2301-S1 Not Properly Implemented
78-36-04	2301-M4 Needs Revision
78-36-05	2303-M13 and 2102-4.1 Need Revision Reactor Bldg Purge Time Tracking
78-36-06	Deficiency - Value verification not performed as required

1f. (Continued)

NRC Inspection Report Open Item List

Insp. Rpt. No.	Subject
78-37-04	Check Valve Testing - Review Procedures
78-37-05	Fail - Safe Actuations - Put in Procedures
78-37-01	Revise Reactor Coolant Pump Procedure
78-37-02	Snubber Maintenance Procedure
78-37-03	Snubber Seal Material Verification
78-39-01	Verify Acceptance Criteria Was Met on Data From Generator Trip Test
78-39-01	Solder Iron and Cardboard Boxes in Cable Room.
78-38-02	3303-M1 Manual Pushbutton didn't start diesel
78-38-03	Sealed Beam Emergency Light Mislocated
79-01-01	LER 78-67/3L Battery Changes Blown Fuses
79-01-02	LER 78-68/3L Diesel Generator Exceeded Allowable Valve
79-01-01	Biological Shield Surveys - Neutron Shield Tank
79-04-02	Entering High Neutron Dose Area without continually monitoring
79-07-01	LER 78-74/3L and LER 79-04/3L
79-07-02	LER 78-05/3L A/E Evaluation and PORC Review of Results
79-07-03	Revise LER 79-10/1T

g. Status of Pertinent Commitments to the Regulatory Staff

(1) Environmental Qualification of Electrical Components (IE Bulletin 79-01)

Review was completed prior to 3/27/79, response was being prepared for submittal to NRC.

(2) Small Break LOCA Piping Cross - Connect

Design had been approved by NRC (12/8/78)

Work was progressing toward installation at the first scheduled refueling outage.

(3) Feedwater Isolation Valves

Work was progressing toward installation at the first refueling outage. Specifically, analyses were being performed to demonstrate design adequacy. NRC had performed a preliminary design review and had approved the design concept, but had requested the above-mentioned analyses prior to issuing a formal design acceptance.

(4) Aysmmetric LOCA Loads

Work was progressing toward completion of the analysis in June of 1980. B & W analysis of cavity loadings and vessel/vessel internals loading was in progress.

(5) Appendix I Tech Specs

Working on draft submittal due to NRC on 4/15/79 (since revised to 7/15/79)

(6) IE Bulletins:

79-C2 - Pipe Support Base Plates (issued 3/8/79)

79-03 - Longitudinal Pipe Welds (issued 3/13/79)

Work was underway to investigate the applicability of concerns raised in these bulletins for TMI-1 and/or TMI-2.

Concerning IE Bulletin 79-02, the architect engineering firm for each unit had been instructed to investigate the extent to which the Bulletin applied to each unit. This investigation was underway but had not been completed.

Concerning IE Bulletin 79-03, it had been determined that the Bulletin was not applicable to TMI-2, but the investigation for applicability for TMI-1 had not yet been completed.

(7) Security

The TMI Security Plan had been approved. Work was underway to implement some security systems. However, NRC approved compensatory actions were in effect.

(8) License Conditions

Operating License No. DPR-73 stipulated that certain items should be completed within an allotted time frame. A number of these items had been completed prior to 3/27/79. Work was continuing on the remaining items. Those items which had not yet been completed were as follows:

2.c.3.g.1	Attachment 2
2.c.3.g.2	F.1
2.c.3.g.3	
2.c.3.h	
2.c.3.i	
2.c.3j	
2.c.3.k	
2.c.3.1.6	
2.c.3.1.7	
2.d	
2.e.1	
2.f.	

1.h All connections and shared activities between TMI-1 and 2.

(1) Shared Activities

Security - Common site protection force and protected area.

Fire Suppression Water System - Common system for both Unit 1 and Unit 2

Radwaste - Solid - Radwaste solidification done in Unit 1

Industrial Waste Treatment System -

Paging System - Common page system - can be isolated

230 KV Substation - offsite power for both Units provided via common 230 KV substation

River Water Chlorinator - Common system to chlorinate each unit's river water cooling system.

Meteorological Tower - Common tower reading out in each unit's control room

River Water Discharge Canal - Common discharge to river from each unit's mechanical draft cooling tower

Primary Sampling Room - Common room for sampling Unit 1 and Unit 2 primary samples.

(2) Connections

Extraction Steam System - Either unit can supply other unit with extraction heating

Demineralized Water System (Supplied by Unit 1)

Condensate Return System Condensate return connection if extraction steam is supplied

Turbine Lube Oil Storage System - Common storage and makeup capability

Radwaste Liquid - System - cross-connected to transfer liquids between the units

Instrument Air System - (not normally open)

Domestic Water System - (supplied by Unit 1)

HVAC Fuel Handling Building - common bldg each with its own Heating, Ventilation & Air Conditioning

On March 28, 1979 extraction stream was being supplied by Unit 2 to Unit 1, Demineralized Water was being supplied by Unit 1 to Unit 2, and Condensate Return System was being supplied by Unit 1 to Unit 2.

ENCLOSURE 2

Procedure Change Requests (PCR)

PCR No.	Procedure No.
2-78-241	2104-4-3
2-78-429	2104-4-3
2-78-609	2401-7-1
2-78-610	2401-5-3
2-78-685	2401-4-1
2-78-686	2401-4-2
2-78-687	2401-2-4
2-78-688	2401-2-1
2-78-689	2401-4-3
2-78-690	2401-4-4
2-78-932	1420-4-10
2-79-004	1621-2
2-79-014	2104-4-2
2-79-024	2303-M14A-E
2-79-025	2303-M2A/B
2-79-030	2303-M24A/B
2-79-032	2303-M31A-D
2-79-037	2303-Q7
2-79-043	1430-SPDN4
2-79-047	2303-M14A-E
2-79-055	2303-M31A-D
2-79-059	2204-18.A5,A6,C5,D6
2-79-073	2104-3-7
2-79-078	2305-R5
2-79-082	2106-3-1
2-79-087	2311-F1
2-79-088	2103-1-9
2-79-089	2311-F2
2-79-090	2311-1
2-79-091	2204-8.A23
2-79-092	2302-R1-2
2-79-093	2302-Q1
2-79-094	2104-4.4
2-79-095	2104-1-5
2-79-096	2104-2-2
2-79-097	2302-R1-5
2-79-098	2602-R10
2-79-099	2602-R-1
2-79-100	2106-2-1
2-79-101	2106-2-4
2-79-102	2106-1-4
2-79-103	2106-1-2
2-79-104	2104-2-2
2-79-105	2104-2-11
2-79-106	2106-2-1
2-79-107	2311-6
2-79-108	2303-M6
2-79-109	2302-R11
2-79-110	2101-1-1
2-79-111	2103-1-1
2-79-112	2104-1-2
2-79-113	2103-1-2
2-79-114	2104-3-7
2-79-115	2301-51
2-79-116	2302-5A1

ENCLOSURE 3

Temporary Change Notices (TCN)

TCN No.	Procedure No.
2-79-001	1021
2-79-002	2303-M2 A/B
2-79-003	2303-M24 A/B
2-79-009	1630-2
2-79-011	2303-M31A-D
2-79-015	2303-M21
2-79-021	2104-4-2
2-79-023	2313-R7
2-79-026	1621-2
2-79-027	2106-1-2
2-79-028	2104-4-3
2-79-030	2301-51
2-79-034	2303-M2 A/B
2-79-035	2303-M29 A/B
2-79-037	2301-M12
2-79-039	2104-4-2
2-79-042	2303-M14 A-E
2-79-044	3303-A1
2-79-050	2303-Q5
2-79-054	2204-8-A23
2-79-055	2302-R1-2
2-79-056	2302-Q1
2-79-057	1622-02
2-79-058	2106-3-1
2-79-059	2303-M14
2-79-061	2303-Q5
2-79-062	2301-M3
2-79-063	2303-M2 A/B
2-79-064	2303-M32 A/B
2-79-065	2104-4.2
2-79-066	3301-M1
2-79-067	1005-11
2-79-068	1622-2301
2-79-070	2301-3015
2-79-072	2302-R1-5
2-79-073	2602-R102
2-79-074	2103-1-2
2-79-075	2302-R11
2-79-076	2303-M6
2-79-077	2311-6.11
2-79-078	2104-2-11
2-79-079	2202-2-3
2-79-080	2106-3-2
2-79-081	2623-R2
2-79-082	2102-3.1