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November 12, 1992  
C311-92-2149

U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, D.C. 20555

Gentlemen:

Subject: Three Mile Island Nuclear Station, Unit I (TMI-1)  
Operating License No. DPR-50  
Docket No. 50-289  
Monthly Operating Report for October 1992

Enclosed are two copies of the October 1992 Monthly Operating Report for Three Mile Island Nuclear Station, Unit 1. Also included are amended Operating Data Report and Average Daily Power pages for the month of September 1992. The pages correct data inaccuracies contained in the September 1992 submittal that resulted from an intermittent malfunction of the plant watt hour meter.

Sincerely,

T. G. Broughton  
Vice President and Director, TMI-1

WGH

Attachments  
cc: Administrator, Region I  
TMI Senior Resident Inspector

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OPERATIONS SUMMARY  
OCTOBER 1992

The plant entered the month of October operating at 100% power producing 860 MWe. It continued full power operation for the entire period and closed the month producing 860 MWe.

MAJOR SAFETY RELATED MAINTENANCE

During October, the following major safety related maintenance was performed:

Boric Acid Tank Mixer CA-M-1

Boric Acid Tank Mixer CA-M-1 was removed from service to replace a sheared drive shaft taper pin. Upon completion of the work, the mixer was satisfactorily tested and returned to service.

Fire Service System Altitude Tank FS-T-1

Altitude Tank FS-T-1 was removed from service in order to accomplish a level switch replacement modification and perform various corrective maintenance tasks. The corrective maintenance tasks accomplished included: replacement of valves FS-V-83 A/B/C, FS-V-278, FS-V-1007 and FS-V-1226 with ball valves, replacement of recirculation pump FS-P-6, replacement of valve FS-V-6 with a flanged tee, and repair as necessary of the 6" and 12" piping with welded contoured plate. Additionally, heater elements FS-C-1, FS-C-2, and FS-C-3 were replaced, and a new 2½ inch ball valve was installed in the heater recirculation piping. Because of flow restrictions in the Altitude Tank piping, a contractor was brought on-site to perform high pressure water blasting to clean the 12" discharge pipe, the 6" filter water supply pipe, and the 2½" heater recirculation pipes. Painting and level switch calibration continue and the tank is expected to be returned to service in November.

Intermediate Closed Cooling Water Pump IC-P-1A

Intermediate Closed Cooling Water Pump IC-P-1A was taken out of service because of noisy motor bearings. The motor and pump internals were removed and taken to the shop for repairs. In the shop, a new pump shaft was fitted and pinned to a new, replacement motor. The pump rotating assembly was installed along with a new mechanical seal. The motor/pump assembly was reinstalled and after being satisfactorily tested, IC-P-1A was returned to service.

#### Waste Gas System Check Valve WDG-V-41

WDG-V-41, the Waste Gas Decay Tank inlet check valve was removed from service because of seat leakage. An inspection of the disassembled valve revealed that the disc was sticking in the bonnet guide. The parts were cleaned and the valve reassembled. WDG-V-41 was returned to service after being satisfactorily tested.

#### Sample Isolation Valve CA-V-2

Reactor Coolant sample isolation valve CA-V-2 was removed from service because of leakage at the bonnet-to-body gasket. The operator air lines and limit switches were removed and the operator/bonnet assembly was lifted from the valve body to gain access to the gasket seating surfaces. The surfaces were cleaned and a new bonnet gasket was inserted prior to reinstalling and torquing the operator/bonnet assembly. The operator air lines and limit switches were reconnected. CA-V-2 was returned to service after completion of a satisfactorily local leakrate test.

# OPERATING DATA REPORT

## OPERATING STATUS

DOCKET NO. 50-289  
 DATE November 12, 1992  
 COMPLETED BY W G HEYSEK  
 TELEPHONE (717) 948-8191

1. UNIT NAME: THREE MILE ISLAND UNIT 1  
 2. REPORTING PERIOD: OCTOBER 1992  
 3. LICENSED THERMAL POWER: 2568  
 4. NAMEPLATE RATING (GROSS MWe): 871  
 5. DESIGN ELECTRICAL RATING (NET MWe): 819  
 6. MAXIMUM DEPENDABLE CAPACITY (GROSS MWe): 834  
 7. MAXIMUM DEPENDABLE CAPACITY (NET MWe): 786

## NOTES:

8. IF CHANGES OCCUR IN (ITEMS 3-7) SINCE LAST REPORT, GIVE REASONS:

9. POWER LEVEL TO WHICH RESTRICTED, IF ANY (NET MWe):

10. REASONS FOR RESTRICTIONS, IF ANY:

## | | | THIS MONTH | YR-TO-DATE | CUMMULATIVE | |---|-------|------------|------------|-------------| | 11. HOURS IN REPORTING PERIOD | (HRS) | 745.0 | 7320.0 | 159241.0 | | 12. NUMBER OF HOURS REACTOR WAS CRITICAL | (HRS) | 745.0 | 7281.8 | 84012.8 | | 13. REACTOR RESERVE SHUTDOWN HOURS | (HRS) | 0.0 | 38.2 | 2283.8 | | 14. HOURS GENERATOR ON-LINE | (HRS) | 745.0 | 7279.0 | 82935.2 | | 15. UNIT RESERVE SHUTDOWN HOURS | (HRS) | 0.0 | 0.0 | 0.0 | | 16. GROSS THERMAL ENERGY GENERATED | (MWH) | 1910592 | 18517951 | 202386996 | | 17. GROSS ELECTRICAL ENERGY GENERATED | (MWH) | 636326 | 6124904 | 68119163 | | 18. NET ELECTRICAL ENERGY GENERATED | (MWH) | 601021 | 5779255 | 63936580 | | 19. UNIT SERVICE FACTOR | (%) | 100.0 | 99.4 | 52.1 | | 20. UNIT AVAILABILITY FACTOR | (%) | 100.0 | 99.4 | 52.1 | | 21. UNIT CAPACITY FACTOR (USING MDC NET) | | 102.6 | 100.4 | 51.1 | | 22. UNIT CAPACITY FACTOR (USING DER NET) | | 98.5 | 96.4 | 49.0 | | 23. UNIT FORCED OUTAGE RATE | (%) | 0.0 | 0.6 | 42.3 | | UNIT FORCED OUTAGE HOURS | (HRS) | 0.0 | 41.0 | 60689.7 | | 24. SHUTDOWNS SCHEDULED OVER NEXT 6 MONTHS (TYPE, DATE AND DURATION OF EACH): | | | | | | 25. IF SHUT DOWN AT END OF REPORT PERIOD, ESTIMATED DATE OF STARTUP: | | | | |

		THIS MONTH	YR-TO-DATE	CUMMULATIVE
11. HOURS IN REPORTING PERIOD	(HRS)	745.0	7320.0	159241.0
12. NUMBER OF HOURS REACTOR WAS CRITICAL	(HRS)	745.0	7281.8	84012.8
13. REACTOR RESERVE SHUTDOWN HOURS	(HRS)	0.0	38.2	2283.8
14. HOURS GENERATOR ON-LINE	(HRS)	745.0	7279.0	82935.2
15. UNIT RESERVE SHUTDOWN HOURS	(HRS)	0.0	0.0	0.0
16. GROSS THERMAL ENERGY GENERATED	(MWH)	1910592	18517951	202386996
17. GROSS ELECTRICAL ENERGY GENERATED	(MWH)	636326	6124904	68119163
18. NET ELECTRICAL ENERGY GENERATED	(MWH)	601021	5779255	63936580
19. UNIT SERVICE FACTOR	(%)	100.0	99.4	52.1
20. UNIT AVAILABILITY FACTOR	(%)	100.0	99.4	52.1
21. UNIT CAPACITY FACTOR (USING MDC NET)		102.6	100.4	51.1
22. UNIT CAPACITY FACTOR (USING DER NET)		98.5	96.4	49.0
23. UNIT FORCED OUTAGE RATE	(%)	0.0	0.6	42.3
UNIT FORCED OUTAGE HOURS	(HRS)	0.0	41.0	60689.7
24. SHUTDOWNS SCHEDULED OVER NEXT 6 MONTHS (TYPE, DATE AND DURATION OF EACH):				
25. IF SHUT DOWN AT END OF REPORT PERIOD, ESTIMATED DATE OF STARTUP:				

25. IF SHUT DOWN AT END OF REPORT PERIOD, ESTIMATED DATE OF STARTUP:

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-289  
 UNIT TMI-1  
 DATE November 12, 1992  
 COMPLETED BY W G HEYSEK  
 TELEPHONE (717) 948-8191

MONTH: OCTOBER

DAY AVERAGE DAILY POWER LEVEL  
 (MWe-NET)

1	807
2	803
3	799
4	801
5	807
6	808
7	806
8	801
9	790
10	797
11	799
12	801
13	802
14	803
15	799
16	801

DAY AVERAGE DAILY POWER LEVEL  
 (MWe-NET)

17	814
18	819
19	818
20	821
21	815
22	816
23	815
24	806
25	811
26	810
27	809
28	810
29	807
30	805
31	809

# UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH October 1992

DOCKET NO. 50-289  
UNIT NAME TMI-1  
DATE November 12, 1992  
COMPLETED BY W. G. Heysek  
TELEPHONE (717) 948-8191

No.	Date	Type <sup>1</sup>	Duration (Hours)	Reason <sup>2</sup>	Method <sup>3</sup> of Shutting Down Reactor <sup>3</sup>	Licensee Event Report#	System Code " & "	Component Code " & "	Cause & Corrective Action to Prevent Recurrence
						NONE			

F Forced  
S Scheduled

2

Reason  
A-Equipment Failure (Explain)  
B-Maintenance or Test  
C-Refueling  
D-Regulatory Restriction  
E-Operator Training & Licensing Examination  
F-Administrative  
G-Operational Error (Explain)  
H-Other (Explain)

3

Method  
1-Manual  
2-Manual Scram  
3-Automatic Scram  
4-Other (Explain)

4

Exhibit G - Instructions for  
preparation of Data Entry Sheets  
for Licensee Event Report (LER)  
File (NUREG-0161)

5 Exhibit 1 same source

6 Actually used exhibits F & H NUREG 0161



### REFUELING INFORMATION REQUEST

1. Name of Facility: Three Mile Island Nuclear Station, Unit 1
2. Scheduled date for next refueling shutdown: September 17, 1993 (10R)
3. Scheduled date for restart following current refueling: NA
4. Will refueling or resumption of operation thereafter require a technical specification change or other license amendment? YES

In general, these will be:

- a) Technical Specification Change Request (TSCR) No. 212 requesting an increase of the allowable enrichment of fresh fuel to 5.0 wt/o  $U^{235}$  was submitted August 25, 1992. The TMI-1 Senior Project Manager committed to completing approval prior to January 1, 1993.
  - b) TSCR No. 220 requesting approval to move the Maximum Allowable LOCA Linear Heat Rate Limits (T.S. Figure 3.5-2M) to the Core Operating Limits Report was submitted on October 29, 1992.
  - c) Use of gadolinia-urania fuel and B&W Fuel Corporation (BWFC) changes in core physics methods will require change to T.S. 6.9.5.2 which lists approved analytical methods references to support the Core Operating Limits Report values. Changes will include reference to BAW-10180, Rev. 1, NEMO and BAW-10184P, GDTACO methods (see #6, Item 1, below). Use of the gadolinium integral burnable poison may also require changes to the Reactor Core fuel descriptions in T.S. 5.3.1.
5. Scheduled date(s) for submitting proposed licensing action and supporting information:

Submittals made to date are described in 4a and b above. The TSCR submittal schedule for use of the gadolinia-urania fuel will depend on completion of the USNRC review of the applicable BWFC methods addressed in 4c above. Per recent discussions, NEMO, Rev. 1 approval is expected prior to January 1, 1993 and the review of GDTACO is expected in May 1993. Based on these expected approval dates, the GPUN TSCR would be submitted in June 1993.

6. Important licensing considerations associated with refueling, e.g. new or different fuel design or supplier, unreviewed design or performance analysis methods, significant changes in fuel design, new operating procedures:
- a) BWFC and GPUN are now performing the fuel cycle design for cycle 10, which is scheduled for startup in September 1993. This design incorporates reload fuel that contains gadolinia-urania. Use of this type of fuel will require changes to the plant Technical Specifications as noted in 4c above. These changes will need to be supported by approval of BWFC topical reports on reload design methods revisions that account for the Gd effects in the analyses;

noted in 5 above. To ensure that no delays occur to reload analyses, fuel manufacturing and plant startup schedules, approval of these topics has been requested for April 1, 1993.

- b) TMI-1 will use the new Mark B9 fuel assembly in the Cycle 10 reload batch. This design is an upgrade of the Mark B8 assembly used in Cycles 8 and 9. The Mark B9 provides improved fuel thermal limits (LOCA, DNBR, CLM) and repair capabilities. The Mark B9 design meets current BWFC fuel design criteria and has been previously used at other B&W 177 FA plants.
  - c) BWFC has several licensing changes under USNRC review. Changes are necessary to upgrade their shipping containers for shipment of fuel up to 5 wt/o  $U^{235}$ . These changes are necessary to support the TMI-1 Cycle 10 refueling schedule. Approval of the B&W Model B fuel assembly shipping container for shipment of single assemblies from 4.6 to 5.1 wt/o  $U^{235}$  is expected in January 1993. Approval of the Siemens fuel assembly shipping container for two BWFC Mark B fuel assemblies up to 5.0 wt/o  $U^{235}$  is expected in March 1993.
7. The number of fuel assemblies (a) in the core, and (b) in the spent fuel storage pool: (a) 177 (b) 521
8. The present licensed spent fuel pool storage capacity and the size of any increase in licensed storage capacity that has been requested or is planned, in number of fuel assemblies:

The present licensed capacity is 1991. Phase I of the reracking project to increase spent fuel pool storage capacity permits storage of 1496 assemblies. Upon completion of Phase II of the reracking project, the full licensed capacity will be attained.

9. The projected date of the last refueling that can be discharged to spent fuel pool assuming the present licensed capacity:

Completion of Phase I of the reracking project permits full core off-load (177 fuel assemblies) through the end of Cycle 13 and on completion of the rerack project full core off-load is assured through the end of the current operating license and beyond.



CORRECTED COPY

OPERATING DATA REPORT

OPERATING STATUS

DOCKET NO. 50-289  
 DATE October 13, 1992  
 COMPLETED BY W G HRYSEK  
 TELEPHONE (717) 948-8191

1. UNIT NAME: THREE MILE ISLAND UNIT 1  
 2. REPORTING PERIOD: SEPTEMBER 1992  
 3. LIC USED THERMAL POWER: 2568  
 4. NAMEPLATE RATING (GROSS MWe): 871  
 5. DESIGN ELECTRICAL RATING (NET MWe): 819  
 6. MAXIMUM DEPENDABLE CAPACITY (GROSS MWe): 834  
 7. MAXIMUM DEPENDABLE CAPACITY (NET MWe): 786

NOTES:  
 THIS AND THE FOLLOWING PAGE  
 INCLUDE CORRECTIONS TO ITEMS  
 17, 18, 21, 22, & THE AVERAGE  
 DAILY POWER LEVEL FOR 09-03-92.

8. IF CHANGES OCCUR IN (ITEMS 3-7) SINCE LAST REPORT, GIVE REASONS: \_\_\_\_\_

9. POWER LEVEL TO WHICH RESTRICTED, IF ANY (NET MWe): \_\_\_\_\_

10. REASONS FOR RESTRICTIONS, IF ANY: \_\_\_\_\_

		THIS MONTH	YR-TO-DATE	CUMULATIVE
11. HOURS IN REPORTING PERIOD	(HRS)	720.0	6575.0	158496.0
12. NUMBER OF HOURS REACTOR WAS CRITICAL	(HRS)	681.8	6536.8	83267.8
13. REACTOR RESERVE SHUTDOWN HOURS	(HRS)	38.2	38.2	2283.8
14. HOURS GENERATOR ON-LINE	(HRS)	679.0	6534.0	82190.2
15. UNIT RESERVE SHUTDOWN HOURS	(HRS)	0.0	0.0	0.0
16. GROSS THERMAL ENERGY GENERATED	(MWH)	1591955	16607359	200476404
17. GROSS ELECTRICAL ENERGY GENERATED	(MWH)	516394	5488578	67482837
18. NET ELECTRICAL ENERGY GENERATED	(MWH)	483704	5178234	63335559
19. UNIT SERVICE FACTOR	(%)	94.3	99.4	51.9
20. UNIT AVAILABILITY FACTOR	(%)	94.3	99.4	51.9
21. UNIT CAPACITY FACTOR (USING MDC NET)		85.5	100.2	50.8
22. UNIT CAPACITY FACTOR (USING DER NET)		82.0	96.2	48.8
23. UNIT FORCED OUTAGE RATE	(%)	5.7	0.6	42.5
UNIT FORCED OUTAGE HOURS	(HRS)	41.0	41.0	60689.7
24. SHUTDOWNS SCHEDULED OVER NEXT 6 MONTHS (TYPE, DATE AND DURATION OF EACH):				

25. IF SHUT DOWN AT END OF REPORT PERIOD, ESTIMATED DATE OF STARTUP: \_\_\_\_\_

CORRECTED COPY

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-289  
UNIT TMI-1  
DATE October 13, 1992  
COMPLETED BY W G HEYSEK  
TELEPHONE (717) 948-8191

MONTH: SEPTEMBER

DAY AVERAGE DAILY POWER LEVEL  
(MWe-NET)

1	334
2	340
3	341
4	344
5	688
6	791
7	788
8	783
9	783
10	776
11	789
12	797
13	795
14	793
15	788
16	779

DAY AVERAGE DAILY POWER LEVEL  
(MWe-NET)

17	776
18	555
19	-39
20	160
21	782
22	787
23	804
24	809
25	807
26	800
27	793
28	799
29	804
30	809
31	NA