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October 14, 1996

6710-96-2339

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 September 1996

Enclosed are two copies of the September 1996 Monthly Operating Report for Three Mile Island Nuclear Station, Unit 1.

Sincerely,

A handwritten signature in cursive script, appearing to read "J. Knubel".

J. Knubel  
Vice President and Director, TMI

WGH

9610230081 960930  
PDR ADOCK 05000289  
R PDR

cc: Administrator, Region I  
TMI Senior Resident Inspector  
96001

IE241/1

230073

## OPERATIONS SUMMARY

September 1996

The plant entered the month operating at 100% power and remained at that power level for the remainder of the month. Net unit electrical output averaged approximately 801 MWe during September.

### MAJOR SAFETY RELATED MAINTENANCE

The major safety related maintenance items completed during the month involved the following equipment:

#### Nuclear Services Closed Cooler NS-C-1D

Nuclear Services Closed Cooler NS-C-1D was removed from service for scheduled maintenance. Work accomplished included leaking check of the tubes (no leaks identified), installation of sacrificial anodes, coating of the water boxes, performing an Eddy Current Test. Based on Eddy Current Test results, one (1) tube was removed from service by installing a stabilizer and plugging.

#### Core Flood Valves CF-V-83A/B

Core Flood System Sample valves CF-V-83A/B were removed from service because of seat leakage. The existing valves were replaced with new compression fitting tubing valves.

#### Reactor Coolant Pump Bearing Oil Level Indicator RC-61-LI7

Reactor Coolant Pump RC-P-1D lower bearing oil level indicator RC-61-LI7 was removed from service after the instrument failed down scale. Troubleshooting identified a blown fuse and a failed power supply. Following installation of a new power supply and fuse, the fuse blew again when the unit was repowered. The failure was attributed to a failed step-down transformer. The transformer and fuse were replaced. After post maintenance testing was satisfactorily completed, the instrument was returned to service.

#### Nuclear Services River Water Pump NR-P-1C

Nuclear Services River Water Pump NR-P-1C was removed from service due to high column vibrations. After the motor was removed, the pump was pulled and disassembly started. A new replacement pump bowl assembly was obtained from warehouse stock, disassembled, balanced, reassembled and set aside for installation later. Pump disassembly is still in progress and re-assembly is expected to be complete in October.

# OPERATING DATA REPORT

## OPERATING STATUS

DOCKET NO. 50-289  
DATE October 14, 1996  
COMPLETED BY W G HEYSEK  
TELEPHONE (717) 948-8191

1. UNIT NAME: THREE MILE ISLAND UNIT 1
2. REPORTING PERIOD: SEPTEM 1996
3. LICENSED THERMAL POWER: 2568
4. NAMEPLATE RATING (GROSS MWe): 872
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

		THIS MONTH	YR-TO-DATE	CUMMULATIVE
11. HOURS IN REPORTING PERIOD	(HRS)	720.0	6575.0	193560.0
12. NUMBER OF HOURS REACTOR WAS CRITICAL	(HRS)	720.0	6575.0	116118.1
13. REACTOR RESERVE SHUTDOWN HOURS	(HRS)	0.0	0.0	2284.0
14. HOURS GENERATOR ON-LINE	(HRS)	720.0	6575.0	114956.3
15. UNIT RESERVE SHUTDOWN HOURS	(HRS)	0.0	0.0	0.0
16. GROSS THERMAL ENERGY GENERATED	(MWH)	1,847,727.4	16,823,687.0	282,938,613.0
17. GROSS ELECTRICAL ENERGY GENERATED	(MWH)	610,101.0	5,600,405.0	95,053,879.1
18. NET ELECTRICAL ENERGY GENERATED	(MWH)	576,900.0	5,292,770.0	89,336,174.1
19. UNIT SERVICE FACTOR	(%)	100.0	100.0	59.4
20. UNIT AVAILABILITY FACTOR	(%)	100.0	100.0	59.4
21. UNIT CAPACITY FACTOR (USING MDC NET)		101.9	102.4	58.7
22. UNIT CAPACITY FACTOR (USING DER NET)		97.8	98.3	56.4
23. UNIT FORCED OUTAGE RATE	(%)	0.0	0.0	34.5
UNIT FORCED OUTAGE HOURS	(HRS)	0.0	0.0	60761.2

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: \_\_\_\_\_

# AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-289  
UNIT TMI-1  
DATE 10/14/96  
COMPLETED BY W G HEYSEK  
TELEPHONE (717) 948-8191

MONTH: SEPTEMBER

DAY AVERAGE DAILY POWER LEVEL  
(MWe-NET)

1	797
2	797
3	795
4	795
5	789
6	791
7	789
8	791
9	792
10	792
11	796
12	797
13	801
14	808
15	806
16	805

DAY AVERAGE DAILY POWER LEVEL  
(MWe-NET)

17	804
18	805
19	805
20	808
21	807
22	806
23	808
24	811
25	809
26	811
27	803
28	800
29	810
30	809
31	#N/A

DOCKET NO. 50-289  
UNIT NAME TMI-1  
DATE 10/14/96  
COMPLETED BY W. G. Heysek  
TELEPHONE (717) 948-8191

REPORT MONTH September 1996

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

- 1  
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 Scan  
3-Automatic Scan  
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 5, 1997**
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. To support GPU Nuclear's independent reload analyses for Cycle 12 as discussed in response to Question 6 below, T.S. 6.9.5.2 will require revision to include references to the GPU Nuclear analysis methods applied to the reload.**
5. Scheduled date(s) for submitting proposed licensing action and supporting information: **A Technical Specification Change Request for the changes as discussed above will be submitted once the GPU Nuclear topicals are approved.**
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) GPU Nuclear Letter 6710-96-2092, dated March 28, 1996 confirmed plans to perform independent reload design evaluations for Cycle 12, the next operation cycle, based on NRC approved methods described in GPU Nuclear Topical Reports TR-091A (core physics), TR-087 (core thermal hydraulics), TR-078 (FSAR safety analyses) and TR-092P (design and setpoints methodology) submitted to the NRC. The latter three are in the NRC review and approval stage.**

**At this time, completion of the NRC review and issuance of NRC SERs is active. We have received questions on all reports and are in the process of providing answers. All remaining reports are expected to be approved in an acceptable time frame to support our reload design activities.**

**The GPU Nuclear Cycle 12 reload program and results are expected to be available for NRC review in the March to April 1997 time frame.**

b) Cycle 12 fuel rod performance calculations (e.g. internal pin pressure) will be performed by Framatome Cogema Fuels Company (FCF) using the approved TACO3 (BAW-10162P-A) and GDTACO (BAW-10184P-A) fuel codes. Results require minor changes to the Mark B9 fuel rod design (lower fill gas prepressure, increased plenum volume). The new design will meet all fuel criteria in the latest approved revision of BAW-10179P-A, Safety Criteria and Methodology for Acceptable Cycle Reload Analyses. Fuel rod cladding corrosion calculations for all Cycle 12 fuel are being done by FCF using the COROS2 methodology now under review by the NRC with approval expected about September 1996. The TACO calculations are being done using power histories generated with the GPU Nuclear approved core physics codes CASMO-3/SIMULATE-3 (TR-091A). A letter requesting approval for use of the SIMULATE-3 power peaking uncertainty of 5.5% with the TACO methodologies, rather than the current FCF NEMO physics code (BAW-10180A, Rev 1) uncertainty of 4.8%, was submitted by FCF in August 1996 with approval requested by September 30, 1996 to support the Cycle 12 reload design schedule requirements.

7. The number of fuel assemblies (a) in the core, and (b) in the spent fuel storage pool: (a) 177 (b) 864
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 1990. Phase I of the reracking project to increase spent fuel pool storage capacity permits storage of 1342 assemblies. Upon completion of Phase II of the reracking project, the full licensed capacity will be attained. Phase II is expected to be started in 2002.

9. The projected date of the last refueling that can be discharged to the 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 14 and on completion of the rerack project full core off-load is assured through and beyond the end of the current operating license.