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February 12, 1993
C311-93-2023

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 January 1993

Enclosed are two copies of the January 1993 Monthly Operating Report for Three Mile Island Nuclear Station, Unit 1.

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
January 1993

The plant entered the month operating at 100% power producing 860 MWe. It continued full power operation for the entire month of January. On January 26 TMI-1 entered Technical Specification 3.0.1 as a result of the failure of BS-PS-286 for 30 psig ESAS actuation. Technical Specification 3.0.1 was entered on January 29 when a valve line-up caused River Water System flow to the Decay Heat Service Coolers (DC-C-2A and 2B) to be bypassed. The NRC Operations Center was notified of each event and both will be detailed in LERs.

MAJOR SAFETY RELATED MAINTENANCE

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

Emergency Diesel Compressor Pressure Switch EG-PS-532B

EG-P-1B, the Emergency Diesel Generator Air Start Compressor, was removed from service to facilitate the replacement of pressure switch EG-PS-532B. The pressure switch was replaced because it was sticking and was of an obsolete design. The compressor was returned to service with a new pressure switch installed.

Building Spray System Pressure Switch BS-PS-286

The 30# Reactor Building Spray System ESAS pressure switch, BS-PS-286, failed to actuate during the performance of Surveillance 1303-4.14. It was subsequently jumpered out and an investigation into the cause of failure was initiated. The switch deadband, although within manufacturers specification, was found to be on the low end of the scale. As a result, the internal linkage was unsatisfactorily restrained and prevented positive closure of the contacts. The linkage was cleaned and lubricated and the deadband was adjusted to increase contact closure. Surveillance procedure 1303-4.14 was re-performed and BS-PS-286 operated satisfactorily during the test.

Concentrated Waste Storage Tank WDL-T-6A

The replacement of Concentrated Waste Storage Tank WDL-P-6A outlet piping began in January. The work was necessitated by clogging in the original piping. Shorter, flanged sections are being used in the replacement effort to facilitate future cleaning activities. All prefabrication welding is complete and piping installation will begin in February.

OPERATING DATA REPORT

OPERATING STATUS

DOCKET NO. 50-289
 DATE February 12, 1993
 COMPLETED BY W G HEYSEK
 TELEPHONE (717) 948-9191

1. UNIT NAME: THREE MILE ISLAND UNIT 1
2. REPORTING PERIOD: JANUARY 1993
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)	744.0	744.0	161449.0
12. NUMBER OF HOURS REACTOR WAS CRITICAL	(HRS)	744.0	744.0	36720.8
13. REACTOR RESERVE SHUTDOWN HOURS	(HRS)	0.0	0.0	2283.8
14. HOURS GENERATOR ON-LINE	(HRS)	744.0	744.0	85144.1
15. UNIT RESERVE SHUTDOWN HOURS	(HRS)	0.0	0.0	0.0
16. GROSS THERMAL ENERGY GENERATED	(MWH)	1906278	1906278	207952982
17. GROSS ELECTRICAL ENERGY GENERATED	(MWH)	644964	644964	69990038
18. NET ELECTRICAL ENERGY GENERATED	(MWH)	609151	609151	65711458
19. UNIT SERVICE FACTOR	(%)	100.0	100.0	52.7
20. UNIT AVAILABILITY FACTOR	(%)	100.0	100.0	52.7
21. UNIT CAPACITY FACTOR (USING MDC NET)		104.2	104.2	51.8
22. UNIT CAPACITY FACTOR (USING DER NET)		100.0	100.0	49.7
23. UNIT FORCED OUTAGE RATE	(%)	0.0	0.0	41.6
UNIT FORCED OUTAGE HOURS	(HRS)	0.0	0.0	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: _____

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-239
UNIT TMI-1
DATE February 12, 1993
COMPLETED BY W G HEYSEK
TELEPHONE (717) 946-8191

MONTH: JANUARY

DAY	AVERAGE DAILY POWER LEVEL (MWe-NET)
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1	816
2	821
3	820
4	811
5	808
6	818
7	818
8	818
9	820
10	822
11	822
12	817
13	817
14	819
15	820
16	821

DAY	AVERAGE DAILY POWER LEVEL (MWe-NET)
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17	819
18	821
19	823
20	821
21	821
22	817
23	817
24	816
25	820
26	822
27	821
28	821
29	820
30	821
31	816

UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH January 1993

DOCKET NO. 50-289
UNIT NAME TMI-1
DATE February 12, 1993
COMPLETED BY W. G. Heysek
TELEPHONE (717) 948-8191

No.	Date	Type ¹	Duration (Hours)	Reason ²	Method of Shutting Down Reactor ³	Licensee 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 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 i same source
6 Actually used exhibits F & II 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.
 - 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 23, 1992.
 - c) Use of urania-gadolinia fuel and B&W Fuel Corporation (BWFC) changes in core physics methods may require change to T.S. 6.9.5.2 which lists approved analytical methods references to support the Core Operating Limits Report values to include reference to BAW-10180, Rev. 1, NEMO. Use of the gadolinium integral burnable poison may also require changes to the Reactor Core fuel descriptions in T.S. 5.3.1.
 - d) Based on higher fuel loadings planned for Cycle 10 and beyond, it was previously reported that the borated water storage requirements of T.S. 3.2 would need to be increased. BWFC preliminary boron results indicate that no change is necessary.
5. Scheduled date(s) for submitting proposed licensing action and supporting information:
- a) Submittals made to date are described in 4a and b above.
 - b) The TSCR submittal schedule for use of the urania-gadolinia fuel depended on completion of the USNRC review of the BAW-10180, Rev. 1 methods addressed in 4c above. Per recent USNRC letter (Thadani to Taylor (BWFC), January 29, 1993), NEMO, Rev. 1 acceptance for referencing has been completed. A GPUN TSCR for any necessary changes to T.S. 6.9.5.2 and T.S. 5.3.1 will be submitted by April 1993 (See 5.c. below).
 - c) With reference to 4d above, final BWFC boron results are expected in March 1993. Based on that date, if changes are necessary, the GPUN TSCR would be submitted in April 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 October 1993. This design incorporates reload fuel that contains urania-gadolinia. Use of this type of fuel may require changes to the plant Technical Specifications as noted in 4c above. These changes would need to be supported by approval of BWFC topical reports on reload design methods revisions that account for the Gd effects in the analyses; the NEMO physics code was noted in 5 above. Approval of BAW-10184P, GDTACO is also required to support fuel thermal analysis. To ensure that no delays occur to reload analyses, fuel manufacturing and plant startup schedules, approval of these topicals was requested for April 1, 1993. In subsequent discussions, the USNRC committed to a completion date of May 1993 with review started early enough to identify any major concerns by March.
- 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, CFM) and repair capabilities. The Mark B9 design meets current BWFC fuel design criteria and has been used previously at other B&W 177 FA plants.
- c) BWFC has a licensing change under USNRC review for certification of the Siemens fuel assembly shipping container design for shipment of two BWFC Mark B fuel assemblies up to 5.0 wt/o U^{235} . This change is necessary to support the TMI-1 Cycle 10 fresh fuel receipt by reducing the number of fuel shipments and fuel handling activities. The risk of fuel damage is also minimized. Based on the 12/3/93 BWFC/NRC meeting on this issue, approval is expected by March 1993. Cycle 10 fuel shipments will start in June 1993.
- d) GPUN is in the process of withdrawing TSCR No. 200 to modify the TMI-1 Technical Specifications to permit the substitution of Zr-4 or stainless steel replacement rods for failed fuel rods, in accordance with USNRC Generic Letter 90-02, dated February 1, 1990. Generic Letter 90-02, Supplement 1 was issued on July 31, 1992, to clarify limitations on the application of currently-approved analytical methods and withdraw and replace the model TS recommended by Generic Letter 90-02. The B&W Owners Group Core Performance Committee submitted Topical Report BAW-2149, "Evaluation of Replacement Rods in BWFC Fuel Assemblies" in December 1991 and responses to NRC reviewer questions on November 2, 1992 and January 12, 1993. This report justifies the use of up to ten replacement stainless steel rods located anywhere in a single fuel assembly based on currently-approved methodology. Completion of the NRC review is expected in the first quarter of 1993. Approval of BAW-2149 will provide the basis for reconstitution repairs of BWFC Mark B assemblies which may be done under the provisions of 10 CFR 50.59 (i.e., the repair does

not represent an unreviewed safety question). A new TSCR will be submitted in response to Generic Letter 90-02, Supplement 1 referencing BAW-2149 upon approval. A TSCR review completion date consistent with the next TMI-1 refueling outage in September 1993 will be requested.

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 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.

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 the end of the current operating license and beyond.