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Docket No. 50-277

Philadelphia Electric Company
ATTN: Mr. J. L. Hankins
Vice President
2301 Market Street
Philadelphia, Pennsylvania 19101

Change No. 1
License No. DPR-44

Gentlemen:

We have completed our evaluation of your letter dated January 16, 1974 requesting changes to the Technical Specifications (Appendix A) of Facility License No. DPR-44. The proposed changes are for Sections 4.3.B.3.b.3, 4.3.B.3.b.4 and 4.3.C.1 of Appendix A. These changes are required to make the surveillance requirement for the Rod Worth Minimizer and scram insertion time measurements compatible with the characteristics of the Rod Sequence Control System.

Based on our evaluation, a copy of which is enclosed, we conclude that the proposed changes do not involve a significant hazard consideration and that there is reasonable assurance that the health and safety of the public will not be endangered.

Accordingly, pursuant to Section 50.59 of 10 CFR Part 50, the Technical Specifications appended to License No. DPR-44 are hereby changed as indicated below:

1. Change Section 4.3.B.3.b.3 to read as follows. Word changes from original are underlined.

   4.3.B.3.b.3 Prior to the start of control rod withdrawal only, proper annunciation of the selection error of at least one out-of-sequence control rod in a fully inserted group shall be verified.

2. Change Section 4.3.B.3.b.4 to read as follows. Word changes from original are underlined.

   4.3.B.3.b.4 The rod block function of the RWM shall be verified by withdrawing the first rod during startup only as an out-of-sequence control rod, no more than to the block point.

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3. Change Section 4.3.C.1 to read as follows. Word changes from original are underlined.

4.3.C.1 After each refueling outage all operable fully withdrawn in-sequence rods shall be scram tested during operational hydrostatic testing or during startup from the fully withdrawn position with the nuclear system pressure above 800 psig. This testing shall be completed prior to synchronizing the main turbine generator initially following restart of the plant. <u>After exceeding 30 per cent power and prior to exceeding 40 per cent power, all previously untested operable control rods shall be tested as described above.</u>

Sincerely,

R. C. De Young, Assistant Director
for Light Water Reactors Group 1
Directorate of Licensing

Enclosure: As stated

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DATE ➔	2/5/74	2/6/74	2/15/74	2/ /74	2/8/74	

ENCLOSURE 1

SAFETY EVALUATION

FOR TECHNICAL SPECIFICATIONS

CHANGE NO. 1 TO APPENDIX A OF THE LICENSE FOR

PEACH BOTTOM ATOMIC POWER STATION UNIT 2, DPR-44

DOCKET NUMBER 50-277

1.0 INTRODUCTION

On January 16, 1974, the Philadelphia Electric Company requested a change in the Technical Specifications for the Peach Bottom Atomic Power Station, Unit 2. This is designated as Change Request No. 1. Peach Bottom, Unit 2 is currently undergoing initial tests (at less than 25% power) of the start-up and rise to power test program. During these initial reactor tests, which have been prolonged due to the Unit 2 turbine-generator problems, the reactor operator has determined that changes are required in the Technical Specifications before the reactor can be operated above the 30% power level. The first proposed change relates to the surveillance requirement for the Rod Worth Minimizer and the second proposed change relates to the surveillance time limit for completion of all the scram insertion time measurements An evaluation of each of these proposed changes to the Technical Specifications follows:

2.0 PROPOSED CHANGE NO. 1-A

The proposed changes for surveillance on Rod Worth Minimizer (RWM) are underlined.

2.1 Section 4.3.B.3.b.3

4.3.B.3.b.3 Prior to the start of control rod withdrawal only, proper annunciation of the selection error of at least one out-of-sequence control rod in a fully inserted group shall be verified.

2.2 Section 4.3.B.3.b.4

4.3.B.3.b.4 The rod block function of the RWM shall be verified by withdrawing the first rod during startup only as an out-of sequence control rod no more than to the block point.

3.0 EVALUATION OF PROPOSED CHANGE NO. 1-A

The above changes are required because Peach Bottom, Unit 2 has a Rod Sequence Control System (RSCS) which prevents selection of any rods not in RWM rod groups 1 or 2 unless the group 1 and 2 are fully withdrawn. Therefore only RWM group 2 can be checked for a selection error prior to start-up.

During a shutdown sequence, the RSCS becomes operable at 30% power and the RWM becomes operable at 25% power.

The RWM selection error and rod block check required by Paragraph 4.3.B.3.b.4 of the Technical Specifications cannot be performed during a shutdown of the reactor because below 30% power level, the RSCS is operable.

As rewritten, the RWM can be tested sufficiently to ensure its proper operation to identify rod selection errors, and to provide for rod block functions prior to start-up. The RWM diagnostic test required by Paragraph 4.3.B.3.b.2 of the Technical Specifications is sufficient to demonstrate the RWM operability prior to the shutdown sequence.

The requested changes to 4.3.B.3.b.3 and 4.3.B.3.b.4 do not affect the operability requirements of the RWM and do not reduce its reliability.

These two changes to the Peach Bottom Technical Specifications 4.3.B.3.b.3 and 4.3.B.3.b.4 have no safety significance and the changes requested should be granted.

4.0 PROPOSED CHANGE NO. 1-B

The proposed change to the requirements for completion of control rod scram insertion time measurements is underlined.

4.1 Section 4.3.C.1

4.3.C.1 After each refueling outage all operable fully withdrawn in-sequence rods shall be scram tested during operational hydrostatic testing or during start-up from the fully withdrawn position with the nuclear system pressure above 800 psig. This testing shall be completed prior to synchronizing the main turbine generator initially following restart of the plant. <u>After exceeding 30 per cent power and prior to exceeding 40 per cent power, all previously untested operable control rods shall be tested as described above.</u>

5.0 EVALUATION OF PROPOSED CHANGE NO. 1-B

The above change deletes the 24 hour time limit to complete this scram testing and substitutes a 40% power limit to complete the scram testing. The proposed change submitted by the Philadelphia Electric Company had the words "fully withdrawn" between the words "operable" and "control" in the last sentence of Paragraph 4.3.C.1 given above. We do not believe the words "fully withdrawn" provide clarification as stated in the proposed change. Philadelphia Electric Company has indicated that to improve fuel performance and to reduce the fraction of fuel elements experiencing defects, the Peach Bottom Station, Units 2 & 3 will be operated in conformance with General Electric fuel Preconditioning Interim Operating Management Recommendations, which require gradual increases in local power once a linear heat generation (LHGR) of 8 Kw/ft has been reached. It is expected that the the 8 Kw/ft LHGR will be reached at approximately 25% power. Once this LHGR is reached, power and LHGR are increased at a rate of 0.06 KW/ft/h by increasing the recirculation flow rate. Control rod movement at an LHGR above 8 Kw/ft is not used until the fuel has been preconditioned by using the recirculation flow to raise power and then holding power level constant for a period of

12 hours. Therefore, preconditioning is highly desirable before the remaining approximately 30% control rods are scram tested. In addition to the time required for preconditioning, (2 to 4 days in the 30 to 40% power range) it will be desirable to withdraw the Group C rods to establish a more normal rod pattern before commencing scram time testing.

The implementation of this change in Paragraph 4.3.C.1 will improve operational safety by permitting compliance with the General Electric fuel management recommendations while retaining the requirements for control rod scram time testing. Relaxing the 24 hour time limit after achieving 30% power to a 40% maximum power for completion of all control rod scram testing does not significantly alter the effectiveness of the control rod scram time tests. This change will have no safety significance and the change indicated above for 4.3.C.1 should be granted.

6.0 CONCLUSION

On the basis of our evaluation, we have concluded that the Technical Specifications Change No. 1, proposed by the Philadelphia Electric Company for the Peach Bottom Atomic Power Station, Units 2 and 3, do not present significant hazard considerations and that there is reasonable assurance that the health and safety of the public will not be endangered by operations in the proposed manner. The Technical Specifications changes described above should be reissued to holders of Appendix A to Operating License DPR-44.

Raymond R. Powell, Project Manager
Light Water Reactors Projects Branch 1-2
Directorate of Licensing

Walter R. Butler, Chief
Light Water Reactors Projects Branch 1-2
Directorate of Licensing

Date 2/6/74