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An Exelon/British Energy Company

10 CFR 50.90

December 20, 2001
2130-01-20251

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

Subject: Oyster Creek Generating Station
Docket No. 50-219
Facility Operating License No. DPR-16
Technical Specification Change Request No. 281
Replacement Pages

References: 1) AmerGen Letter No. 2130-01-20042 dated April 4, 2001, "Technical Specification Change Request No. 281"

2) AmerGen Letter No. 2130-01-20211 dated October 12, 2001, "Technical Specification Change Request No. 281, Response to Request for Additional Information"

In Reference 1 AmerGen Energy Company, LLC (AmerGen) requested a change to the Section 5.3 Technical Specifications contained in Appendix A to the Oyster Creek Facility Operating License. A change was proposed to eliminate Technical Specifications 5.3.1.B and 5.3.1.C. A mark-up of the proposed Technical Specification change on page 5.3-1 was contained in Enclosure 3 of Reference 1. Proposed bases changes were also indicated on page 5.3-1. A mark-up of proposed changes to Technical Specification bases on page 5.3-2 was contained in Enclosure 4 to Reference 2.

The enclosure to this letter provides replacement pages 5.3-1 and 5.3-2 for the Oyster Creek Technical Specifications incorporating the changes contained on the marked-up pages previously submitted to the NRC with some minor changes to the proposed bases. While Reference 1 proposed to delete the second paragraph in the current basis section on page 5.3-1 in its entirety only the last part of that paragraph pertaining to dropped waste cans should be deleted. The text that should remain in that paragraph discusses a dropped fuel assembly, which is unrelated to the Technical Specification change proposed in Reference 1. An additional change in two locations, reflecting deletion of cask drop structural analysis, is also indicated in the bases on page 5.3-2. Waste can and cask drops will no longer need to be considered upon issuance of the requested license amendment. Therefore, the effects of a dropped waste can and the loads to the spent fuel

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pool structure, associated with a cask drop, will not need to be considered in the structural analysis. Vertical lines in the right-hand margin indicate changed areas. The replacement pages can be issued with the license amendment approving the requested change.

Should you have questions or require additional information please contact Mr. Paul F. Czaya at 610-765-5952.

I declare under penalty of perjury that the foregoing is true and correct.

Very truly yours,

12-20-01
Executed On

Michael P. Gallagher
Director, Licensing
Mid-Atlantic Regional Operating Group

Enclosure: Technical Specification Replacement Pages 5.3-1 and 5.3-2

c: H. J. Miller, Administrator, USNRC Region I
L. A. Dudes, USNRC Senior Resident Inspector, Oyster Creek
H. N. Pastis, USNRC Senior Project Manager, Oyster Creek
File No. 01037

Enclosure

Technical Specification Replacement Pages
5.3-1 and 5.3-2

5.3 AUXILIARY EQUIPMENT

5.3.1 Fuel Storage

A. The fuel storage facilities are designed and shall be maintained with a K-effective equivalent to less than or equal to 0.95 including all calculational uncertainties.

B. Deleted

C. Deleted

D. The temperature of the water in the spent fuel storage pool, measured at or near the surface, shall not exceed 125°F.

E. The maximum amount of spent fuel assemblies stored in the spent fuel storage pool shall be 3035.

BASIS

The specification of a K-effective less than or equal to 0.95 in fuel storage facilities assures an ample margin from criticality. This limit applies to unirradiated fuel in both the dry storage vault and the spent fuel racks as well as irradiated fuel in the spent fuel racks. Criticality analyses were performed on the poison racks to ensure that a K-effective of 0.95 would not be exceeded. The analyses took credit for burnable poisons in the fuel and included manufacturing tolerances and uncertainties as described in Section 9.1 of the FSAR. Calculational uncertainties described in 5.3.1.A are explicitly defined in FSAR Section 9.1.2.3.9. Any fuel stored in the fuel storage facilities shall be bounded by the analyses in these reference documents.

The effects of a dropped fuel bundle onto stored fuel in the spent fuel storage facility have been analyzed. This analysis shows that the fuel bundle drop would not cause doses resulting from ruptured fuel pins that exceed 10 CFR 100 limits (1,2,3).

Detailed structural analysis of the spent fuel pool was performed using loads resulting from the dead weight of the structural elements, the building loads, hydrostatic loads from the pool water, the weight of fuel and racks stored in the pool, seismic loads, and loads due to thermal gradients in the pool floor and the walls. Thermal gradients result in two loading conditions: normal operating and the accident conditions with the loss of spent fuel pool cooling. For the normal condition, the reactor building air temperature was assumed to vary between 65°F and 110°F while the pool water temperature varied between 85°F and 125°F. The most severe loading from the normal operating thermal gradient results with reactor building air temperatures at 65°F and the water temperature at 125°F. Air temperature measurements made during all phases of plant operation in the shutdown heat exchanger room, which is directly beneath part of the spent fuel pool floor slab, show that 65°F is the appropriate minimum air temperature. The spent fuel pool water temperature will alarm control room before the water temperature reaches 120°F.

Results of the structural analysis show that the pool structure is structurally adequate for the loadings associated with normal operation and postulated accidents (5) (6). The floor framing was also found to be capable of withstanding the steady state thermal gradient conditions with the pool water temperature at 150°F without exceeding ACI Code requirements. The walls are also capable of operation at a steady state condition with the pool water temperature at 140°F (5).

Since the cooled fuel pool water returns at the bottom of the pool and the heated water is removed from the surface, the average of the surface temperature and the fuel pool cooling return water is an appropriate estimate of the average bulk temperature; alternately the pool surface temperature could be conservatively used.

References

1. Amendment No. 78 to FDSAR (Section 7)
2. Supplement No. 1 to Amendment No. 78 to the FDSAR (Question 12)
3. Supplement No. 1 to Amendment 78 of the FDSAR (Question 40)
4. Deleted
5. Revision No. 1 to Addendum 2 to Supplement No. 1 to Amendment No. 78 of FDSAR (Questions 5 and 10)
6. FDSAR Amendment No. 79
7. Deleted
8. Holtec Report HI-981983, Revision 4