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10 CFR 50.90

January 12, 2005

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Peach Bottom Atomic Power Station, Units 2 and 3
Renewed Facility Operating License Nos. DPR-44 and DPR-56
Docket Nos. 50-277 and 50-278

Subject: License Amendment Request
Increase Emergency Diesel Generator Load During Technical Specification Surveillance Testing; SR 3.8.1.3, SR 3.8.1.10, SR 3.8.1.14.b, and SR 3.8.1.15

References: 1) Letter from M. P. Gallagher (Exelon Generation Company, LLC) to U. S. Nuclear Regulatory Commission (USNRC), date June 15, 2004

2) Letter from G. F. Wunder (USNRC) to C. M. Crane (Exelon Generation Company, LLC), dated October 29, 2004

Pursuant to 10 CFR 50.90, in the Reference 1 letter, Exelon Generation Company, LLC requested an amendment to the Technical Specifications (TS), Appendix A of Renewed Facility Operating License Nos. DPR-44 and DPR-56 for Peach Bottom Atomic Power Station (PBAPS), Units 2 and 3.

This proposed change will revise PBAPS TS surveillance requirements; SR 3.8.1.3 (the monthly diesel surveillance test), SR 3.8.1.10 (the diesel full-load rejection test), SR 3.8.1.14.b (the diesel 24-hour run test), and SR 3.8.1.15 (the diesel hot restart test) to permit these tests to be conducted at a higher load of up to 2800 kW.

In the Reference 2 letter, the U. S. Nuclear Regulatory Commission requested additional information. Attached is our response to this request.

No new regulatory commitments are established by this submittal.

If any additional information is needed, please contact Mr. Tom Loomis at 610-765-5510.

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

Respectfully,

Executed on Jan. 12, 2005

Keith R. Jury

Keith R. Jury
Director – Licensing and Regulatory Affairs
Exelon Generation Company, LLC

Attachment: 1-Response to Request for Additional Information

cc: S. J. Collins, Administrator, Region I, USNRC
F. Bower, USNRC Senior Resident Inspector, PBAPS
G. F. Wunder, Project Manager [PBAPS] USNRC
R. R. Janati, Commonwealth of Pennsylvania

ATTACHMENT

PEACH BOTTOM ATOMIC POWER STATION
UNITS 2 AND 3
DOCKET NOS. 50-277 AND 50-278

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION REGARDING INCREASED EMERGENCY DIESEL GENERATOR LOAD DURING TECHNICAL SPECIFICATION SURVEILLANCE TESTING; SR 3.8.1.3, SR 3.8.1.10, SR 3.8.1.14.b, and SR 3.8.1.15

Question:

"The license amendment request indicated that the continuous rating for the Peach Bottom emergency diesels generator is 2600 kW and the 2000 hour rating is 3000 kW. The LAR stated that running the diesels above the continuous rating, up to 2800 kW, has been discussed with the original equipment manufacturer, Fairbanks Morse. The LAR also indicated that the increased rate of wear in the diesel considering the operating time of no greater than 400 hours in the 2000 hour rating operating range, coupled with the Peach Bottom EDG post-accident mission time, is expected to be well within the capability of the machine.

Please identify the Peach Bottom EDG post-accident mission time and describe the EDG design loading during that time."

Response:

There is no specified design basis mission time for the Peach Bottom Atomic Power Station, Units 2 and 3 Emergency Diesel Generators (EDGs). However, continued reliability of the Peach Bottom Atomic Power Station (PBAPS), Units 2 and 3 EDGs at the proposed maximum test load value of 2800 kW will be ensured through continued maintenance. The PBAPS EDGs are not operated for more than 400 hours between inspections as discussed in the license amendment application. These major inspections are bounded by a formula supplied by the vendor as discussed below.

The EDG design loading is documented in Tables 8.5.2.C through 8.5.2.L ("Diesel Generator & Emergency Bus Loading") of the Peach Bottom Atomic Power Station, Units 2 and 3, Updated Final Safety Analysis Report (UFSAR). These tables describe the EDG loading for the Peach Bottom design basis case of an accident in one unit, and a safe shutdown in the non-accident unit for intervals of 0-10 minutes, 10-minutes to one hour, and one hour and beyond following the initiation of the event. The EDG loading for all permutations of a single failure in any one EDG is also tabulated in these UFSAR tables. In addition, the Peach Bottom EDG fuel consumption calculation includes a conservative tabulation of EDG loadings for a period of 24 hours to 7 days following the accident.

Since the Peach Bottom Atomic Power Station EDGs are provided with multiple ratings for different periods of time, the EDG manufacturer has provided a formula that describes the interrelationship of the different load ratings. This formula is re-stated below:

$$\frac{N_1}{8760} + \frac{N_2}{2000} + \frac{N_3}{200} + \frac{N_4}{0.5} \leq 1.0$$

where,

N_1 = Number of hours of operation at or below the EDG continuous rating of 2600 kW,
N_2 = Number of hours of operation between the EDG continuous rating and the 2,000 hour rating of 3000 kW,
N_3 = Number of hours of operation between the EDG 2000 hour rating and the 200 hour rating of 3100 kW,
N_4 = Number of hours of operation between the EDG 200 hour rating and the 30 minute rating of 3250 kW.

This formula applies to the number of hours of EDG operation between 2-year inspections. The EDG is required to be subjected to a 2-year major inspection if the left side of the formula exceeds the value of 1.0. After completion of the inspection including replacement of any worn parts, the "clock" is reset to zero and the cycle repeats.

Using the formula, the UFSAR loading tables, the extended load tabulation in the fuel consumption calculation, and also conservatively tabulating the amount of surveillance testing that occurs in a two-year period, Exelon has determined that in excess of 50 days of EDG post-accident operation is possible until the limits of the above formula are reached. This analysis demonstrates that adopting the proposed higher load range for TS-required surveillance testing does not exceed the capabilities of the machine.

References: 1) Peach Bottom Atomic Power Station, Units 2 and 3, Updated Final Safety Analysis Report, Tables 8.5.2.C through 8.5.2.L, "Diesel Generator & Emergency Bus Loading"