

March 10, 2011

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
NRC Docket Nos. 50-277 and 50-278

Subject: Additional Information Associated with the Acceptance Review of Relief Request
Concerning Reactor Pressure Vessel Circumferential Shell Welds

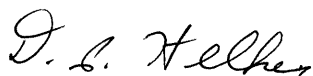
- References:
- 1) Letter from D. P. Helker (Exelon Generation Company, LLC) to U.S. Nuclear Regulatory Commission, "Proposed Relief Request associated with the Requirements of 10 CFR 50.55a Concerning Reactor Pressure Vessel Circumferential Shell Welds," dated January 24, 2011
 - 2) Letter from J. D. Hughey (U.S. Nuclear Regulatory Commission) to M. J. Pacilio (Exelon Generation Company, LLC), "Peach Bottom Atomic Power Station, Units 2 and 3: Supplemental Information Needed for Acceptance of Requested Licensing Action RE: Relief Request I4R-51 (TAC NOS. ME5392 and ME5393)," dated February 28, 2011

In the Reference 1 letter, Exelon Generation Company, LLC (Exelon) submitted for your review and approval a proposed alternative in accordance with 10 CFR 50.55a(a)(3)(i) concerning reactor pressure vessel circumferential shell welds. In the Reference 2 letter, the U.S. Nuclear Regulatory Commission requested additional information as part of the acceptance review. Attached is our response to this request.

There are no regulatory commitments contained in this letter.

If you have any questions or require additional information, please contact Tom Loomis (610-765-5510).

Respectfully,



David P. Helker
Manager - Licensing & Regulatory Affairs
Exelon Generation Company, LLC

Attachment: Response to Request for Additional Information

cc: USNRC Region I, Regional Administrator
USNRC Senior Resident Inspector, PBAPS
USNRC Project Manager, PBAPS
R. R. Janati, Bureau of Radiation Protection
S. T. Gray, State of Maryland

ATTACHMENT

Response to Request for Additional Information

Relief Request for Circumferential Shell Welds

Request:

In order to accept the relief request for detailed NRC staff review, the staff requires that the licensee confirm that the fluence values contained in its submittal letter were calculated in a manner consistent with RG 1.190 or some other acceptable manner... If the fluence values were not calculated using NEDC-32983P-A, Revision 2, then the NRC staff would also request that the licensee describe the fluence calculation method that was used and provide information concerning the qualification of the method for use on the BWR/4 vessel geometry in sufficient detail to determine whether the calculations were adherent to RG 1.190 guidance or some other acceptable methodology.

Response:

The information provided in the relief request is the current licensing basis information as documented in the Peach Bottom Atomic Power Station (PBAPS), Units 2 and 3 Updated Final Safety Analysis Report, Appendix Q. However, more recent fluence values have been calculated in accordance with Regulatory Guide 1.190, "Calculational and Dosimetry Methods for Determining Pressure Vessel Neutron Fluence," dated March 2001. These fluence values were calculated utilizing the methodology contained in NEDC-32983P-A, "General Electric Methodology for Reactor Pressure Vessel Fast Neutron Flux Evaluations," DRF 0000-0012-4185, Revision 2, dated January 2006. These fluence values are less than those documented in Peach Bottom's current licensing basis discussed above, and are therefore bounded. The following are the results of the 54 EFPY fluence values for PBAPS, Units 2 and 3 as well as the computation of the associated mean RT_{NDT} values for the limiting PBAPS circumferential shell welds:

Parameter	PBAPS, Unit 2	PBAPS, Unit 3
Cu% ^[1]	0.058	0.104
Ni% ^[1]	0.949	0.938
CF	79.2	139.3
Fluence at clad/weld interface (n/cm ²)	1.23×10^{18}	9.54×10^{17}
RT_{NDT} (°F)	-32	-50
ΔRT_{NDT} w/o margin (°F)	36.4	56.8
Mean RT_{NDT} (°F)	4.4	6.8

Notes:

1. Best estimate chemistry values from BWRVIP-135, Revision 1 were used for conservatism.