

October 29, 2010

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555-0001

Peach Bottom Atomic Power Station, Unit 2
Renewed Facility Operating License No. DPR-44
NRC Docket No. 50-277

Subject: Submittal of Analytical Evaluation of Reactor Pressure Vessel Closure Head Indications

Reference: 1) Letter from M. P. Gallagher (Exelon Generation Company, LLC) to U.S. Nuclear Regulatory Commission, "Submittal of Analytical Evaluation of Reactor Pressure Vessel Closure Head Indications," dated December 9, 2002

In accordance with the American Society of Mechanical Engineers (ASME) Code, Section XI, 2001 Edition through 2003 Addenda, IWB-3134(b) ("Review by Authorities"), Peach Bottom Atomic Power Station, Unit 2, is submitting an analytical evaluation associated with the Unit 2 Reactor Pressure Vessel (RPV) Closure Head to Flange Weld (CH-C-2) examined during the Fall 2010 refueling outage.

As discussed in the attached report, an analytical evaluation of the indication was performed to disposition an indication associated with the RPV Closure Head to Flange Weld (CH-C-2). The indication (Indication #9) is in the circumferential weld approximately seventeen (17) inches away from the closest meridional weld and is orientated transverse to the weld in the plate region of the weld. Therefore, the indication is in the same plane (i.e., same orientation) to the meridional weld indications that were evaluated in 2002 (Reference 1). Per IWB-3132.3 ("Acceptance by Analytical Evaluation"), the indication in weld CH-C-2 has been evaluated as described in IWB-3600 and meets the acceptance criteria of IWB-3600. It is concluded that the subject indication (Indication #9) in the CH-C-2 weld, even after accounting for projected crack

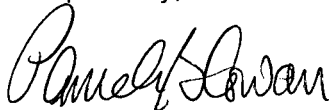
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growth for the life of the plant including license renewal (60 total years), is acceptable for continued operation in as-is condition.

If you have any questions concerning this letter, please contact Tom Loomis (610-765-5510).

Respectfully,



Pamela B. Cowan
Director – Licensing & Regulatory Affairs
Exelon Generation Company, LLC

- Attachments: 1) "Evaluation of Indication in Peach Bottom Unit 2 Vessel Closure Head Weld (CH-C-2)," Report Number 0000-0124-0988, September 2010
- 2) "The Evaluation of Indications in Peach Bottom Unit 2 Vessel Closure Head For Continued Operation," Report Number GE-NE-0000-0007-9747, September 2002

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