

## **NRR-PMDAPEm Resource**

---

**From:** Wiebe, Joel  
**Sent:** Thursday, January 29, 2015 5:09 PM  
**To:** Nrccorrespondence-braidwood@exeloncorp.com  
**Cc:** Dwi Murray  
**Subject:** RAI Regarding Pressure and Temperature Limits Reports (PTLRs), Braidwood Station, Units 1 and 2

Phil Raush,

By letter dated February 28, 2014, (ADAMS Accession No. ML1059A124), Exelon Generation (the licensee) provided "Pressure and Temperature Limits Reports (PTLRs), Braidwood Station, Units 1 and 2" to the U.S. Nuclear Regulatory Commission (NRC) staff in accordance with Technical Specifications 5.6.6 for Braidwood Station, Units 1 and 2. Additional information is required to complete our review of this information.

### Regulatory Basis

Title 10 of the Code of Federal Regulations (10 CFR) Part 50, Appendix G requires that pressure-temperature (P-T) limits be developed to bound all ferritic materials in the reactor vessel (RV). Further, Sections I and IV.A of 10 CFR Part 50, Appendix G specify that all ferritic reactor coolant pressure boundary (RCPB) components outside of the RV must meet the applicable requirements of American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code), Section III, "Rules for Construction of Nuclear Facility Components."

As clarified in Regulatory Information Summary (RIS) 2014-11, "Information on Licensing Applications for Fracture Toughness Requirements for Ferritic Reactor Coolant Pressure Boundary Components" (ADAMS Accession No. ML14149A165), reactor vessel materials with the highest reference temperature may not always produce the most limiting P-T limits because the consideration of stress levels from structural discontinuities (such as nozzles) may produce a lower allowable pressure.

### RAI

Describe how the P-T limit curves for Braidwood Units 1 and 2 consider all ferritic pressure boundary components of the reactor vessel that are predicted to experience a neutron fluence exposure greater than  $1 \times 10^{17}$  n/cm<sup>2</sup> (E > 1 MeV) at the end of the licensed operating period.

If the current P-T limit curves do not consider all ferritic pressure boundary components of the reactor vessel that are predicted to experience a neutron fluence exposure greater than  $1 \times 10^{17}$  n/cm<sup>2</sup> (E > 1 MeV) at the end of the licensed operating period, provide appropriately revised P-T limit curves to the NRC as required by Technical Specification 5.6.6.

A response is requested by March 2, 2015. If you have any questions regarding this matter, contact Joel S. Wiebe at 301-415-6606 or by e-mail to [Joel.Wiebe@nrc.gov](mailto:Joel.Wiebe@nrc.gov).

**Hearing Identifier:** NRR\_PMDA  
**Email Number:** 1841

**Mail Envelope Properties** (1A97AE0578A58B46BC77AA0B5DBD720201249964B4B6)

**Subject:** RAI Regarding Pressure and Temperature Limits Reports (PTLRs), Braidwood Station, Units 1 and 2  
**Sent Date:** 1/29/2015 5:09:01 PM  
**Received Date:** 1/29/2015 5:09:00 PM  
**From:** Wiebe, Joel

**Created By:** Joel.Wiebe@nrc.gov

**Recipients:**  
"Dwi Murray" <Putri.Kusumawatimurray@exeloncorp.com>  
Tracking Status: None  
"Nrccorrespondence-braidwood@exeloncorp.com" <Nrccorrespondence-braidwood@exeloncorp.com>  
Tracking Status: None

**Post Office:** HQCLSTR02.nrc.gov

<b>Files</b>	<b>Size</b>	<b>Date &amp; Time</b>
MESSAGE	2359	1/29/2015 5:09:00 PM

**Options**  
**Priority:** Standard  
**Return Notification:** No  
**Reply Requested:** No  
**Sensitivity:** Normal  
**Expiration Date:**  
**Recipients Received:**