

## **NRR-DMPSPeM Resource**

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**From:** Wiebe, Joel  
**Sent:** Tuesday, May 15, 2018 10:53 AM  
**To:** Lisa Simpson (Lisa.Simpson@exeloncorp.com)  
**Subject:** Preliminary RAIs for Braidwood Relief Request IR4-05

Lisa,

Preliminary RAIs are provided to ensure that the RAIs clearly articulate the needed information. If a clarification call is necessary, let me know by May 22, 2018. This RAI is specific to relief request I4R-05. RAIs, if any are needed, for the other relief requests submitted in your March 19, 2018, letter will be provided by separate correspondence.

Joel

By letter dated March 19, 2018, Exelon Generation Company, LLC (EGC, the licensee) requested relief from the requirements of the American Society of the Mechanical Engineers (ASME) Boiler and Pressure Vessel (BPV) Code for Braidwood Station, Units 1 and 2. The EGC proposed alternative, I4R-05, requests to eliminate the volumetric examination of the reactor pressure vessel (RPV) threads in flange (i.e., Category B-G-1 examinations) during the fourth inservice inspection (ISI) interval at Braidwood Station, Units 1 and 2. Pursuant to Title 10 of the Code of Federal Regulations (10 CFR) Part 50.55a(z)(1), EGC requested to use the proposed alternative on the basis that the alternative provides an acceptable level of quality and safety.

The NRC staff has determined that additional information is necessary to complete its review of proposed alternative I4R-05. The NRC staff's request for additional information (RAI) is provided below.

### **RAI-1 Condition Monitoring**

#### Background:

Exelon Generation Company, LLC (EGC) Letter RS-18-030 dated March 19, 2018, Attachment 5, Section 5, "Proposed Alternative and Basis for Use," states:

"To protect against non-service related degradation, Braidwood Station uses detailed procedures for the care and visual inspection of the RPV [reactor pressure vessel] studs and the threads in flange each time the RPV closure head is removed..... These controlled maintenance activities provide further assurance that degradation is detected and mitigated prior to returning the reactor to service."

Historically, the NRC staff has not authorized the elimination of the RPV threads in flange volumetric inspections for sequential 10-year ISI intervals. Additional information associated with the care and visual inspection activities is needed for the NRC staff to determine if there is reasonable assurance that RPV threads in flange degradation will be detected prior to returning the reactor to service each time the RPV closure head is removed.

#### Regulatory Basis:

EGC Letter RS-18-030 lacks sufficient information to justify that degradation of the RPV threads in flange will be detected and mitigated prior to returning the reactor to service each time the RPV closure head is removed during the fourth ISI interval if volumetric inspections are not performed. The licensee has not provided sufficient information about the care and visual inspection activities associated with the RPV closure head removal and installation to justify the elimination of the RPV threads in flange volumetric inspections for a consecutive 10-year ISI interval.

#### Request:

Address the following plant-specific items for the fourth ISI interval. The plant-specific responses are to consider the impact of stuck studs, missing studs, flange holes with bushings, and other unique flange-stud configurations, as applicable.

1. Provide a detailed description of the “care and visual inspections” performed on the RPV threads in flange and studs each time the RPV head is removed. Alternatively, provide the procedures that control the care and visual inspection activities.
2. Justify that the existing care and visual inspection activities will provide assurance that degradation of the RPV threads in flange is detected and mitigated prior returning the reactor to service each time the RPV closure head is removed during the fourth ISI interval if volumetric inspections are not performed.
3. Describe how the degradation of the RPV threads in flange will be mitigated if it is detected by the care and visual inspections.

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**Recipients:**  
"Lisa Simpson (Lisa.Simpson@exeloncorp.com)" <Lisa.Simpson@exeloncorp.com>  
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