

## **NRR-PMDAPEm Resource**

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**From:** George, Andrea  
**Sent:** Monday, April 21, 2014 11:05 AM  
**To:** 'Van Der Kamp, David (dvwande@nppd.com)'  
**Cc:** Sebrosky, Joseph; Sydnor, Christopher; Rosenberg, Stacey  
**Subject:** Request for Additional Information - License Renewal Core Hold-Down Bolts Commitment Review (TAC No. MF3557)  
**Attachments:** MF3557 RAI Followup.docx

Mr. Van De Kamp,

By letter dated January 16, 2012, and as supplemented by letters dated July 3, 2013 and October 1, 2013 (Agencywide Documents Access and Management System (ADAMS) Accession Nos. ML12031A248, ML13190A030, and ML13283A010, respectively), Nebraska Public Power District (NPPD, the licensee) submitted information pertaining to their fulfillment of a license renewal commitment regarding analysis of the core hold-down bolts at Cooper Nuclear Station.

The staff has reviewed the information provided and determined that a request for additional information (RAI) is required. The RAI is attached to this email.

During a phone call on April 21, 2014, it was agreed that Cooper Nuclear Station would respond to this RAI within 30 days, which is May 21, 2014.

Please let me know of any questions. I can be reached at 301-415-1081.

Thank you,

Andrea George, Project Manager  
Plant Licensing Branch IV-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation  
301-415-1081

**Hearing Identifier:** NRR\_PMDA  
**Email Number:** 1236

**Mail Envelope Properties** (Andrea.George@nrc.gov20140421110500)

**Subject:** Request for Additional Information - License Renewal Core Hold-Down Bolts  
Commitment Review (TAC No. MF3557)  
**Sent Date:** 4/21/2014 11:05:01 AM  
**Received Date:** 4/21/2014 11:05:00 AM  
**From:** George, Andrea

**Created By:** Andrea.George@nrc.gov

**Recipients:**

"Sebrosky, Joseph" <Joseph.Sebrosky@nrc.gov>  
Tracking Status: None  
"Sydnor, Christopher" <Christopher.Sydnor@nrc.gov>  
Tracking Status: None  
"Rosenberg, Stacey" <Stacey.Rosenberg@nrc.gov>  
Tracking Status: None  
"Van Der Kamp, David (dwvande@nppd.com)" <dwvande@nppd.com>  
Tracking Status: None

**Post Office:**

<b>Files</b>	<b>Size</b>	<b>Date &amp; Time</b>
MESSAGE	1068	4/21/2014 11:05:00 AM
MF3557 RAI Followup.docx		23928

**Options**

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

FOLLOW-UP REQUEST FOR ADDITIONAL INFORMATION REGARDING  
FULFILLMENT OF LICENSE RENEWAL COMMITMENT NO. NLS2009100-1, REVISION 1  
FOR THE CORE PLATE HOLD-DOWN BOLTS AT COOPER NUCLEAR STATION  
NEBRASKA PUBLIC POWER DISTRICT  
DOCKET NO. 50-298  
TAC NO. MF3557

By letter dated October 1, 2013 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML13283A010), Nebraska Public Power District (NPPD, the licensee) revised its commitment related to inspections of the core plate hold-down bolts at Cooper Nuclear Station to state the following:

Until the NRC endorses the revised inspection guidance of BWRVIP-25, ["BWR Vessel and Internals Project, BWR Core Plate Inspection and Flaw Evaluation Guidelines," December 1996,] NPPD will perform VT-3 inspections on the top side of a 50 percent sample of the Core Plate Hold Down Bolts every other refueling outage.

Based on its review of the above inspection plan, the staff has determined that additional information is needed to make a determination regarding the adequacy of performing a VT-3 visual examination of 50 percent of the core plate hold-down bolts every other refueling outage. The staff notes that its approval of this same inspection plan for the core plate hold-down bolts at Vermont Yankee Nuclear Power Station (VYNPS) was based, in part, on its determination that the licensee adequately demonstrated that their core plate hold-down bolts would have a low susceptibility to intergranular stress corrosion cracking (IGSCC). This determination is documented in Section 3.2.2 the staff's March 28, 2012 safety evaluation for the VYNPS core plate hold-down bolt inspection plan and stress analysis (ADAMS Accession No. ML120760152). The staff's determination regarding IGSCC susceptibility at VYNPS was based on the fact that the VYNPS core plate hold-down bolts are not sensitized, the bolts were procured to a specification prohibiting cold forming operations after solution heat treatment, and there were no instances of stress corrosion cracking (SCC) of these bolts in the boiling water reactor (BWR) fleet at that time.

The staff will need to evaluate plant-specific information regarding the IGSCC susceptibility of these bolts in order to determine whether a VT-3 visual examination of 50 percent of the core plate hold-down bolts every other refueling outage is an acceptable inspection strategy for Cooper Nuclear Station. Therefore, please provide information regarding the fabrication practices (i.e., sensitization, cold working of the material before or after solution heat treatment, etc.) for the core plate hold-down bolts at Cooper Nuclear Station, as they relate to IGSCC susceptibility. Additionally, please indicate whether any instances of SCC have been observed for these bolts at Cooper Nuclear Station or other U.S. BWRs, based on operating experience in the domestic BWR fleet to date.

ENCLOSURE