

## Davis-BesseNPEm Resource

---

**From:** CuadradoDeJesus, Samuel  
**Sent:** Wednesday, August 03, 2011 5:09 PM  
**To:** 'custerc@firstenergycorp.com'  
**Cc:** dorts@firstenergycorp.com  
**Subject:** FW: Draft RAI 3.1.2.2-3  
**Attachments:** DB DRAI 3 1 2 2-3 v8 8-2-2011.docx

Cliff:

Our staff made some changes to our draft RAI 3.1.2.2-3. The original version of this draft RAI was our final topic of discussion yesterday and we'll continue that discussion tomorrow. I know this is very short notice and for that reason I'll ask you to let me know if you prefer to only cover the portion we discussed yesterday or if it's ok to address the new version of the Draft RAI.

Regards,

**Hearing Identifier:** Davis\_BesseLicenseRenewal\_Saf\_NonPublic  
**Email Number:** 3110

**Mail Envelope Properties** (Samuel.CuadradoDeJesus@nrc.gov20110803170800)

**Subject:** FW: Draft RAI 3.1.2.2-3  
**Sent Date:** 8/3/2011 5:08:46 PM  
**Received Date:** 8/3/2011 5:08:00 PM  
**From:** CuadradoDeJesus, Samuel

**Created By:** Samuel.CuadradoDeJesus@nrc.gov

**Recipients:**

"dorts@firstenergycorp.com" <dorts@firstenergycorp.com>  
Tracking Status: None  
"custerc@firstenergycorp.com" <custerc@firstenergycorp.com>  
Tracking Status: None

**Post Office:**

<b>Files</b>	<b>Size</b>	<b>Date &amp; Time</b>
MESSAGE	429	8/3/2011 5:08:00 PM
DB DRAI 3 1 2 2-3 v8 8-2-2011.docx		36623

**Options**

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

### **DB D-RAI 3.1.2.2-3**

#### Background

In Request 3 of RAI 3.1.2.2-2 issued by letter dated June 21, 2011, the staff requested that the applicant describe the functional groups for the following two components that are addressed in LRA Table 3.1.2-2: (1) core support assembly (CSA) vent valve body, and (2) plenum cylinder reinforcing plate. The staff also requested that if existent, the applicant describe their link relationships (such as primary/expansion link) with other components. In addition, the applicant was requested to describe the inspection method, including the inspection frequency, for the components and the technical basis for the applicant's aging management methods.

In its response dated July 22, 2011, the applicant stated that in MRP-227, the reactor internals were assigned to one of the following four functional groups: Primary, Expansion, Existing Programs, and No Additional Measures components. The applicant also stated that the link relationships are consistent with that provided in Tables 4-1 and 4-4 of MRP-227, Rev. 0. The applicant further stated that the inspection frequency and method for the primary and expansion components are provided in Tables 4-1 and 4-4 of MRP-227, Rev. 0. In comparison, the revised LRA Table 3.1.2-2 in response to RAI 3.1.2.2-2 does not include an AMR item to manage loss of fracture toughness of the CASS CSA vent valve body and plenum cylinder reinforcing plate.

In its review, the staff noted that GALL Report, Rev. 2, item IV.B4.RP-382 recommends GALL AMP XI.M1, "ASME Section XI Inservice Inspection, Subsections IWB, IWC, and IWD," to manage cracking or loss of material due to wear of core support structure components; however, the LRA does not address this item. The staff also noted that Section 5.4.4 of the applicant's Technical Specifications requires that it should be verified by visual inspection every 24 months that the vent valve body exhibits no abnormal degradation. In addition, the staff noted that Section 3.2.3, Table 3-2 and Section 4 of Topical Report BAW-2248A, "Demonstration of the Management of Aging Effects for the Reactor Vessel Internals," indicate that reduction of fracture toughness due to thermal aging embrittlement is applicable to reactor vessel internal vent valve bodies.

In its review, the staff also noted that the revised LRA Table 3.1.2-2 submitted by letter dated July 22, 2011 does not address the following GALL Report Rev. 2 items: (1) items IV.B4.RP-236 and IV.B4.RP-237 for the components with no additional measures and (2) items IV.B4.RP-238 and IV.B4.RP-239 for the inaccessible locations of the reactor vessel internals.

#### Issue

In its response to RAI 3.1.2.2-2, the applicant indicated that the applicant's aging management methods for the plenum cylinder reinforcing plate and vent valve body are described in MRP-227 Tables 4-1 and 4-4. However, the staff noted that MRP-227 Tables 4-1 and 4-4 referenced in the applicant's response do not clearly address information regarding (1) the functional

groups, (2) the link relationships, or (3) the inspection method, including the frequency, specified for the CSA vent valve body and plenum cylinder reinforcing plate. In addition, the revised LRA Table 3.1.2-2 in response to RAI 3.1.2.2-2 does not address an AMR line item to manage loss of fracture toughness of these CASS components.

In its review, the staff also found a need to clarify the following items: (1) why LRA Table 3.1.2-2 does not address GALL Report, Rev. 2, items IV.B4.RP-382, IV.B4.RP-236, IV.B4.RP-237, IV.B4.RP-238 and IV.B4.RP-239, (2) whether or not GALL Report, Rev. 2, item IV.B4.RP-382 is applicable to the plenum cylinder reinforcing plate and vent valve body, and (3) why LRA Table 3.1.2-2 does not address an AMR item for aging management of loss of fracture toughness of the vent valve body even though applicant's Technical Specifications require visual inspections of the component to ensure no abnormal degradation and Topical Report BAW-2248A indicates that reduction of fracture toughness due to thermal aging embrittlement is applicable to reactor vessel internal vent valve bodies.

### Request

1. Provide the justification as to why LRA Table 3.1.2-2 does not address the following GALL Report items for the components with no additional measures and inaccessible areas: GALL Report items IV.B4.RP-236, IV.B4.RP-237, IV.B4.RP-238 and IV.B4.RP-239

In addition, describe the applicant's operating experience to clarify whether or not the accessible areas of the applicant's Primary and Expansion components have indicated aging effects that need management.

2. Provide the justification as to why LRA Table 3.1.2-2 does not address GALL Report, Rev. 2, item IV.B4.RP-382 that recommends GALL AMP XI.M1, "ASME Section XI Inservice Inspection, Subsections IWB, IWC, and IWD," to manage cracking or loss of material of core support structure. In addition, clarify whether or not this item for the core support structure is applicable to the plenum cylinder reinforcing plate and vent valve body.
3. Provide the justification as to why LRA Table 3.1.2-2 does not address an AMR item to manage loss of fracture toughness of the CASS vent valve body even though applicant's Technical Specifications require visual inspections of the component to ensure no abnormal degradation and Topical Report BAW-2248A indicates that reduction of fracture toughness is applicable to the internal valve bodies.
4. Provide the information regarding (1) the functional groups, (2) the link relationships (if existent) and (3) the inspection method including the frequency used to manage loss of fracture toughness of the CSA vent valve body and plenum cylinder reinforcing plate. As part of the response, provide the technical basis to demonstrate that these applicant's aging management methods are adequate to manage loss of fracture toughness of the components.

If the functional group of the component is Existing Programs or No Additional Measures group, provide the method and frequency of the existing inspections specified for the CASS components.