

## Davis-BesseNPEm Resource

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**From:** CuadradoDeJesus, Samuel  
**Sent:** Monday, July 11, 2011 8:49 AM  
**To:** 'custer@firstenergycorp.com'  
**Cc:** 'dorts@firstenergycorp.com'  
**Subject:** Davis Besse valve RAI  
**Attachments:** New DRAI from Yogen Garud on Non-Class 1 Valves 07-08-11 - oyee.docx

Cliff:  
Attached is the D-RAI

**Hearing Identifier:** Davis\_BesseLicenseRenewal\_Saf\_NonPublic  
**Email Number:** 2888

**Mail Envelope Properties** (Samuel.CuadradoDeJesus@nrc.gov20110711084900)

**Subject:** Davis Besse valve RAI  
**Sent Date:** 7/11/2011 8:49:19 AM  
**Received Date:** 7/11/2011 8:49:00 AM  
**From:** CuadradoDeJesus, Samuel

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

**Recipients:**  
"dorts@firstenergycorp.com" <dorts@firstenergycorp.com>  
Tracking Status: None  
"custer@firstenergycorp.com" <custer@firstenergycorp.com>  
Tracking Status: None

**Post Office:**

Files	Size	Date & Time	
MESSAGE	33	7/11/2011 8:49:00 AM	
New DRAI from Yogen Garud on Non-Class 1 Valves 07-08-11 - oyee.docx			27340

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

**DRAI 4.3.2.3.2-X or 4.3.3.2-X (Ching to decide on the SER section and number for issuing this RAI)**

**Background:** ~~The LRA Section 4.3.2.3.2 deals with~~discusses the fatigue of Class 1 (Class A) valves of the reactor coolant pressure boundary (RCPB). ~~The applicant states~~It states that a review of Davis-Besse quality assurance records was performed, ~~which that~~resulted in ~~identifying locating~~stress reports of record for ~~twelve~~12 Class 1 valves with four inch or greater diameter, ~~however but~~no associated fatigue analyses were identified. The LRA Section 4.3.2.3.2 also ~~states~~notes that "valve bodies were considered robust compared to the piping system in which they were located and fatigue of the attached piping was understood to bound the fatigue of the valve bodies." Therefore, ~~in the LRA Table 4.1-1, the applicant~~states that fatigue of Class 1 valves is not a TLAA. The staff reviewed the applicant's ~~USAR~~CLB relevant to ~~the RCPB Class 1 valves~~to identify the applicable design Code of record for these valves, but could not ascertain the applicable design code(s).

However, the staff noted that the Davis-Besse USAR Table 5.2-1 states that relief valves and pressurizer safety valves were designed to ASME draft pump and valve Code, Nov. 1968 Edition, loop isolation valves and other valves were designed to ASME Section III, 1971 Edition or later, pressurizer pilot-operated relief isolation valve designed to ASME Section III 1974 Edition with Addenda through Summer 1976, and pressurizer spray line isolation valve designed to ASME Section III, 1986 Edition. The staff noted that valves designed to these Codes, and having larger than 4 in. nominal pipe size, are to meet the requirements of NB-3530 through NB-3550 (or Article 4 of 1968 Edition of Draft Pump and Valve Code), and that adequacy of the valves for cyclic conditions is verified in accordance with Subsection NB-3553 (or Sub-article 454 of 1968 edition of draft pump and valve Code), which requires fatigue usage I<sub>c</sub> to be less than 1.0. It was unclear to the staff why the fatigue analyses of Class 1 valves were not performed as required by the design Code of record and, as such, why the Class 1 valves are identified in the LRA as not requiring fatigue TLAA for the extended period of operation.

~~In a~~By letter dated May 2, 2011, the staff issued RAI 4.1-1 (ML111170204) ~~requesting the applicant to identify the applicable design codes for, Request 1 — Parts A and B, Requests 2, 3, and 4 pertaining to the fatigue of various~~Class 1 valves, ~~relative to the design codes applicable to these valves, requesting the applicant to~~justify why the fatigue ~~analyses~~analyses were not required, or ~~else~~, why these analyses were not included in the LRA as TLAA's.

By teleconference dated June 16, 2011 the staff discussed the absence of TLAA for Class 1 fatigue valves in relation to the above issued RAI 4.1-1 ~~(ML111170204)~~and ~~also~~noted that the USAR refers to a few Class 2/3 valves as being analyzed for Class 1. The applicant stated that the handling of the Class 2 and 3 valves that were analyzed to Class 1 design criteria was addressed in LRA Section 4.3.2.3.2 but stated that it will address both these valve sets, as part of its RAI 4.1-1 response, ~~still to be issued, for the potential TLAA identification as requested under staff's RAI 4.1-1, but needs more time to respond.~~ The staff agreed to time extension for this response from the applicant.

**Issue:** In light of the ~~original~~issues ~~concerning the fatigue of Class 1 valves, as detailed~~discussed in RAI 4.1-1 ~~(ML111170204, dated May 2, 2011)~~, and similar issues with ~~regard to these~~Class 2/3 valves treated as Class 1 for design analysis, the staff ~~seeks~~requires ~~additional~~the information ~~under RAI 4.1-1, requesting the applicant to justify why the fatigue analyses were not required, or else, why these analyses were not included in the LRA as TLAA's for all the applicable valves.~~

**Comment [OYee1]:** USAR or UFSAR?

**Comment [OYee2]:** Specific documents? CLB is very broad and general.

Do you mean USAR?

**Comment [OYee3]:** Is all of this needed? Was all of this asked in RAI 4.1-1?

If it was I would suggest deleting it because it does not add any value. You can just reference the previous RAI.

**Comment [OYee4]:** Can we say this?

**Comment [OYee5]:** This is just repeating the request.

**Request:** ~~In light of your responses to RAI 4.1-1, Request 1, Parts A and B; Request 2; Request 3; and Request 4, clarify which of the Code Class 2 or Code Class 3 valves at were analyzed to Class 1 valve design requirements. Justify your the bases~~ for concluding that the LRA does not need to identify any TLAA's for the Davis Besse Class 2 and 3 valves that were analyzed to Class 1 design requirements.

**Comment [OYee6]:** This is repeating the issue.