

## Davis-BesseNPEM Resource

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**From:** CuadradoDeJesus, Samuel  
**Sent:** Thursday, July 07, 2011 10:06 AM  
**To:** Doult, Clifford; 'dorts@firstenergycorp.com'  
**Subject:** FW:  
**Attachments:** DB AMR RAI TRP 79 Elastomers - External Manipulation- Holston Internal removed.docx

Cliff and Steve:

FYI see attached. Bill caught some minor errors on his RAI 3.3.2.2.5-2 (follow up to RAI 3.3.2.2.5-1).

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**From:** Holston, William  
**Sent:** Tuesday, July 05, 2011 6:44 AM  
**To:** CuadradoDeJesus, Samuel  
**Subject:** RE:

I caught two minor typos in the RAI. Please use this copy instead. I used Word track changes to show the errors. Bill

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**From:** CuadradoDeJesus, Samuel  
**Sent:** Friday, July 01, 2011 2:29 PM  
**To:** [custer@firstenergycorp.com](mailto:custer@firstenergycorp.com); 'dorts@firstenergycorp.com'  
**Cc:** Holston, William; Wise, John; Kichline, Michelle; Todd Mintz  
**Subject:**

Cliff and Steve:

Attached are the following D-RAIs.

RAI #	Reviewer
RAI 3.2.2.2.3.6-2 (follow up to 3.2.2.2.3.6-1)	JWise MKichline TMintz
3.3.2.2.5-2 (follow up to RAI 3.3.2.2.5-1)	BHolston
3.3.1.49-2 (follow up to RAI 3.3.1.49-1)	JWise MKichline

I'll be out next Tuesday but I'll be preparing a formal RAI letter to issue this asap. Let me know if you guys have any questions.

Regards,  
**Samuel Cuadrado de Jesús**  
Project Manager  
Projects Branch1  
Division of License Renewal  
U.S. Nuclear Regulatory Commission  
Phone: 301-415-2946  
[Samuel.CuadradoDeJesus@nrc.gov](mailto:Samuel.CuadradoDeJesus@nrc.gov)

**Hearing Identifier:** Davis\_BesseLicenseRenewal\_Saf\_NonPublic  
**Email Number:** 2763

**Mail Envelope Properties** (Samuel.CuadradoDeJesus@nrc.gov20110707100500)

**Subject:** FW:  
**Sent Date:** 7/7/2011 10:05:57 AM  
**Received Date:** 7/7/2011 10:05:00 AM  
**From:** CuadradoDeJesus, Samuel

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

**Recipients:**

"Doutt, Clifford" <Clifford.Doutt@nrc.gov>  
Tracking Status: None  
"dorts@firstenergycorp.com" <dorts@firstenergycorp.com>  
Tracking Status: None

**Post Office:**

Files	Size	Date & Time
MESSAGE	1310	7/7/2011 10:05:00 AM
DB AMR RAI TRP 79 Elastomers - External Manipulation- Holston Internal removed.docx		
22368		

**Options**

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

## DBNPS RAI TRAP 79 AMR - Elastomers

### RAI 3.3.2.2.5-21A

#### Background

In its response to RAI 3.3.2.2.5-1, dated May 24, 2011, regarding aging management of elastomeric components the applicant developed a new plant-specific Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Program; however, the applicant did not revise the External Surfaces Monitoring Program to include physical manipulation of the external surfaces of elastomers. The amended LRA contains elastomeric components exposed to air-indoor uncontrolled (external) environment in Tables 3.2.2-1 and 3.3.2-1, 6, 12, 13, 14, 15, 21, and 30.

The GALL Report Revision 2, recommends that elastomeric materials exposed to air-indoor uncontrolled (external) be managed for hardening and loss of strength by GALL Report AMP XI.M36, "External Surfaces Monitoring of Mechanical Components". GALL Report AMP XI.M36 recommends that elastomeric materials be physically manipulated during inspections to detect hardening and loss of strength and that the manipulation should include 10 percent of the available surface area.

The GALL Report Revision 2 recommends that elastomeric materials exposed to raw water be managed by GALL Report AMP XI.M20, "Open-Cycle Cooling Water System" which states that elastomeric components be periodically examined consistent with the examinations described in GALL Report AMP XI.M38. The staff noted that the applicant revised its LRA AMR line items addressing elastomeric materials exposed to raw water to be managed for hardening and loss of strength by a newly-developed plant-specific Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Program.

#### Issue

The staff agrees with the applicant's position that elastomeric components exposed to an air-indoor uncontrolled (internal) environment be managed by the Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Program for hardening and loss of strength. However, for elastomeric components exposed to an air-indoor uncontrolled (external environment), the GALL Report recommends that the components be periodically inspected using a physical manipulation method. In addition, the applicant should state the minimum available surface area that will be manipulated during inspections when utilizing the External Surfaces Monitoring Program.

The staff does not agree that elastomeric components exposed to raw water can be adequately managed for hardening and loss of strength by the plant-specific Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Program because it is opportunistic and therefore may not ensure periodic inspections of elastomeric material are conducted. The staff believes periodic inspections are necessary due to the changing nature of raw water environments.

#### Request

- a.) Revise the External Surfaces Monitoring Program to include physical manipulation of elastomeric materials and, or:
  - i. state how it would be effective at determining if hardening or loss of strength has occurred in the absence of physical manipulation, or

## DBNPS RAI TRAP 79 AMR - Elastomers

- ii. propose a periodic inspection program that will physically manipulate elastomeric components.
- b.) Propose a periodic inspection program which includes physical manipulation of elastomeric components exposed to raw water, or state why periodic inspections are not necessary to adequately detect hardening and loss of strength in these materials.
- c.) State the minimum available surface area that will be manipulated during inspections of elastomeric materials. If the minimum available surface area that will be manipulated during inspections of elastomeric materials is less than 10 percent, state the basis for how the inspection will sufficiently identify the hardening and loss of strength aging effects