

NRR-PMDAPem Resource

From: Mathews, Mitchel A:(GenCo-Nuc) <Mitchel.Mathews@exeloncorp.com>
Sent: Thursday, March 03, 2016 10:33 AM
To: Haskell, Russell
Subject: [External_Sender] FW: Dresden & Quad Cities Fuel Transition LAR RAI Response Clarification Call

Russ,

I think your summary aligns well with mine. Please see the list of attendees below.

Regards,

Mitch

Mitchel Mathews
Sr. Regulatory Engineer
Exelon Nuclear - Corporate Licensing

4300 Winfield Road – 4th Floor
Warrenville, IL 60555
Office: 630-657-2819 | Fax: 630-657-4327
Mitchel.Mathews@exeloncorp.com | www.exeloncorp.com

From: Mathews, Mitchel A:(GenCo-Nuc)
Sent: Wednesday, March 02, 2016 3:52 PM
To: Byam, Timothy A:(GenCo-Nuc); Nicely, Ken M.:(GenCo-Nuc); Reitmeyer, Michael:(GenCo-Nuc); Close, Robert S:(GenCo-Nuc); GALIOTO Tom (AREVA); 'WILL Tony (AREVA)'; 'CARR Darrell (AREVA)'; 'RILEY Earl (AREVA)'; Youssefnia, M Hossein:(GenCo-Nuc); Wong, Annie W:(GenCo-Nuc); Henning, Brian P:(GenCo-Nuc); Hsiao, Ming-yuan:(GenCo-Nuc); De Graaf, Brandon Michael:(GenCo-Nuc); Priaulx, Michael E:(GenCo-Nuc); Baxa III, George:(GenCo-Nuc); Luebbe, Rachel A:(GenCo-Nuc); Wise, Douglas J:(GenCo-Nuc); McVey, Edward A:(GenCo-Nuc); Simpson, Patrick R.:(GenCo-Nuc)
Subject: RE: Dresden & Quad Cities Fuel Transition LAR RAI Response Clarification Call

To all,

Here is a summary of our teleconference with the NRC to align our understanding on our January 28, 2016, response to NRC RAIs. AREVA, please review each RAI listed below to validate the information I captured. Please provide additional details regarding the references as agreed to on the call with the NRC at your earliest convenience.

Additionally for the AREVA team, please provide a schedule regarding when you will be able to provide a description of how the OPTIMA2 and AREVA 10XM assembly-specific information is developed and applied as input to core monitoring programs as discussed in RAI-18 and 18a.2 below. Please account for the inclusion of proprietary and non-proprietary responses and the accompanying affidavit, if necessary:

[March 2, 2016, teleconference with NRC to Discuss D/Q Response to NRC RAIs for Transition to AREVA ATRIUM 10XM Fuel, dated January 28, 2016](#)

On the teleconference were:

NRC

Justin Poole– NRR Branch Chief for Dresden and Quad Cities
Mathew Panicker – NRC technical reviewer
Russell Haskell – NRR Project Manager for Dresden

AREVA

Darrell Carr
Jason Medina
Tom Galioto
Earl Riley
Ralph Grummer
Alan Meginnis
Corey Long
Tony Will

Exelon

Robert Close – Nuclear Fuels
Rachel Luebbe – Quad Cities Regulatory Assurance
Ming Hsiao – Nuclear Fuels
Annie Wong – Nuclear Fuels Safety Analysis
Hossein Youssefnia – Nuclear Fuels Safety Analysis
George Baxa – Dresden Regulatory Assurance
Brian Henning – Nuclear Fuels
Mitch Mathews – Corporate Licensing

NRC Need for Clarification Regarding RAI-16 Response –

Action Required - Exelon/AREVA - Review St. Lucie, Unit 2 response to similar question for level of detail that reviewer is looking for.

TAC MF5494 – Document Date 10/2/2015- Docket No. 50-389

NRC Need for Clarification Regarding RAI-17 Response – NRC is looking for greater detail regarding the tests and analyses that were performed. Can we shed more light on the how and the why the specific tests were selected and performed. What is done when fluence is outside the range of acceptance criteria in the database? Brunswick and Browns Ferry have Operating License Conditions to address this issue.

Action Required –AREVA Reconcile references via email - ANP 3338-P, Section 5 discusses what is done if channel bow fluence gradients are outside of the database range.

NRC Need for Clarification Regarding RAI 18 Response – Table 18.1 of the response shows that the OPTIMA2 and ATRIUM 10XM assemblies have very different flow characteristics (as shown by the differences in pressure and inlet subcooling). The NRC wants to know how Exelon will manage/track flow dynamics and Critical Heat Flux in mixed cores.

Action Required – Exelon/AREVA -Provide supplemental information on the docket that describes how assembly-specific information is developed and applied as input to core monitoring programs for use during operations with mixed cores.

NRC Need for Clarification Regarding RAI 18a.1 Response – What procedure/methodology/approach was used to develop the additive constants?

Action Required AREVA clarify references via email - Procedure for OPTIMA2 and ATRIUM 10XM is the same. EMF-2209, Section 2.3.6 discusses additive constants and EMF-2245 describes the derivation of the uncertainties for the additive constants.

NRC Need for Clarification Regarding RAI 18a.2 Response – Please highlight/elaborate on the guidance used in defining the impact on the safety limit minimum CPR determination.

Action Required – If not previously docketed – Exelon/AREVA - Provide supplemental information on the docket that describes how assembly-specific information is derived and applied as input to core monitoring programs for use during operations with mixed cores. This information could be covered in upcoming AREVA methodology audit, if necessary.

NRC Need for Clarification Regarding RAI 21b Response – Please provide additional details on how the quadratic Lagrangian interpolation methodology was applied in this analysis. How is quadratic Lagrangian interpolation applied to void fraction/ void history cross sections?

Action Required AREVA clarify references - ANP-1833, Section XXX describes this methodology. Referenced in ANP-2158

Regards,

Mitch

Mitchel Mathews
Sr. Regulatory Engineer
Exelon Nuclear - Corporate Licensing

4300 Winfield Road – 4th Floor
Warrenville, IL 60555
Office: 630-657-2819 | Fax: 630-657-4327
Mitchel.Mathews@exeloncorp.com | www.exeloncorp.com

-----Original Appointment-----

From: Byam, Timothy A:(GenCo-Nuc)

Sent: Friday, February 26, 2016 12:48 PM

To: Byam, Timothy A:(GenCo-Nuc); Mathews, Mitchel A:(GenCo-Nuc); Nicely, Ken M.:(GenCo-Nuc); Haskell, Russell; Reitmeyer, Michael:(GenCo-Nuc); Close, Robert S:(GenCo-Nuc); GALIOTO Tom (AREVA); 'WILL Tony (AREVA)'; 'CARR Darrell (AREVA)'; 'RILEY Earl (AREVA)'; Youssefnia, M Hossein:(GenCo-Nuc); Wong, Annie W:(GenCo-Nuc); Henning, Brian P:(GenCo-Nuc); Hsiao, Ming-yuan:(GenCo-Nuc); De Graaf, Brandon Michael:(GenCo-Nuc); Prialux, Michael E:(GenCo-Nuc); Baxa III, George:(GenCo-Nuc); Luebbe, Rachel A:(GenCo-Nuc); Wise, Douglas J:(GenCo-Nuc); McVey, Edward A:(GenCo-Nuc); Simpson, Patrick R.:(GenCo-Nuc)

Subject: Dresden & Quad Cities Fuel Transition LAR RAI Response Clarification Call

When: Wednesday, March 02, 2016 1:00 PM-2:00 PM (UTC-06:00) Central Time (US & Canada).

Where: Conference Call In Number : 1-855-723-8900 / ID: 1078973# / Leader PIN: 110492#

This call was requested by the NRC to obtain clarification on several RAI responses we provided in our letter dated January 28, 2016. The reviewers are looking for clarification on our responses to the following RAIs:

RAI 16
RAI 17
RAI 18a and b
RAI 21b

The responses to these 4 questions can be found in Attachment 2 to the referenced letter. A copy of the letter is attached for your information. Please note that this document does contain proprietary information.

<< File: RS-16-018 (Proprietary).pdf >>

This Email message and any attachment may contain information that is proprietary, legally privileged, confidential and/or subject to copyright belonging to Exelon Corporation or its affiliates ("Exelon"). This Email is intended solely for the use of the person(s) to which it is addressed. If you are not an intended recipient, or the employee or agent responsible for delivery of this Email to the intended recipient(s), you are hereby notified that any dissemination, distribution or copying of this Email is strictly prohibited. If you have received this message in error, please immediately notify the sender and permanently delete this Email and any copies. Exelon policies expressly prohibit employees from making defamatory or offensive statements and infringing any copyright or any other legal right by Email communication. Exelon will not accept any liability in respect of such communications. -EXCIP

Hearing Identifier: NRR_PMDA
Email Number: 2732

Mail Envelope Properties (9D2506E4CE18A94FA8B424C24804ACB401F87465)

Subject: [External_Sender] FW: Dresden & Quad Cities Fuel Transition LAR RAI
Response Clarification Call
Sent Date: 3/3/2016 10:32:43 AM
Received Date: 3/3/2016 10:32:53 AM
From: Mathews, Mitchel A:(GenCo-Nuc)

Created By: Mitchel.Mathews@exeloncorp.com

Recipients:
"Haskell, Russell" <Russell.Haskell@nrc.gov>
Tracking Status: None

Post Office: EXCHM-CCC-23.exelonds.com

Files	Size	Date & Time
MESSAGE	8147	3/3/2016 10:32:53 AM

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