

ArevaEPRDCPEm Resource

From: Miernicki, Michael
Sent: Friday, October 25, 2013 8:19 AM
To: ArevaEPRDCPEm Resource
Subject: FW: Writeup on Issue with regard to Final Response to RAI 587, Q 3.7.2-79
Attachments: Issue Related to Final Response to RAI 587 Q 3.7.2-79.docx

Michael J. Miernicki
Sr. Project Manager
NRC/NRO/DNRL/LB1
301-415-2304

From: Miernicki, Michael
Sent: Friday, October 25, 2013 8:18 AM
To: 'Nathan.Hottle@areva.com'
Cc: Gleaves, Bill
Subject: FW: Writeup on Issue with regard to Final Response to RAI 587, Q 3.7.2-79

Nathan, attached are NRC staff talking points for the Public Meeting/Telecon on 11/4 at 1pm.

Mike

Michael J. Miernicki
Sr. Project Manager
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301-415-2304

From: Thomas, George
Sent: Thursday, October 24, 2013 10:12 PM
To: Miernicki, Michael
Cc: David Foster; Xu, Jim
Subject: Writeup on Issue with regard to Final Response to RAI 587, Q 3.7.2-79

Mike,

Attached is the requested writeup on RAI 587, Q 3.7.2-79 for discussion with AREVA on the public call on 11/4.

Thanks.
George

Hearing Identifier: AREVA_EPR_DC_RAIs
Email Number: 4712

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From: Miernicki, Michael

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Issue Related to Final Response to RAI 587, Question 03.07.02-79 for discussion with AREVA

The US EPR Tier 2 FSAR Revision 6 - interim markup for page 3.7-121 provided with the final response to RAI 587, Question 03.07.02-79, under the title "Overturning Analysis" includes, in part, the following:

"Bounding analysis cases, using the Table 3.7.1-6 soil cases, are performed for sliding and overturning using the model previously described to demonstrate that:

- The combination of rotational and translational displacements does not close the NI to NAB shake space resulting in structure-to-structure contact. A minimum safety factor of 3.0 is determined when flexural and shear stiffness of the NAB superstructure is reduced to 50%. A minimum safety factor of 2.4 is determined when flexural and shear stiffness of NAB superstructure is reduced to 50% as well as consideration of additional lateral movement of the NAB due to redistribution of high corner bearing pressure.
- Bearing pressure demands calculated at the concrete-to-soil interface are less than or equal to the calculated capacities using the principles of soil mechanics."

The statement in the **second bullet** above has been retained in the FSAR contrary to the feedback provided by staff on the Advanced Response to RAI 587, Question 03.07.02-79. This statement is not supported by the data provided with the response to RAI 370, Question 03.07.02-64.

Further, Item 2 of the response states, in part, that the analyses performed for design certification demonstrates that the bearing pressure is less than the minimum dynamic bearing capacity shown in U.S. EPR FSAR Tier 2, Table 2.1-1 using an analysis with non-linear soil properties as described in the Response to RAI 370, Question 03.07.02-64. The staff observes that FSAR Table 2.1-1 does not provide values of minimum dynamic bearing capacities calculated using principles of soil mechanics for the US EPR Table 3.7.1-6 soil cases. Table 2.1-1 provides only a statement of the requirement to be met by the bearing capacity.

The statement in the **second bullet above** can not be verified to be demonstrated based on data and information provided to staff and, therefore, not acceptable.