

From: Daegeun Ahn <daegeun.ahn@gmail.com>
Sent: Tuesday, January 16, 2018 12:12 PM
To: Ward, William
Cc: jiyong oh; 김윤호; JUNG HO KIM; Robert Sisk; Brown, Frederick; Ordaz, Vonna; Akstulewicz, Frank; Bradford, Anna; Monninger, John; Hayes, Michelle; McCoppin, Michael; Steckel, James; Sweeney, Robert; 김영기
Subject: [External_Sender] Re: Removal of PRA-based SMA insights from Chapter 19 SER and APR1400 design certification rule

Mike and Bill,

Thank you for your email. KHNP has reviewed the NRC position and would like to offer the following comments and propose an alternative approach. Based on the January 9th meeting, it is KHNP's understanding that the NRC NRO management has initiated the action necessary to remove the seismic margin analysis (SMA) insights from the scope of the APR1400 DCA review in order to maintain the 42 month schedule for the review of the design certification application.

This action would result in the SMA being specifically excluded from the rule certifying the APR1400 design when issued. Based on discussions with the NRC it is unclear to KHNP that this action would guarantee completion of the review within 42 months or any sooner than completing the SMA when taking into consideration the following:

- The time needed to revise the DCD to either remove the SMA from the DCA or update the SMA to more fully meet NRC expectation
- The Staff's need to review and concur with the DCD changes resulting from either change – removing SMA or revising SMA
- The Staff's need to reschedule the Phase 5 ACRS meeting for Chapter 19 to accommodate the required changes to Chapter 19 from April to a future date acceptable to the ACRS

In carving out the SMA from the DCD review, it is believed that the NRC staff may introduce some uncertainty regarding the process and schedule going forward. This uncertainty or risk would be the result of the Staff adopting a new process, and perhaps policy, regarding Part 52 which would have to be addressed and which may have the potential impact the 42 month schedule.

KHNP's current position is to retain the SMA in the APR1400 DCA/Certification review and maintain the original 42 month review. In support of KHNP's position, KHNP is applying all necessary resources to completing the SMA and has taken the necessary actions to revise and enhance its SMA analysis to be in line with NRC Staff expectations. These actions were identified in our recent meeting with the Staff, including:

- Applying methodology familiar to the NRC and improving the SMA model, adding seismic failure of BOP SSCs,
- Analyzing and presenting the results based on HCLPF
- Including insights of Random Failures and Operator Actions

We believe the revised SMA analysis can be completed and formally submitted by February 14 (as final). KHNP offers the following schedule for NRC planning:

- Draft results of the SMA rework to be completed by Jan 26 (placed in ERR)
- Draft responses to RAI 19-10, and 19-85 with DCD markups by Feb 2 (placed in ERR)
- Face to face meeting to walk through the SMA results and address preliminary/initial questions on Feb 6
- Establish prompt, frequent (and effective) communication to rapidly respond to NRC comments
- Locate APR1400 team's SME for SMA in WDCC, as necessary, to facilitate an efficient NRC review of the SMA
- Issue final RAI 19-10 and 19-85 with DCD mark ups by Feb 14
- ACRS subcommittee meeting on Chapter 19 on June 5 and full Committee meeting around July 11 (depending on ACRS schedule)

KHNP management has tentatively scheduled a meeting with the NRC management for January 17 or 18 (and January 23 or 24) to discuss the path forward with the inclusion of SMA in the APR1400 DCA review/certification. Please note that KHNP has begun the necessary actions to complete and submit this work on the time line above. Therefore KHNP requests that the SMA be included in the APR1400 DCA review and further request that the NRC support the proposed schedule. If ACRS can support the proposed schedule, then the APR1400 DCA review could be maintained within the 42 month schedule.

Please be assured KHNP recognizes the importance of "on time delivery" and a "complete and high quality response" to support this schedule. KHNP looks forward to meeting with the NRC to discuss our approach in greater details and will follow up with a formal letter from KHNP by January 24.

Best regards,

Tony

On Thu, Jan 11, 2018 at 6:05 PM, Ward, William <William.Ward@nrc.gov> wrote:

Mr. Daegeun Ahn,

Mr. Jiyong Oh,

On January 9, 2018, at the start of a public meeting with KHNP to discuss the APR1400 methodology for the assessment of the Probabilistic Risk Assessment (PRA)-based seismic margin analysis (SMA) insights, NRO management communicated that in order to maintain the 42-month schedule for the review of the design certification application, the PRA-based SMA insights will not be evaluated in the Chapter 19 Safety Evaluation Report. The PRA-based SMA insights will also be specifically excluded from the rule certifying the APR1400 design, if issued. This decision was based on the fact that KHNP has not yet provided information that appropriately supports its PRA-based SMA insights submittals. NRO management stated that no more meetings would be held with KHNP on the topic of the PRA-based SMA insights until after the Phase 4 milestone has been completed, due to the need to focus resources on other portions of the PRA review.

KHNP still needs to complete its DCD on APR1400 seismic capacity as discussed in SECY-93-0087 and the related SRM. To meet the 42-month schedule, KHNP must submit in a timely manner, all outstanding material identified in recent meetings as necessary for NRO to complete its review. The submitted material must be complete and correct such that it will not cause any further delays to the schedule. This includes any edits to the DCD to address the above statements regarding the PRA-based SMA insights, which must be submitted by February 16, 2018.

NRO management also communicated that if KHNP prefers that the PRA-based SMA insights be included in the SER and the design certification rule, then KHNP should send a letter to the NRC that: 1) acknowledges the submittals to date on this topic have not sufficiently addressed the issue, 2) describes how KHNP intends to resolve all open issues in a timely manner, and 3) states that KHNP is supportive of extending the 42-month review schedule in order to include this area in the certification. After receipt of the letter, the NRC will determine whether to revise the approach described above.

If you have any questions about this email, please contact me.

Respectfully,

William R. Ward, P.E.
APR1400 DCA Lead Project Manager
U.S. Nuclear Regulatory Commission
m/s O8-G9A

Washington, DC, 20555-0001
NRO/DNRL/Licensing Branch 2

ofc O8-H15
ofc [\(301\) 415-7038](tel:3014157038)

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Daegeun (Tony) Ahn
Director
KHNP Washington DC Center
8100 Boone Blvd Suite 620
Vienna, VA 22182
(O) 703-388-0592
(C) 571-216-5320,