

September 24, 2004

LICENSEE: Dominion Connecticut Nuclear, Inc.

FACILITY: Millstone Power Station, Units 2 and 3

SUBJECT: SUMMARY OF TELEPHONE CONFERENCE REGARDING SAMA ANALYSES CONDUCTED ON SEPTEMBER 13, 2004 WITH DOMINION CONNECTICUT NUCLEAR, INC. IN SUPPORT OF THE ENVIRONMENTAL REVIEW OF THE LICENSE RENEWAL APPLICATION FOR MILLSTONE POWER STATION UNITS 2 AND 3 (TAC NOS. MC1827 AND MC1828)

On September 13, 2004, the U.S. Nuclear Regulatory Commission (NRC) staff conducted a telephone conference with Dominion Connecticut Nuclear, Inc. (Dominion) regarding the severe accident mitigation alternatives (SAMA) analyses for license renewal at Millstone Power Station, Units 2 and 3 (Millstone). By letter dated June 22, 2004, the NRC staff sent requests for additional information (RAIs) to Dominion regarding the SAMA analyses for Millstone. By letter dated August 13, 2004, Dominion provided responses to the NRC staff's RAIs. The purpose of the telephone conference was to seek further clarification regarding several of Dominion's RAI responses so that the NRC staff can complete the review. On September 2, 2004, I sent Dominion an electronic message (email) providing a list of questions regarding these RAI responses to be used as an agenda for this telephone conference (Attachment 1) and Attachment 2 is the list of people who participated in the telephone conference.

Each of the questions was discussed, and Dominion explained the answer to each question. In addition, the staff asked Dominion to provide simple descriptions of the PRA model modifications in the response to RAI 7a instead of the event tree designations.

Dominion agreed to provide the answers to these clarification questions in an electronic message to me by the end of the week to support the schedule for drafting the draft supplemental environmental impact statement.

**/RAI/**

Richard L. Emch, Jr., Senior Project Manager  
Environmental Section  
License Renewal and Environmental Impacts Program  
Division of Regulatory Improvement Programs  
Office of Nuclear Reactor Regulation

Attachments: As stated

Docket Nos.: 50-336 and 50-423

cc: See next page

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On September 13, 2004, the U.S. Nuclear Regulatory Commission (NRC) staff conducted a telephone conference with Dominion Connecticut Nuclear, Inc. (Dominion) regarding the severe accident mitigation alternatives (SAMA) analyses for license renewal at Millstone Power Station, Units 2 and 3 (Millstone). By letter dated June 22, 2004, the NRC staff sent requests for additional information (RAIs) to Dominion regarding the SAMA analyses for Millstone. By letter dated August 13, 2004, Dominion provided responses to the NRC staff's RAIs. The purpose of the telephone conference was to seek further clarification regarding several of Dominion's RAI responses so that the NRC staff can complete the review. On September 2, 2004, I sent Dominion an electronic message (email) providing a list of questions regarding these RAI responses to be used as an agenda for this telephone conference (Attachment 1) and Attachment 2 is the list of people who participated in the telephone conference.

Each of the questions was discussed, and Dominion explained the answer to each question. In addition, the staff asked Dominion to provide simple descriptions of the PRA model modifications in the response to RAI 7a instead of the event tree designations.

Dominion provided the answers to these clarification questions in an electronic message to me on September 16, 2004. Attachment 3 is a copy of that electronic message.

**/RAI/**

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Dated: September 24, 2004

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## Questions on Responses to Millstone SAMA RAIs

1. (U2 & U3) Different revisions of the PRA were used for the identification of SAMAs and the quantification of benefits. The response to RAI 6a lists the highest importance basic events from the PRA used for SAMA identification (Rev. 2 for U2; 10/99 for U3) and the importance of the same basic events from the PRA used for quantification (Rev. 3 for U2; 10/02 for U3). Confirm that the highest importance events from the later PRA are included in the list. If not, identify those basic events and the SAMAs that address those events.
2. (U2) The response to RAI 1b (p. 5) mentions results of a PRA model more recent than the version used for SAMA quantification. Confirm the existence of this update, identify the major changes (models/assumptions and results/risk profile), and discuss any potential impact on the SAMA analysis.
3. (U2) Relative to peer review F&O AS-5 (Item A.2 in Table 2), confirm that manual control of AFW after loss of air or loss of DC is credited in the PRA. (For example, is success in manual AFW control included in the top success branch in the event tree provided in response to RAI 2c?) If so, what is the failure probability and its importance? Is unavailability of indications due to dependency on power considered in determining this HEP? How was the evaluation of SAMA 113 performed in response to RAI 6g (i.e., what events were revised)?
4. (U3) Relative to Level A peer review F&Os SY-4 and HR-1 (Items A.2 and A.3 in Table 2), please provide a more detailed discussion and support for the conclusion that the incorporation of model changes in response to this F&O will have a negligible impact on the SAMA analysis.
5. (U3) Relative to peer review F&O TH-8 (Item B.19 in Table 2), the impact in Table 2 says that the DWST will provide only 9 hours of water for the AFW pumps. Considering the high importance of the AFW system (the AFW is involved in 3 of the top 4 CDF sequences and the turbine driven AFW pump has a FV importance of 0.235), and the potential for a dependency between operator action to initiate bleed and feed, justify further why the failure to provide alternate sources of water for the AFW after the DWST is emptied has a negligible impact on the SAMA analysis.
6. (U3) The date provided for Rev. 4 is 10/99. The ER states that the WOG peer review took place in 9/99. What version of the PRA was used in the peer review? The ER implies that it was the version used for the SAMA analysis (10/99). Table G.2-1 indicates a 8/99 version, but this is not included in the response to RAI 1d. Please clarify.
7. (U2 & U3) The truncation value used has a significant impact on the CDF. Please provide the truncation values used for obtaining the CDFs given for U2 PRA Revisions 0, 1, and 2, and U3 PRA Revisions 0 (12/95), 2, and 3.
8. (U2 & U3) Of all of the PRA changes listed in response to RAI 1d, indicate which ones (1 or 2) were the major contributors to the changes in CDF from one revision to the next.

9. (U2) What is meant by the last sentence in the description of the Rev. 0 and Rev. 1 PRAs?
10. (U2) Describe the sequences identified as COOL in the response to RAI 1e.
11. (U3) Regarding the 10/02 revision of the PRA, the response to RAI 1e indicates a total CDF (excluding internal flooding) of  $2.57\text{E-}5$  with a truncation value of  $1\text{E-}11$ . The response to RAI 1d gives a value of  $2.04\text{E-}5$  with a truncation value of  $1\text{E-}9$ . The ER provides a value of  $2.88\text{E-}5$  and states that a truncation value of  $1\text{E-}11$  was used. Please explain.
12. (U2) The second paragraph of the response to RAI 1h states "The Level 2 portion of the IPE PRA for Millstone Unit 2 has not been updated but there has been some modifications of the individual bin definitions for consistency between the Unit 2 and Unit 3 PRAs." However, page E-F-23 of the ER states "Recent experimental results have shown that certain outcomes on the containment event tree are much less likely than previously thought. These changes were incorporated into the Level 2 model." These statements appear inconsistent. Please clarify and describe in more detail what was done.
13. (U2) An example of how the RC and PDS conversions were made, and how Table F.2-4 was generated would help explain some remaining confusion regarding the conversion process. Take new RC M6, for example. According to Table 1h-3 in the RAI responses, RC M6 is composed of IPE RCs E-LM-R and E-MH-R. In the IPE (Table 4.9-5 of the IPE), TLCH contributes 0.04% and 37.7% to these two RCs. However, in the revised PRA (Table F.2-4 of the ER) TLCH contributes 73.8% of RC M6. It is noted that a number of IPE PDSs are not included in Tables 1h-1 and F.2-4 (for example, TEHA, TEHB, and TEHC, which are the dominant PDS in the IPE. Where are they assigned and is this the source of the difference noted above?
14. (U3) Given that the original Table G.2-4 is incorrect (according to the response to RAI 2.c) and results in incorrect (but high) frequencies in several release categories, is the increase in CDF used in the cost benefit analysis also in error?

LIST OF PEOPLE PARTICIPATING  
IN THE SAMA TELEPHONE CONFERENCE  
MILLSTONE POWER STATION, UNITS 2 AND 3  
SEPTEMBER 13, 2004

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