

## 03/20/2020

TYPE OF CONVERSATION

☐ E-MAIL

☒ TELEPHONE

☐ INCOMING

☒ OUTGOING

DOCKET NUMBER(S)

71-9228

CONTROL NUMBER(S)

## GE-2000 Criticality Evaluation Discussion

NRC participants: Chris Allen, Drew Barto, Ken Armstrong and John McKirgan

The call began at approximately 11:30 A.M. After introductions, NRC staff asked a clarifying question about how the maximum uranium 235 mass limit of 1750 grams was determined. GEH explained how previous evaluations were expanded to evaluate the impact of rod height and pellet diameter in determining the maximum amount of uranium 235 authorized for shipment. NRC staff also inquired about the uncertainty associated with using square pitch experimental data to calculate the maximum reactivity for a triangular pitch array. GEH discussed the techniques employed in the criticality evaluations and how the uncertainty was applied. NRC staff pointed out that the code validation provided by GEH was not performed as described in the guidance and that the fuel enrichment for which GEH sought authorization exceeded the enrichment in the critical experiment data provided with the application. NRC staff outlined the options that GEH had for addressing the code validation issues which included following the guidance, finding additional experimental data or demonstrating that there was sufficient margin to deal with the uncertainties associated with their code to code validation. GEH asserted that a qualitative code to code comparison provides sufficient validation especially if the same cross section data was employed in both code versions. NRC staff responded that information about the cross sections used in the code to code comparison would assist staff in making a finding of reasonable assurance. GEH stated that they

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ACTION REQUIRED (IF ANY)

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Chris Allen

William C. Allen



## CONVERSATION RECORD (continued)

SUMMARY: (Continued from page 1)

would evaluate what SAR changes, if any, were needed and how the January 31, 2020 additional information request responses (ML20031C697) would be revised. The call concluded at approximately 12:15 P.M.