

***ACE/ATRIUM-10  
Meeting With U.S. NRC  
Response to Preliminary RAs  
Part 2***

***Ken Greene***

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## Statistical Issues RAI #1

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- 1. General topic: In this section, (Chapter 4), the statistical performance of the ACE correlation relative to the raw data is presented. However, no comparison(s) are made to those results of the SPCB-10 correlation statistics regarding overall correlation uncertainty, K-factor and additive constant values and uncertainties. I.e., Please provide a table (graph) displaying the statistical uncertainties associated with the ACE-correlation and the SPCB-10 correlation, K-factor and additive constant uncertainties.***

# ***Statistical Issues RAI #1***

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## Statistical Issues RAI #2

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2. *The first paragraph on page 4-6, the last sentence alludes to “optimizing” the correlation. Please clarify the statement.*

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> **“Optimizing” is used to describe the process for determination of the coefficients that are based on the experimental data contained in the defining data set.**

## Statistical Issues RAI #3

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3. *Please be prepared to discuss and provide additional information regarding the last paragraph on page 4-6.*

- > **Discuss during meeting**
- > **Question to be deleted.**

## Statistical Issues RAI #4

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4. *Please be prepared to discuss and provide additional information regarding Figure 4.8 on page 4-8.*

# Statistical Issues RAI #4

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## ***Statistical Issues RAI #4***

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## Statistical Issues RAI #5

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5. *On page 5-7, Section 5.3, the importance of ACE the correlation being able to [ ] discussed. It was demonstrated in chapters 4 and 5 that in a few cases the ACE correlation under and over predicts [ ] Discuss the impact of the under and over prediction on the overall correlation uncertainty.*

*In addition, please be prepared to discuss the first paragraph on the same page stated above.*

# ***Statistical Issues RAI #5***

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## ***Statistical Issues RAI #5***

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**> Statistical implications?**

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## Statistical Issues RAI #6

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6. *On page 5-16, the ACE correlation was applied to a different assembly. [ ] had to be optimized to enhance the performance of the ACE correlation. Please provide additional discussion regarding the optimization process.*
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## ***Statistical Issues RAI #6***

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## ***Statistical Issues RAI #6***

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- > The conclusion is that the ACE/ATRIUM-10 correlation can be applied to other designs**

## Statistical Issues RAI #7

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7. On page 5-17, the [ ] is alluded to. Please be prepared to discuss the reason as to why the defining data base did not include [ ]



## ***Statistical Issues RAI #7***

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## ***Statistical Issues RAI #8***

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- 8. *On page 5-19, the second paragraph from the bottom requires additional explanation. Please be prepared to discuss further.***
- > Clarification on the issue is required.**
  - > The response will explain the paragraph, what best estimate means, and the expected behavior of the correlation to measured transient test data.**

## Statistical Issues RAI #9

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**9. *Is the data base for ACE correlation the same as that for SPCB correlation?***

**> [**

**]**

- > The correlation development process was performed according to the correlation development guideline – EMF-2022.**
- > The process of evaluating the data for use in correlation was repeated**

## ***Statistical: RAI #9***

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- > The following data were excluded from use in defining the correlation or validating the correlation for cause:**

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## ***Statistical: RAI #9***

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- > In the response, the number of data points removed, and the physical basis for removal shall be fully described to the same level of detail as was shown in calculation notebook.**