

## Fermi2LRANPEm Resource

---

**From:** Wentzel, Michael  
**Sent:** Wednesday, January 21, 2015 6:49 AM  
**To:** Randall D Westmoreland  
**Cc:** Angela Rudolph; Kevin P Lynn; Michael J Koenemann; Joseph Lavelline  
**Subject:** RE: SAMA RAI Response Questions  
**Attachments:** Fermi SAMA RAI Response Clarificaitons.docx

Randy, et al.,

Attached are the clarifying questions regarding your responses to the SAMA RAIs that we would like to discuss. Although I have not yet heard back from everyone on our end, Friday before noon is looking promising for us. Also, if your staff have availability on Thursday, that may be a possibility. I understand that you are out today, so we can touch base on our Thursday morning phone call to work out the details.

Thanks,  
Mike

**From:** Randall D Westmoreland [mailto:westmorelandr@dteenergy.com]  
**Sent:** Tuesday, January 20, 2015 4:45 PM  
**To:** Wentzel, Michael  
**Cc:** Angela Rudolph; Kevin P Lynn; Michael J Koenemann; Joseph Lavelline  
**Subject:** SAMA RAI Response Questions

Mike,

Per our discussion, I understand there are about 10 SAMA clarifying questions you would like to discuss and that you will be providing draft versions of the questions to us in writing potentially as early as tomorrow.

I also understand that you would like to have the call this week if possible--perhaps Friday. Please also send the draft questions to the other individuals on this email as I will be out tomorrow.

My schedule is pretty open on Friday.

Joe, Kevin, Michael-- please let me know your availability for a call on Friday. Thanks.

Randall Westmoreland  
DTE Electric Company  
Major Enterprise Projects  
Technical Expert  
Fermi Office: 734-586-1445

\*\*\*\*\*

\*\*\*

CARING ABOUT THE ENVIRONMENT IS THE NATURE OF  
OUR JOB.

**Hearing Identifier:** Fermi2\_LR\_NonPublic  
**Email Number:** 39

**Mail Envelope Properties** (Michael.Wentzel@nrc.gov20150121064900)

**Subject:** RE: SAMA RAI Response Questions  
**Sent Date:** 1/21/2015 6:49:12 AM  
**Received Date:** 1/21/2015 6:49:00 AM  
**From:** Wentzel, Michael

**Created By:** Michael.Wentzel@nrc.gov

**Recipients:**

"Angela Rudolph" <rudolpha@dteenergy.com>  
Tracking Status: None  
"Kevin P Lynn" <lynnk@dteenergy.com>  
Tracking Status: None  
"Michael J Koenemann" <koenemannm@dteenergy.com>  
Tracking Status: None  
"Joseph Lavelline" <lavellinej@dteenergy.com>  
Tracking Status: None  
"Randall D Westmoreland" <westmorelandr@dteenergy.com>  
Tracking Status: None

**Post Office:**

<b>Files</b>	<b>Size</b>	<b>Date &amp; Time</b>
MESSAGE	1589	1/21/2015 6:49:00 AM
Fermi SAMA RAI Response Clarificaitons.docx		22392

**Options**

**Priority:** Standard  
**Return Notification:** No  
**Reply Requested:** No  
**Sensitivity:** Normal  
**Expiration Date:**  
**Recipients Received:**

## **Fermi 2 RAI Clarifications for teleconference discussion**

### **RAI 1.c.iii**

What is the value for the phenomenological failure probability of the common cause failure of all four combustion turbine generators in the event of a “weather centered” loss of the 345kV (Division 2) Switchyard?

### **RAI 2.g.iii**

The RAI response provided a wealth of information supporting the selection of representative sequences in terms of the determination of the base case risk, however, the impact of representative selection on the calculation of delta risk for a SAMA is not specifically addressed. Furthermore, the information provided indicates that the specific example in the RAI will not adversely impact the selection of cost-beneficial SAMAs; however, it does raise concern about the impact of combining Class IIA sequences with Class IV sequences. As indicated in the RAI response, separating the Class IIA sequences from the Class IV sequences in the H/E release category results in a 15% increase in dose risk and a 0.6% increase in OECR in the total risk. Table 2.g-4 indicates the revised Class II contribution is 2.69 times the person-rem/yr and 1.08 times the OECR contributions when they are included in the H/E base case release category. Thus, the staff believes, the benefit of any SAMA that significantly reduces the risk of Class IIA (loss of containment heat removal) sequences will be underestimated. Please address the impact of combining Class IIA sequences with Class IV sequences and clarify the impact of representative selection on the calculation of delta risk for a SAMA.

### **RAI 2.e**

The SAMA analysis release category frequency is based upon a truncation of  $1E-12/yr$  which results in undercounting the Class II frequency by  $3.14E-09/yr$  compared to the Class II frequency from the Level 1 quantification. This is stated to have been resolved by lowering the truncation to  $1E-14/yr$ . It is stated that this  $3.14E-09/yr$  difference was added to the PRA documentation release category (RC) medium/early (M/E) frequency but not that used in the SAMA analysis. What was the basis for assigning this undercounting due to truncation to RC M/E and not other RC's such as high/early (H/E)? Was it based on the results of the Level 2 quantification at the lower truncation?

### **RAI 4.c**

The economic multiplier stated in the RAI response is 2.1384 which is different from the value of 1.2964 stated on page D-96 of the environmental report (ER). The RAI response does not mention any reason for the ER value to be different from the original value. Please clarify which is the correct value for the economic multiplier value(s) used in the assessment of cost beneficial SAMAs.

### **RAIs 5.a.ii, 5.a.vi, 5.a.vii, 6.h and 7.a**

The response to these RAIs provides the result of new cost benefit analyses. Was this based on doing the complete analysis similar to that for the ER evaluation involving determining the new release category frequencies and resulting cost risks, or were some assumptions made? Some of the results do not appear to be consistent with those given in Table D.2-1. Are these results conservative?

**RAI 6.c**

While Fermi 2 may not have the same vulnerability that prompted SAMA 023 to develop procedures to repair or replace failed 4 kV breakers, this SAMA was cited to mitigate a number of important Fermi events in Table D.1-2 and screening it out is not considered appropriate. If the transfers cited in the source of this SAMA are not required, why were they cited in the evaluation of the benefit of SAMA 023?

**RAI 6.e**

The response indicates that assuming a 15% reduction in main steam isolation valves (MSIVs) failure to close and safety relief valves (SRVs) failure to open has essentially no impact ( $\sim < 0.01$ ) on risk. On the other hand, operator failures to depressurize have risk reduction worth of 1.10, 1.05, and 1.03. These are equivalent to SRVs failure to open and would indicate that the above reduction in SRV failure to open would lead to a 2% reduction in CDF. Please clarify this disparity.