HLWYM HEmails

From: Patrick Mackin
Sent: Friday, September 01, 2006 10:39 AM
To: James Winterle; Sitakanta Mohanty; James Durham; Lane Howard; Oleg Povetko
Cc: Budhi Sagar
Subject: FW: Re: Question Re 10 CFR Part 63

All:

Please read the attached message regarding a question that came up during this week's H-415 course. If any of you with expertise in this area of 10 CFR Part 63 disagree with the interpretation that Banad or Rodican Reed have presented here, please respond to them.

Thanks.

Pat

-----Original Message-----
From: Rodican Reed [mailto:RPR1@nrc.gov]
Sent: Friday, September 01, 2006 9:19 AM
To: Patrick Mackin; Brittain Hill; Bhasker Tripathi; Denise Edwards; Doris Lewis; Jin-Ping Gwo; Maria Schwartz; Rosemary Reeves; Ray L. Kellar
Cc: John Ricci; Kien Chang
Subject: Fwd: Re: Question Re 10 CFR Part 63

During the H-415 course this week, there was a brief discussion regarding how doses are calculated for Category 1 events and compared against the performance criteria.

There was some confusion, which I wanted to clarify.

Please see the attached discussion with Banad Jagannath of HLWRS.

For the consequence assessment, frequency-weighted doses from Category
1 event sequences are aggregated and added to the dose from normal operations and this result is compared against the performance criteria.
Since the doses are "annualized", the dose from each Category 1 event is weighted by frequency of occurrence. This weighted product of dose and frequency for each Category 1 event is summed over all Category 1 event sequences and added to the dose from normal operations.

However, for Category 2 event sequences, the dose is calculated and compared against the performance criteria for each separate Category 2 event sequence, without aggregation or weighting by frequency.

For further information, I recommend you read 10 CFR Part 63.111 and the YMRP, Section 2.1.1.5 Consequence Analyses, paying particular attention to Review Method 3 on page 2.1-31, where it states that:

"Verify that an appropriate method has been used to aggregate the doses from normal operations and annualized doses from Category 1 event sequences."

This interpretation is consistent with how we have been teaching this subject in the H-403 HLW HP Course. Whether this approach will remain in the same in the future, I am not sure.

If you have questions, please see Banad or me.

Thanks and I hope you enjoyed the H-415 course!

Rod Reed

>>> Banad Jagannath 08/30/2006 8:09 AM >>>
Your understanding of dose compliance for Category 1 event sequences is correct. However, dose compliance for Category 2 event sequences is for each occurrence and is not frequency weighted.

Banad Jagannath

>>> Rodican Reed 08/30/2006 7:41 AM >>>
I want to test my understanding of how we treat consequence assessment for Category 1 and Category 2 events.

It has been my understanding that for Category 1 event sequences, we weight the dose by frequency of the event and aggregate the events by summing the weighted doses. This is then added to dose from normal operations to be compared against the performance criteria.

The current Part 63 says we will aggregate Category 1 events and the YMRP says the doses will be annualized, which I presume means weighted by frequency

We do not aggregate Category 2 events is also my understanding.
However, are Category 2 events weighted by frequency in the consequence assessment.

Please confirm my understanding or correct it, if necessary. What do we plan to do in the future in the new revise Part 63.

This is needed for training purposes.

Thanks!

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From: Patrick Mackin

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Recipients:
"Budhi Sagar" <bsagar@cnwra.swri.edu>
Tracking Status: None
"James Winterle" <jwinterle@cnwra.swri.edu>
Tracking Status: None
"Sitakanta Mohanty" <smohanty@cnwra.swri.edu>
Tracking Status: None
"James Durham" <jsdurham@cnwra.swri.edu>
Tracking Status: None
"Lane Howard" <lhoward@cnwra.swri.edu>
Tracking Status: None
"Oleg Povetko" <opovetko@cnwra.swri.edu>
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