

REVIEW OF RESOLUTION OF COMMENTS ON DRAFT NUREG-2230 (09-23-2019)

Introduction

In July and August 2019, Center for Nuclear Waste Regulatory Analyses (CNWRA®) staff completed a detailed review of draft NUREG-2230, “Methodology for Modeling Fire Growth and Suppression Response for Electrical Cabinet Fires in Nuclear Power Plants” dated June 2019 (hereafter referred to as “draft NUREG-2230”) for the Office of Nuclear Reactor Regulation (NRR) of the U.S. Nuclear Regulatory Commission (NRC). Two types of comments resulted from this review. The first type involved substantive and technical comments, while the second set of comments were editorial in nature. In total, 51 comments were submitted to NRR (35 substantive and 16 editorial). Comment resolutions from the public comment period were received September 9, 2019. The results of CNWRA’s review of the resolutions for the 51 comments that were submitted are summarized below.

Comments for Which the Resolution Did Not Involve Changes to the Document

Of the 51 comments that CNWRA submitted, 39 were accepted. In many cases, the resolution of these comments resulted in extensive changes to the document. The 12 remaining comments that did not result in any changes are summarized in Table 1 (substantive comments) and Table 2 (editorial comments) below.

Table 1. Substantive CNWRA comments that did not result in document changes.

Comment No.	Place in NUREG	Comment Summary
CNWRA9	<i>p. 3-12, line 25</i>	Requests justification for not considering Low Power Shut Down (LPSD) conditions in the development of the generic fire frequency for the Main Control Board (MCB)
CNWRA14	<i>p. 3-13, line 33</i>	Suggests using electrical cabinet heat release rate (HRR) at 3 min instead of 5 min to determine probability of failing to manually suppress a fire in the Main Control Room (MCR)
CNWRA17	<i>Table 3-9</i>	Requests explanation for using frequencies split by power mode for MCB fires and not for electrical cabinet fires
CNWRA18	<i>Table 4-1</i>	Suggests using median pre-growth, growth, steady burning and decay durations from the fire events database (FEDB) to establish the HRR profile
CNWRA19	<i>Table 4-2</i>	
CNWRA20	<i>p. 4-7, lines 7-14</i>	
CNWRA25	<i>Table 7-1</i>	Suggests including table with suppression curve parameters for various fires in executive summary
CNWRA33	<i>Section B.3</i>	Suggests deleting smoke model validation section

Table 2. Editorial CNWRA comments that did not result in document changes.

Comment No.	Place in NUREG	Comment Summary
CNWRA41	<i>p. 3-13, lines 7-8</i>	Suggests adding a footnote to point out an error in NUREG-2169, which is the source document for the fire frequencies used here
CNWRA44	<i>p. 4-1, line 22</i>	Suggests using the English instead of the Finnish name for VTT
CNWRA48	<i>p. 4-3, line 19</i>	Suggests referring to NIST (organization that performed the tests) instead of CBD (place where the tests were conducted)
CNWRA49	<i>p. 4-5, line 17</i>	

Resolution of Comments that Did Not Involve Changes to the Document

The resolution of the comments that did not result in any changes to the document is summarized below.

- A logical explanation was provided for not accepting the following substantive comments: CNWRA9, CNWRA14, CNWRA17, and CNWRA25.
- CNWRA18, CNWRA19, and CNWRA20 pertain to sections that were substantially revised and expanded. The revisions support the use of averages (versus median values as proposed by CNWRA staff), for which there is a historical precedent.
- As far as CNWRA33 is concerned, the comment resolution recognizes that determining the probability of smoke detector activation does not require estimating the time to activation. However, the preference is to keep the Section B.3, which discusses validation of models to predict the time to smoke detector activation and is therefore relevant to the subject of the appendix. This is really a matter of opinion.
- Explanations were provided for not accepting the proposed editorial changes.

Conclusions

Seventy-six percent of the CNWRA comments on draft NUREG-2230 were accepted. Some resulted in major changes to the document. For example, a Monte Carlo simulation had to be repeated and an entire appendix and several tables had to be substantially revised based on the simulation results. Twelve comments did not result in any changes to the document. A rationale was provided for ignoring these comments. For some, whether to accept or not is a matter of opinion. In summary, CNWRA staff feels that the resolution of the comments was satisfactory and that no additional follow-up is needed.