

CSSG TASKING 2016-04

Date Issued: June 22, 2016

Task Title: *Position of the CSSG on Natural Phenomena and Other Extreme Events vis-à-vis ANSI/ANS-8 Standards*

Background:

The Department of Energy continues to struggle with the cost-effective application of Section 4.1.2 of ANSI/ANS-8.1 when the abnormal event initiator is a natural phenomena event (e.g. seismic) or other postulated, but credible as defined by the safety analysis community, extreme event causing cataclysmic facility failure. It has been asserted, by some, that a criticality accident must be precluded during all extreme events which cause massive facility failure that alone can cause large numbers of fatalities and that such criticality accident prevention is required by the current wording of ANSI/ANS-8.1-2014 Section 4.1.2.

Consistent with the final statement in the introduction of ANSI/ANS-8.1, "Good safety practices should recognize economic considerations, but the protection of operating personnel and the public is the dominant consideration." the Standard does not purport to nor, propose to, prevent a criticality accident regardless of cost nor to eliminate risk.

The ANS-8 community has had several discussions of this issue but as of yet has not yet provided any strawman language for discussion.

Task Statement:

The CSSG is directed to develop a position on this topic to include a discussion of safety philosophy which implements a graded approach consistent with the understood/interpreted intent of ANSI/ANS-8.1. The CSSG shall explicitly state any interpretive assumptions or philosophies they consider in forming their position. The CSSG is further directed to provide specific language to recommend to ANS-8 for consideration when revising affected standards.

Period of Performance:

The CSSG shall provide their position on criticality prevention during natural phenomena and other extreme events to the NCSP Manager by November 4, 2016.

Resources:

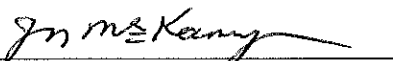
The CSSG shall organize their resources as they deem appropriate and utilize funding provided by the DOE Nuclear Criticality Safety Program for completing this task.

Task Deliverables:

1. Draft text of the response to the entire CSSG: August 25, 2016
2. Comments back to Writing Team: September 9, 2016
3. Final response provided to the NCSP Manager: November 4, 2016

Task Completion Date: November 4, 2016

Signed:



Dr. Jerry N. McKamy, Manager US DOE NCSP
Office of the Chief of Defense Nuclear Safety, NA-511