SUNI Review Complete Template=ADM-013 E-RIDS=ADM-03

PUBLIC SUBMISSION ADD: Michael Eudy, Kevin Hsueh, Sean Meighan,

ADD: Michael Eudy, Kevin Hsueh, Sean Meighan, Mark Blumberg, Bridget Curran, Mary Neely Comment (15) Publication Date: 4/21/2022 Citation: 87 FR 23891 As of: 6/23/22 7:39 AM Received: June 21, 2022 Status: Pending_Post Tracking No. 14p-12yh-d71q Comments Due: June 21, 2022 Submission Type: API

Docket: NRC-2021-0179 Alternative Radiological Source Terms for Evaluating Design Basis Accidents at Nuclear Power Plants

Comment On: NRC-2021-0179-0001 Alternative Radiological Source Terms for Evaluating Design Basis Accidents at Nuclear Power Reactors

Document: NRC-2021-0179-DRAFT-0017 Comment on FR Doc # 2022-08519

Submitter Information

Name: Anonymous Anonymous Email: Cliffnukem@gmail.com

General Comment

Since the source term is being applied to all LWR reactors the maximum site-specific releases, like those for the non-LOCA DBA, for all reactors (not just 4 reactors) needs to be calculated and put in Tables 1 and 2.

The source term in DG-1389 should be restricted to use by light water reactor fuel (Uranium dioxide or mixed oxide) with zirconium clad and a maximum burnup of 68,000 MWd/MTU.

Restore the terminology loss-of-coolant accident, rather than using a new terminology and new philosophical scenario of the accident that must be considered. It took decades of research to get away from the maximum hypothetical accident and move to a revised source term and more reasonable realistic methodologies that use the scenarios that don't require modeling that conflicts with structures, systems, and components and the phenomenology in codes like MELCOR. In addition, the terminology maximum hypothetical LOCA conflicts with or does not exist in the regulations such as General Design Criteria 19 and 10 CFR 50.67.

The new guidance specifies an MHA source term in Section 3 that is being applied to a wide range of facility designs. However, the source term is only based upon accident modeling for four facilities that include Surry, Sequoyah, Peach Bottom and Grand Gulf. It our understanding that NUREG- 1465 was based upon a source term that was approximately the 70th percentile phase durations and release factions and SAND-2011 contains source terms based upon the 50th percentile phase durations and release factions. These are clearly not maximum hypothetical release source terms but are average hypothetical release fractions and durations. Therefore, Tables in Section 3 of the revision (for example Tables 1 and 2 values) in RG- 1.183 need to be revised to include values that represent maximum hypothetical releases consistent with the 95th percentile if they are to be truly considered maximum hypothetical releases.

Regulatory Position 3.4, Table 6, should be updated to include the molybdenum group consistent with page 18, Section 4.3 of ERI/NRC 11-211, "Peer Review of Accident Source Terms for Light-water

blob:https://www.fdms.gov/c5269e09-32b3-4c91-996b-3ce0f7f303c9

Nuclear Power Plants using High-Burnup and Mixed Oxide Fuels." In addition, Zr in this table should be moved from the Lanthanide group to the Cerium group consistent with Table 14 of SAND 2011-0128.

Given the history of regulatory guide updates it is a rare exception that the previous version of the regulatory guidance would continue to be acceptable, especially when obvious errors are corrected in the revised version of that guidance. If necessary, a backfit analysis needs to be performed to supersede the known to be erroneous Revision 0 of regulatory guide 1.183 gap fractions and other items fixed in DG-1389. Revision 0 should not be allowed to continue to exist.