

ANS Answers Inquiry on ANSI/ANS-8.19-2005, “Administrative Practices for Nuclear Criticality Safety,” and ANSI/ANS-8.26-2007 (R2012), “Criticality Safety Engineer Training and Qualification Program.”

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Inquiry:

Position 1: When preparing a nuclear criticality safety evaluation (NCSE), both the author and the reviewer (reviewer as defined in ANSI/ANS-8.19-2005, Section 8.4) shall have a facility qualification (i.e., have documented facility/process specific knowledge per ANSI/ANS-8.26-2007 (R2012), Section 7.10).

Position 2: When preparing an NCSE, either the author or the reviewer shall have facility qualification.

Question: Given compliance with ANSI/ANS-8.19-2005 and ANSI/ANS-8.26-2007 (R2012) are required, which position is compliant? If none of the above, then what would be a compliant position?

Response:

The inquiry was intended to clarify the training and qualification requirements necessary to perform an “independent review that confirms the adequacy of the nuclear criticality safety evaluation” as stated in Section 8.4 of ANSI/ANS-8.19-2005.

Specifically, are both the author and the reviewer required to be qualified according to the requirement of ANSI/ANS-8.26-2007 (R2012), Section 7.10, for the specific facility for which the NCSE was prepared?

Neither ANSI/ANS-8.19-2005 nor ANSI/ANS-8.26-2007 (R2012) define a reviewer or the qualifications necessary for the reviewer of NCSEs and this inquiry cannot be answered within the context of the current versions of the standards. The nuclear criticality safety (NCS) program implemented at the site or facility level should define the requirements necessary to author or review NCSEs. If the NCS program requirements state that the NCSE reviewer must be a fully qualified criticality safety engineer or senior criticality safety engineer assigned to the operation that is the subject of the NCSE, then all requirements of ANSI/ANS-8.26-2007 (R2012), including process and facility knowledge of assigned operations, must be met. If the NCS program permits criticality safety engineers or senior criticality safety engineers to perform reviews of NCSEs for operations to which they have not been “assigned,” there is no conflict with either ANSI/ANS-8.19-2005 or ANSI/ANS-8.26-2007 (R2012).

The intent of ANSI/ANS-8.26-2007 (R2012) is that the NCSE author is a qualified criticality safety engineer (see Section 7.6). Position 1 (both author and reviewer fully qualified) is obviously compliant with the requirements of ANSI/ANS-8.19-2005 and ANSI/ANS-8.26-2007 (R2012). Position 2 (either author or reviewer fully qualified) as stated in the inquiry, while not directly in conflict with specific statement of Section 8.4 in ANSI/ANS-8.19-2005, does not meet the concept of having the reviewer qualified to the same level as the criticality safety engineer who performed the original analysis.