

# **ASME/ANS RA-S INTERPRETATIONS VOLUME 3**

## **Replies to Technical Inquiries July 2008 Through June 2013**

### **FOREWORD**

Each interpretation has been reviewed for applicability to the edition and supplements listed for that inquiry. In some instances, a review of the interpretation revealed a need for corrections of a technical nature. In these cases, a revised interpretation is presented bearing the original interpretation number with the suffix R and the original file number with an asterisk.

ASME procedures provide for reconsideration of these interpretations when or if additional information is available which might affect any interpretation. Further, persons aggrieved by any interpretation may appeal to the cognizant ASME committee or subcommittee. ASME does not "approve," "certify," "rate," or "endorse" any item, construction, proprietary device, or activity.

For detailed instructions on the preparation of technical inquiries, refer to Preparation of Technical Inquiries to the Committee on Nuclear Risk Management (p. v of ASME/ANS RA-S-2008).

**Interpretation: 1-1R**

Subject: ASME RA-Sb-2005, Table 4.5.6-2(c); ASME/ANS RA-Sb-2013, Part 2, Table 2-2.6-4; Supporting Requirements for HLR-DA-C, Index number DA-C6

Date Issued: June 6, 2013

File: 05-1605\*

Question: Should the second action verb in Supporting Requirement DA-C6 of RA-S-2002, Addendum a (and unchanged in Addendum b [RA-Sb-2005] and RA-Sb-2013) be interpreted as follows: those (additional) demands that might have been performed during troubleshooting to determine the cause of the fault should not be included, since they are part of the repair process? A single demand related to full functional testing of the component after maintenance, but prior to declaring it operable, may or may not be included, depending on the relationship between the maintenance and the functional test.

Reply: Yes.

**Interpretation: 1-2R**

Subject: ASME RA-Sa-2003, Section 4, Risk Assessment Technical Requirements; ASME/ANS RA-Sb-2013, Part 2

Date Issued: June 6, 2013

File: 06-609\*

Question: Is it a requirement of Table 4.5.4-2(c) [Table 2-2.4-4 in RA-Sb-2013], Index number SY-C1; Table 4.5.8-2(f) [Table 2-2.7-7 in RA-Sb-2013], Index number QU-F1; and Table 4.5.9-2(g) [Table 2-2.8-8 in RA-Sb-2013], Index number LE-G5 that the lists prefaced by “documentation typically includes” are provided as minimum requirements for documentation?

Reply: No, the lists in SY-C1, QU-F1, and LE-G5 are provided as examples of documentation forms or types that may be used to meet the documentation requirements of the PRA Element. They should not be interpreted as specific requirements for the documentation. This is clarified by the language used in Addendum (b); for specific locations, see Note (1) below.

**NOTES:**

- (1) When the inquiry was posed, the supporting requirements designator correctly referred to “documentation” lists. With the release of Addendum (b), these designators have changed, and there are “documentation” lists in other tables of Section 4. These are as follows:

Table 4.5.1-2(d) [Table 2-2.1-5 in RA-Sb-2013]	IE-D2
Table 4.5.2-2(c) [Table 2-2.2-4 in RA-Sb-2013]	AS-C2
Table 4.5.3-2(c) [Table 2-2.3-4 in RA-Sb-2013]	SC-C2
Table 4.5.4-2(c) [Table 2-2.4-4 in RA-Sb-2013]	SY-C2
Table 4.5.5-2(i) [Table 2-2.5-10 in RA-Sb-2013]	HR-I2
Table 4.5.6-2(e) [Table 2-2.6-6 in RA-Sb-2013]	DA-E2
Table 4.5.7-2(f) [See Note (2) below regarding RA-Sb-2013.]	IF-F2
Table 4.5.8-2(f) [Table 2-2.7-7 in RA-Sb-2013]	QU-F2 (An error in the Standard identifies this as QE-F2.)
Table 4.5.9-2(g) [Table 2-2.8-8 in RA-Sb-2013]	LE-G2

- (2) With regard to ASME/ANS RA-Sb-2013, Part 2, the first two sentences of the Reply remain applicable. The affected supporting requirements are as listed in Note (1) above (although the tables have been renumbered), with the exception that IF-F2 is now a Part 3 (Internal Flood) requirement.

**Interpretation: 1-3R**

Subject: ASME RA-Sa-2003, Section 4, Risk Assessment Technical Requirements, Table 4.5.5-2(g), Index number HR-G3; ASME/ANS RA-Sb-2013, Part 2, Table 2-2.5-8

Date Issued: June 6, 2013

File: 06-610\*

Question: Is it the intent of Table 4.5.5-2(g) [Table 2-2.5-8 in RA-Sb-2013], Index number HR-G3, Capability Categories II and III that an explicit evaluation of the impact for each of the listed performance shaping factors (PSF) is not required if the selected human response analysis methodology addresses these PSFs implicitly and provides a means for establishing reasonable confidence that the results implicitly include these considerations?

Reply: Yes.

**Interpretation: 1-5R**

Subject: ASME RA-Sb-2005, Section 4, Risk Assessment Technical Requirements; ASME/ANS RA-Sb-2013, Part 2, Table 2-2.1-2

Date Issued: June 6, 2013

File: 06-1060\*

Question: Is it a requirement to include “non-forced” manual trips that are part of the normal shutdown procedure when counting initiating events?

Reply: No, a normal controlled shutdown would not present the same challenges as a trip from full power. This event is more appropriate for a transition model and outside of the scope of this Standard. If the manual trip was prompted by conditions other than the normal shutdown procedure that could occur at full power, it should be counted. This guidance is consistent with IE-A5(a) [IE-A7(a) in RA-Sb-2013] and IE-C4 [IE-C6 in RA-Sb-2013].

**Interpretation: 1-6R**

Subject: ASME RA-Sb-2005, Section 4, Risk Assessment Technical Requirements; ASME/ANS RA-Sb-2013, Part 2, Table 2-2.1-2

Date Issued: June 6, 2013

File: 07-213\*

Question: Is it a requirement to include “forced” (e.g., technical specification 3.03 actions) or “non-forced” (e.g., manual shutdowns for refueling) when the resulting shutdown follows normal plant procedures with no off-normal conditions requiring a reactor scram?

Reply: No, the risk needs to be captured in a transition risk or low power risk model, which is outside the scope of RA-Sb-2005 and RA-Sb-2013.

**Interpretation: 3-1**

Subject: ASME RA-Sc-2007, Section 4, Supporting Requirement (SR) AS-A9;  
ASME/ANS RA-Sb-2013, Part 2, SR AS-A9

Date Issued: February 9, 2009

File: 08-493

Question: Do the requirements in Supporting Requirement AS-A9 mean that plant-specific thermal-hydraulic calculations are not required to achieve Capability Category II?

Reply: Yes.

**Interpretation: 3-2**

Subject: ASME RA-Sc-2007, Section 4.3, Expert Judgment; ASME/ANS RA-Sb-2013, Part 1, Subsection 1-4.3

Date Issued: February 9, 2009

File: 08-501

Question (1): Do the requirements in Section 4.3 of the Standard [subsection 1-4.3 in RA-Sb-2013] mean that it is necessary to apply and document the expert judgment process described in Section 4.3 [subsection 1-4.3 in RA-Sb-2013] to a PRA Level 2/LERF model solely on the basis that the model was developed by an entity (e.g., consultant, consulting company, etc.) outside of the PRA owner?

Reply (1): No.

Question (2): Do the requirements in Section 4.3 of the Standard [subsection 1-4.3 in RA-Sb-2013] mean that it is necessary to apply and document the expert judgment process described in Section 4.3 [subsection 1-4.3 in RA-Sb-2013] to usage of reports that involve expert judgment (e.g., NUREG-1829, NUREG/CR-6936) in support of the PRA simply on the basis that expert judgment was used in preparation of those reports?

Reply (2): No.

**Interpretation: 3-3**

Subject: ASME RA-Sc-2007 up to and including ASME/ANS RA-Sb-2013, Supporting Requirement IF-C2c [IFSN-A5 in RA-Sb-2013]

Date Issued: September 10, 2009

File: 08-503

Question: Is it the case that SR IF-C2c [IFSN-A5] can only be met if individual components located in the flood area are documented?

Reply: No. However, if individual components are not identified, adequate justification to support the level at which SSCs are modeled should be documented.

**Interpretation: 3-4**

Subject: ASME RA-Sc-2007 up to and including ASME/ANS RA-Sb-2013, Supporting Requirements IF-E3 and IF-E4 [IFQU-A2 and IFQU-A4, respectively, in RA-Sb-2013]

Date Issued: September 10, 2009

File: 08-505

Question: Is it the case that SR IF-E3 [IFQU-A2] and IF-E4 [IFQU-A4] can only be met if individual components located in the flood area are modeled as failed?

Reply: No. The level of detail should be consistent with IF-C3 [IFSN-A6]. However, if individual components are not identified, adequate justification to support the level at which SSCs are modeled should be documented.

**Interpretation: 3-5**

Subject: ASME RA-Sa-2009 and ASME/ANS RA-Sb-2013, Supporting Requirement AS-A9

Date Issued: April 29, 2013

File: 13-53

Question: Does the phrase “operability of the mitigating systems” in AS-A9 mean the ability of the mitigating systems to support the key safety functions (as stated in HLR-AS-A)?

Reply: Yes.

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