

ENCLOSURE 2:

Comments on Draft SE for BAW-10227P, Revision 2 – NON-PROPRIETARY

Framatome Technical Comments to the Draft Safety Evaluation for M5 Rev. 2 Topical Report (BAW-10227P, Revision 2)

Framatome has reviewed the November 8, 2022 Draft SE. The additional text below explains the technical comments included in the table which follows.

The draft safety evaluation describes the set of RAIs on the swelling and rupture model (SRM) as the first, second, and third response to RAIs #8-10. However, there are two distinct sets of RAIs: RAIs #8-#10 and the follow-up RAI to RAIs #8-10. The response to RAIs #8-10 is contained in Q2P Rev. 0. The response to the NRC's Follow-up RAI to RAIs #8-10 is contained in Q4P Rev. 1.

[

] Proposed modifications are annotated as "Request #1."

The response to the Follow-up RAI to RAIs #8-10 in Q4P Rev. 1 modified BAW-10227P, Section 13.1.2, as shown in Q4P Rev. 1 Attachment A. [

] is largely generic and is not necessary to be included in the M5 material topical report. Proposed modifications to refine the text are tabulated below, annotated as "Request #2".

Section 13.3 of BAW-10227P Rev.2 provides the assessment of the ECCS performance criteria and concludes that M5_{Framatome} is applicable to all the criteria, [

] proposed modifications to refine the text are tabulated below, annotated as "Request #3".

#	Page/Line	Text in SE	Concern	Proposed Change
1	p.10, line 42	three responses to RAIs #8-10 (Refs. [12], [13] and [14])	See Request #1. Please delete Reference [13] (Q4P Rev. 0) and update wording to reflect response and follow-up RAI response.	the response to RAIs #8-10 and the follow-up RAI (Refs. [12] and [14])
2	p.11, lines 15-26	As discussed in Section 13.1.2...Reactors" (Ref. [20]).	See Request #2.	Delete the identified text.
3	p.11, lines 28-30	The first two methodologies listed above (BAW-10192 and EMF-2328) conform to Appendix K to 10 CFR Part 50, which requires that the degree... not be underestimated.	See Request #2. The SE text remains applicable without the reference to the methods in the introduction to the sentence.	Appendix K to 10 CFR Part 50 requires that the degree ... not be underestimated.
4	p.11, lines 34-35	The third methodology (EMF-2103)...10 CFR 50.46(a)(1)(i).	See Request #1. The SE paragraph remains applicable without the reference to the method in this sentence.	Delete sentence.
5	p.13, lines 13-15	[]	See Request #1. The same data is present in Q4P Rev. 1.	[]
6	p.14, lines 3-5	... Framatome stated in Section 2.6, "[]" of its second response to RAIs #8-10 (Ref. [13]) that these revised cladding strains will result in corresponding updates to its fuel assembly blockage curves. In its third response to RAIs #8-10 (Ref. [14]), Framatome included ...	See Request #1. The same information is present in Q4P Rev. 1.	... Framatome stated in Section 2.0 of the response to the Follow-up RAI to RAIs #8-10 (Ref. [14]) that corresponding updates to its fuel assembly blockage curves are made. Framatome included
7	p.14, line 10	Blockage Curves," in the section of Framatome's third response that contains markup pages to	See Request #1.	Blockage Curves," in the section of Ref. [14] that contains markup pages to
8	p.14, lines 40-41	[]	See Request #1. The same modification is present in Q4P Rev.1.	[]
9	p.14, lines 43-44	[]	See Request #1. Please delete Ref. [13] and update wording.	[]
10	p.15, lines 6-8	industry in performing analyses to demonstrate that the peak cladding temperature, maximum local oxidation, and core-wide oxidation comply with the acceptance criteria specified in 10 CFR 50.46(b)(1)-(3).	See Request #3.	industry in performing LOCA analyses.

#	Page/Line	Text in SE	Concern	Proposed Change
11	p.16, lines 18-25	Framatome's first two responses to RAIs #8-10 (Refs. [12] and [13]) ... second RAI response.	See Request #1. The conclusion remains clear without the text related to Request #1. Please reduce text as suggested and delete Ref. [24].	The NRC staff ultimately did not agree that Framatome's response (Ref. [12]) fully justified the rupture strain curves proposed in BAW-10227P, Rev. 2.
12	p. 16, line 29	Subsequently, Framatome submitted a third revision to RAIs #8-10 (Ref. [14]) that	See Request #1.	Subsequently, Framatome submitted Ref. [14] that
13	p.17, line 3	as summarized in Table 13-2 of Framatome's third response to RAIs #8-10 (Ref. [14]),	See Request #1.	as summarized in Table 13-2 of Ref. [14]
14	p.17, lines 31-32	[]	See Request #1. The same modification is present in Q4P Rev. 1.	[]
15	p. 17, line 35	[]	See Request #1.	[]
16	p.18, lines 22-23	determining compliance with 10 CFR 50.46(b)(1)-(3), in conjunction with Framatome's existing, approved LOCA evaluation models (Refs. [16] through [20]).	See Request #2 and Request #3.	determining compliance with 10 CFR 50.46(b) acceptance criteria. <i>Alternatively, the topical's stated applicability can be included:</i> determining compliance with 10 CFR 50.46(b) acceptance criteria in conjunction with the []
17	p.18, line 26	the acceptance criteria in 10 CFR 50.46(b)(1)-(3).	See Request #3.	the acceptance criteria in 10 CFR 50.46(b).
18	p.18, lines 39-42	Note that while both correlations are acceptable for predicting the metal-water reaction, only the Baker-Just correlation should be used to integrate time-at-temperature for comparison against the 17 percent equivalent cladding reacted (ECR) criterion.	This sentence is not related to the BAW-10227P Rev. 2 review. 10 CFR 50.46 has not been revised to state this. Control over the correlation used to show compliance is within the approved LOCA methods.	Delete the identified text.
19	All Pages	Entire Document	Identified additional proprietary bracketing, or adjustments to the proprietary markings throughout the document.	Proprietary markings have been added throughout the document using single bold brackets.
Comments below refer to References				
20	[13]		See Request #1.	Delete reference and denote as not used.
21	[16] - [20]		See Request #2.	Delete references and denote as not used.
22	[24]		See Request #3.	Delete reference.