From:	SLIDER, James
To:	Garmoe, Alex
Cc:	Govan, Tekia; Lewin, Aron
Subject:	[External_Sender] Comments on Draft Appendix A and Attachment 1
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Alex/Tekia/Aron,

Attached are comments on the draft revisions of Appendix A and Attachment 1 provided to the public in conjunction with the July 31, 2019 public meeting. We will be glad to answer any questions the staff may have on our comments during the August 28 public meeting.

Best regards,

Jim

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Introduction

Following are comments from NEI on behalf of its member companies on two documents related to the NRC's Significance Determination Process (SDP). The documents are: (1) Draft revision of Inspection Manual Chapter (IMC) 0609, Appendix A, "The Significance Determination Process for Findings At-Power", [ADAMS ML9198A183] and (2) Draft revision of IMC-0609, Attachment 04, "Initial Characterization of Findings" [ADAMS ML19198A195]. Both documents were provided to external stakeholders just prior to the July 31, 2019 public meeting on the Reactor Oversight Process (ROP).

Comments on Draft Revised Appendix A

1. **Overarching Comment:** We continue to disagree with the staff on the merits of merging the Appendix O SDP (for mitigating strategies) into Appendix A, as attempted in the draft revision provided for public comment. We believe the appropriate action on Appendix O would be to merge it and Appendix L (the B.5.b SDP) into a single Beyond-Design-Basis SDP. The detailed comments provided below highlight the problems created by the staff's chosen alternative, attempting to merge FLEX considerations into the At-Power SDP of Appendix A.

2. **Basis for the Changes**: The draft IMC-0609 Appendix A revision was released to the public without an accompanying update of the basis document (IMC-0308, Attachment 3, Appendix A, last issued June 19, 2012, ADAMS ML11222A063). When the ROPTF inquired about this at the July 31, 2019 public meeting, the staff responded that, in lieu of updating the basis document, the staff provided equivalent information in the Background section of draft revised IMC-0609, Appendix A.

   This does not solve the problem of the missing basis document update. This means that many of the changes shown in the draft revision of Appendix A are provided without explanation or basis. This undermines the principle of Clarity that is essential to good regulation. Citing various NRC internal Feedback Forms in the document's revision history does not suffice. The internal Feedback Forms are rarely made public, so the contents and internal deliberations on the staff's feedback forms is unavailable to external stakeholders. The public is left with no opportunity to understand the problem the proposed revision is intended to solve, nor the data and analysis that informs the staff's decision on how to solve that problem through the proposed revision.

   The commingling of basis information and background information in the body of the draft revision also deviates from the best practice of maintaining the basis document as the primary source of information on <u>why</u> the SDP is what it is. Instead, this draft revision of Appendix A mixes the procedural "how" of this SDP with the narrative "why" behind this SDP.

3. **Guidance Section Provides No Meaningful Guidance**: Section 0609A-02, "Background", gives the history of pre-solved tables and advent of SAPHIRE, but little information to address the contents of this SDP. The subsequent section, 0609A-03, labeled "Guidance" in the Table of Contents but not labeled in the draft provided on July 31, 2019, consists of three sentences. The value this "guidance" adds to the document is not apparent.

4. **Reference to SDP Basis Document**: Section 0609A-04, "Screening", presents a new third paragraph that discusses screening and ends with declarative statement to "See IMC 0308, Attachment 3 for additional information on the basis of the SDP." This statement could appear anywhere in Appendix A, so its appearance in this spot seems intended to have the user look for additional instruction in the text of Attachment 3 that applies to screening. The five mentions of "screening" in IMC 0308, Attachment 3 do not appear to provide much additional information to help the user of Appendix A.

Does the staff intend the user of Appendix A should refer to a specific section of IMC 0308, Attachment 3 that applies to screening? If so, it would be helpful to specify that section, rather than make a general reference to the entire Attachment 3 in this particular section of Appendix A.

5. **Basis for Expanded Guidance on LOCA Initiators**: The text added to page 3 on the definition of "LOCA Initiators" appears substantial. If this addition represents long-standing NRC practice, it should be identified as such. If it is documenting a relatively new NRC practice, the basis for this addition should be cited. There is no citation or reference given at the point of the added text, leaving the outside reader to guess which of the Feedback Forms or other sources cited in the Revision History table addresses this gap.

6. **Basis for Expanded Guidance on Support System Initiators**: As in the comment above on LOCA Initiators, in Section 04.01.c of Appendix A, substantially revised and expanded text on Support System Initiators is added without mention of a source, citation or basis.

7. **Basis for Expanded Guidance on Mitigating Systems**: As in the comment above on LOCA Initiators, in Section 04.02 of Appendix A, substantially revised and expanded text on Mitigating Systems is added without mention of a source, citation or basis.

8. **Definition of Mission Time**: In Section 04.02, bottom of page 4, the term "mission time" is introduced. The new text on mission time should make clear that the PRA mission time is not the same as the mission time used in Inspection Manual Chapter 0326 for operability determinations and functionality assessments.

9. **Change in Time Duration for Risk Significant Outage Times**: In Section 04.02.a, first full paragraph on top of page 5, new text addresses allowed outage times. The time duration for loss of function of risk significant, non-Technical Specification systems, structures and components (SSCs) is changed from 14 days to three days. What is the basis for this change? This section also says, "RICTs [risk-informed completion times] may not be applied in retrospect after a degraded condition occurs." This text warrants explanation.

10. **FLEX Implementation Plan**: New item "e", "Flexible Coping Strategies (FLEX)", on page 5 of the draft revision adds a new paragraph describing the origin and three phases of FLEX. The paragraph ends with "This information can be found in the licensee's FLEX implementation plan." This should refer to the licensee's FLEX "final integrated plan".

11. **Basis for Expanded Guidance on Barrier Integrity:** As in the comment above on LOCA Initiators, in Section 04.03 of Appendix A, substantially revised and expanded text on Barrier Integrity is added without mention of a source, citation or basis. In particular, Fuel Cladding Integrity is a new topic in this section. What is the basis for the text added here?

12. **Questions Transferred from Appendix O are Substantially Different**: In Exhibit 2, Mitigating Systems Screening Questions, the new questions E.2 and E.3 are substantially different from the wording of questions 2 and 3 in IMC-0609, Appendix O, from which they are derived. In proposing to merge Appendix O into Appendix A, the staff conveyed to external stakeholders in public meetings this spring that the merger would involve merely a copy-and-paste transfer of the Appendix O questions into Appendix A. The staff has not documented or explained why it was necessary to fundamentally change the Appendix O questions at this time.

    a. **Partial Loss Added to Scope**: The new questions add the term "partial loss" to the term "complete loss" in the original version. This term introduces ambiguity and uncertainty and substantially expands the scope of issues that might not screen to Green and would be directed to a detailed risk evaluation. There are already programmatic controls for timely restoration of the

"+1" component. Entering a detailed risk evaluation for loss of the "+1" component would be comparable to performing a detailed risk evaluation for every entry into a technical specification condition that has an allowable completion time already determined to be of low risk.

b. **Resources Applied to Detailed Risk Evaluations**: If answered "Yes", questions 2 and 3 direct the staff to perform a detailed risk evaluation (per Section 0609A-05). It is not clear why a detailed risk evaluation is necessary for analysis of FLEX equipment that is provided to mitigate beyond design basis events. Additionally, the resorting to a detailed risk evaluation will consume NRC resources to analyze beyond design basis scenarios that are, by definition, very low risk events. In turn, the NRC's initiation of a detailed risk evaluation will trigger a like response from the licensees' PRA teams. The result will be a cascade of NRC and licensee resources directed to the analysis of a very low risk situation and away from more safety-significant work, and an outcome that adds little or no benefit to public health and safety.

13. **Model:** What model will NRC use to perform a detailed significance evaluation? SPAR models typically address only internal events (with limited fire modeling capability). From industry's perspective, the SPAR models contain pessimistic reliability and HEP inputs, which could strongly influence the SPAR results involving FLEX issues. Many stations have not incorporated FLEX into their PRA models of record yet, making it difficult to cross-check the SPAR results.

14. **Why Default to a Detailed Risk Evaluation?**: Although plant-specific, FLEX credit in base models generally has a small risk impact. In an engineering condition assessment (e.g., an SDP case), FLEX may have a bigger impact, especially in cases where Station Blackout and loss of power scenarios dominate. Nonetheless, FLEX unavailability (even for a full year) would not reach even a moderate safety significance result.

    Even in a seismic PRA (SPRA) model, where FLEX is being credited for a beyond design basis external event, the components are not risk significant. This is because seismic importance is generally driven by common cause issues (i.e., correlated failures). By design, FLEX equipment is located and installed to limit the impact of the initiating event (seismic, flood, wind) associated with this hazard.

15. **FLEX Unavailability:** Attempting to quantify FLEX unavailability in the detailed risk evaluation appears to be of very low value. Therefore, any screening or significance analysis should be limited to a qualitative analysis (i.e., industry should not be prompted to a "science project" to quantify).

16. **Fuel Clad Integrity Called Out in Exhibit 3:** Why is Fuel Cladding Integrity called out in three new questions in Exhibit 3?

Comments on Draft Revised Attachment 4

1. **Missing Basis Information**: As above in the comments on Appendix A, Attachment 4 suffers from the same lack of explicit bases for the proposed changes. A raft of internal Feedback Forms is provided in the Revision History table, but these non-public sources are no help in explaining why the staff is proposing the changes shown in the proposed revision of Attachment 4.

2. **Why FLEX in New Item E?** In IMC 0609, Attachment 4, revised Table 2, FLEX is called out specifically in the Mitigating Systems Cornerstone column (item E on page 7) but there is already an External Events Mitigating Systems category (Item B on page 6). Why is FLEX singled out as a new item E? It should either be incorporated into Item B or be a subset of item B.

    In the Initiating Events cornerstone, the external events of interest are limited to fire and internal flooding. Other external events, in the context of the Initiating Events cornerstone, are not

applicable because the licensee does not have control over these events (e.g., tornado, hurricane). However, the licensee does have control over the systems used to mitigate an external event and that is covered in the Mitigating Systems section (Exhibit 2).

3. **Mitigating External Hazards Perspective**: Any quantitative evaluation of a FLEX issue must be considered part of the Mitigating Systems cornerstone, which consists primarily of Internal Events (including internal flooding) and Fire modeling. FLEX was designed and implemented to mitigate External Hazards (extreme beyond design basis events) and should be evaluated from that perspective, not from the perspective of internal events or fire.

4. **Logic in Table 3, A.1**: The logic of Table 3, Section A, Question 1 is unclear. Why does Question 1 direct the user to Appendix A for findings involving defueled conditions or fuel handling issues?

5. **Logic in Table 3, A.2:** Why is the reference to RHR [Residual Heat Removal] replaced with the longer and more ambiguous term “the system used to remove residual heat” in the Note below Question A.2?