

Comments on Draft IMC 0609, Appendix M and its Basis Document

No.	Location	Comments on Draft Appendix M
1.	General Comment	As compared to the previous revision of Appendix M, this draft appears to be a more cumbersome way of achieving the same objectives. Once the guidance is determined to be in a near final state, it should be table-topped using existing examples to determine whether the expected results were achieved and whether they are repeatable.
2.	General Comment	The net effect of this draft Appendix M appears to be to drive the user to confirm an initial bounding assessment for the SDP, rather than making an unbiased evaluation of significance.
3.	General Comment	The focus of Appendix M evaluations should be impact on Defense-in-Depth, with better links to other documents, particularly the draft RG 1.174 R3 and the EPRI Risk Aggregation Report (EPRI-3002003116).
4.	General Comment	Given the link to evaluation of Defense-in-Depth concepts addressed in RG 1.174, this revision of Appendix M should follow, rather than precede, the development of RG 1.174, R3.
5.	General Comment	There is no structured guidance for reaching a conclusion. NRC should consider using guidance from NEI 00-04 (based on the concepts used to develop the Phase 2 Workbooks) as a starting point.
6.	General Comment	If there is a model, the guidance in EPRI-3002003116 should be used to determine if the model is appropriate for use and what limitations or enhancements are needed. This should be done for all quantitative SDPs, even if App M is not used directly.
7.	Section 1.0	The text of Section 1.0 goes far beyond "Purpose". The text should be simplified to eliminate what looks like entry criteria (lines 6-13) and an avoidance criterion (lines 15-20).
8.	Section 1.0, line 8	RE: [Use App. M when PRA methods and tools] <i>"...including the existing significance determination process (SDP) appendices, are not <u>available</u> to assesses the significance..."</i> (Emphasis added). How does the word " <i>available</i> " apply to existing SDP appendices?
9.	Section 1.0, lines 10-11	<i>"Large uncertainties of modeling and other influential assumptions"</i> are not good examples, as they are better handled by quantitative tools. It also isn't clear if Appendix M is used for the preliminary evaluation of significance if Appendix M would be required to be used for the final evaluation.

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10.	Section 2.0	What does the NRC plan to do to ensure the Entry Criteria in the draft Appendix M are consistent with the criteria for use of Appendix M presented elsewhere (e.g., in IMC 0609, Attachment 4 (the “SDP Router”); IMC 0609, Appendix A (the “At-Power” SDP); the draft Appendix O SDP)? If the criteria elsewhere direct the user to Appendix M and the Entry Criteria in Appendix M block use of Appendix M, the inspector would be left in limbo.
11.	Section 2.0, lines 28-29	RE: “...within the established SDP timeliness goals.” Appendix M should not be used merely to ensure an SDP timeliness goal is met. Recommend this phrase and all other mentions of using Appendix M to meet SDP timeliness goals be deleted from this document.
12.	Section 2.0.b, lines 36-39	RE: “ <i>b. The available quantitative SDP tools are not adequate to provide a preliminary significance determination due to complexities that affect a timely quantitative assessment (e.g., large uncertainties of PRA modeling and other influential assumptions),</i> ” What is the definition of “adequate”? It is suggested the NRC should use the concepts in the EPRI Aggregation Report to make this determination.
13.	Section 2.0.c, lines 41-43	RE: “ <i>c. Additional SDP tools that involve <u>extensive</u> resources are needed to assess significance of inspection findings of unique complexities (e.g. findings associated with natural hazards).</i> ” (Emphasis added). What is the definition of “extensive”?
14.	Section 3.0, second paragraph, lines 18-21	In the final sentence, the section after the last comma should be deleted. Meeting the timeliness goal for the SDP should never be a sole basis for entry into the Appendix M process. Reasonable timeframes for completing the extent of evaluation warranted by the complexity of the issues should be negotiated with the Region using the appropriate levels of elevation through regional management.
15.	Section 3.0, General Comment	1: How is the Applicability section intended to differ from Section 2.0, Entry Conditions? As written, Section 3.0 simply repeats most of the Entry Conditions. 2: The second paragraph (lines 9-16) appears to present procedural steps the Significance and Enforcement Review Panel (SERP) should follow. Is it appropriate to prescribe such steps here in Appendix M rather than in IMC 0609, Attachment 1, the document governing the SERP process? Shouldn’t the SERP process requirements be presented in one place only, to ensure configuration control?
16.	Section 4.01, line 17	Strike “Attachment 1.4.1.1”. This reference appears to be incorrect.
17.	Section 4.01, line 20	The bounding analysis is bounding only if it provides both worst and best case estimates of significance.

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18.	Section 4.01, line 27	The last sentence in this section refers to “Step 4.2 below”. This should refer to “Step 4.02 below”.
19.	Section 4.02a, line 43, fourth bullet	RE: <i>“Did the Licensee Use <u>Effective Performance Monitoring Strategies</u>?”</i> (emphasis added) 1: Where and how is the term “Effective Performance Monitoring Strategies” defined? 2: Where is the relationship between performance monitoring and risk significance defined and described? This comment also applies to 4.02b, fourth bullet; 4.02c, second bullet.
20.	Section 4.02a, page 6 in the file, line 2, second bullet	RE: <i>“Are there Additional Relevant Decision Attributes to Consider?”</i> Where and how is this criterion defined? [This comment also applies to section 4.02b and 4.02c.]
21.	Section 4.02b, line11, third bullet	RE: <i>“Did the Licensee Comply with Regulatory Guidelines?”</i> As discussed in the accompanying comments on the Appendix M Technical Basis document (MC 0308, Attachment 3), this criterion should not be relevant for determining significance, especially given that no credit or penalty is given for a history of compliance or noncompliance. Compliance history is a factor in traditional enforcement credit and should not be a factor in determining significance of a finding. This comment also applies to the other sections of this procedure where this criterion is referenced [4.02.c, 4.04.a.3, 4.04.b.3, 4.04.c.1 and the associated flowcharts in the attachments].
22.	Section 4.02b, line12, fourth bullet	The operating experience (OE) attribute of performance monitoring is too subjective an area to use for penalty or credit since the likelihood of finding OE that could be relevant is high given the substantial number of cumulative operating reactor years. The other performance monitoring strategies listed in the basis document may be applicable in some cases. This comment also applies to the other sections of this procedure where this criterion is referenced [4.02.c, 4.04.a.4, 4.04.b.4, 4.04.c.2 and the associated flowcharts in the attachments] .
23.	Section 4.03, top of page, lines 1-3	RE: <i>“If one or more of these factors are assessed to have high influence, it is feasible to conclude that the Defense-in-Depth decision attribute has a high influence on the decision making.”</i> What is the basis for this statement? By this statement, DID would always be ranked as High.

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24.	Section 4.04, lines 16-24	<p>RE: <i>“At this point, the assessment and evaluation of the effect of the PD on each decision attribute listed in the applicable Entry Condition attachment are completed. When making a decision on the risk significance of a PD, the decision maker should consider the importance of each decision attribute that would affect the safety of the plant, and how each decision attribute should be weighted for consideration in making the final decision. It is noted that a particular decision attribute identified for a PD may have less weight than the similar decision attribute identified for assessment of a different PD. Thus, an integrated approach that collectively considers the effect of the PD on each decision attribute would lead to a more objective decision outcome.”</i></p> <p>This section seems especially subjective and likely to foil the desired outcome of making Appendix M results repeatable.</p>
25.	Section 4.04, lines 26-29	<p>RE: <i>“There may be situations where the initial bounding assessment shows the initial significance of a PD is Greater than Green, yet the assessment of each decision attribute shows that the PD is not significantly affected by any decision attribute under consideration. In these circumstances, it is feasible to determine that the significance of the finding remains as it was initially assessed.”</i></p> <p>When would the initial bounding analysis be the best reflection of risk significance? Please explain.</p>
26.	Section 4.04a, line 36	<p>RE: <i>“However, this change should not exceed the significance established by an <u>initial bounding assessment</u>”</i> (Emphasis added)</p> <p>If a quantitative tool is not available, how would the NRC determine the initial bounding assessment?</p>
27.	Section 4.04a.1, line 45	<p>RE: Defense-in-Depth Decision Attribute</p> <p>Where is the scope of this attribute defined?</p>
28.	Section 4.04a.2, line 11	<p>RE: Safety Margins Decision Attribute</p> <p>Where is this attribute defined? Where is the definition of what constitutes high, medium and low degradation of this attribute?</p>
29.	Section 4.04a.3, lines 25-29	<p>RE: <i>“A PD that is significantly affected by regulatory compliance issues may justify a change in increased significance. If the licensee has repeatedly been in noncompliance with regulatory requirements or missed opportunities to correct a noncompliant condition associated with the PD, there is justification for a change in increased risk significance.”</i></p> <p>This description is unclear. It should be focused on safety significance, not compliance.</p>

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30.	Section 4.04a.4, lines 38-41	RE: Performance Monitoring Decision Attribute Same as previous comment on this attribute
31.	Section 4.04a.5, lines 45-48	RE: <i>"A PD that is significantly affected by extent of condition issues may justify a change in increased significance. If the extent of condition is significantly affecting other decision attributes, such as defense-in-depth and safety margins, a change in increased risk significance should be considered."</i> What is the nexus between "extent of condition issues" and risk significance?
32.	Section 4.04a.6, lines 4-9	RE: <i>"A PD that is significantly affected by the component degradation decision attribute may justify a change in increased significance. This depends on whether the component degradation significantly affects the defense-in-depth or safety margins decision attributes. If the component degradation affects an additional decision attribute, the aggregate effect on each of the other decision attribute should be assessed to make a final decision on risk significance."</i> What is the nexus between "component degradation" and risk significance? How does this differ from Defense-in-Depth as gauges under decision attribute 4.04a.1?
33.	Section 4.04.a.7, line 14	RE: <i>"A PD that is significantly affected by the exposure time decision attribute..."</i> What are the criteria defining "significantly affects"?
34.	Section 4.04.a.9, lines 27-33	The Cross-Cutting Issue attribute should also be eliminated since it has no bearing on the significance of a finding. This attribute and the regulatory compliance attribute are not considered in any other SDP appendices and should not be introduced in Appendix M. They can have the same net effect as aggregating Severity Level IV violations to Severity Level III as was previously done under traditional enforcement; thereby inflating significance of lower level issues. This comment also applies to the other sections of this procedure where this criterion is referenced [4.04.b.6 and the associated flowcharts in the attachments] .

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35.	Attachment 2, Part 1	<p>1: The draft Appendix M Attachment 2, Quantitative SDP Tool Not Available, provides no definitions, criteria, examples or other aids to consistently assess whether an attribute experienced low, medium, or high degradation. Absent such guidance, the draft Appendix M is likely to result in each Region developing its own “feel” for what is low, medium, or high. This would lead to great regional differences.</p> <p>2: It isn’t clear whether the documentation that is created would be made available to the licensee or the public (a licensee preparing for an Appendix M regulatory conference would be shooting in the dark without it).</p> <p>3: In Block 1A, what is meant by “balance” and what are the criteria for determining its effect on significance?</p> <p>4: In Block 1B, programs are part of defense in depth. What criteria are to be used for this determination?</p> <p>5: In Block 1C, what criteria are to be used for this determination?</p> <p>6: In Block 1D, why are there are two questions in this block? How would these two questions be evaluated? What criteria are to be used for this determination?</p> <p>7: In Block 1E, how does NRC envision measuring this?</p> <p>8: In Block 1F, does this Block refer to the General Design Criteria? If so, how would this be evaluated for plants not licensed to the GDC?</p> <p>9: Will each of the elements evaluated in this flowchart be weighed equally?</p>
36.	Attachment 2, Part 2	<p>1: In Block 2A, what constitutes “significant reduction”? Some codes and standards are more important than others.</p> <p>2: In Block 2B, how does this element differ from the compliance criterion presented previously in this document?</p> <p>3: In Block 2C, what constitutes “significant reduction”?</p>

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37.	Attachment 2, Part 3	<p>1: In Block 3A, how does this differ from the compliance criterion presented previously in this document?</p> <p>2: In Block 3B, how does this related to risk significance?</p> <p>3: In Block 3C, if the plant remained within code requirements, what is the concern here?</p> <p>4: In Block 3D, if the SSC continued operating in accordance with the license, what is the performance deficiency? What is its significance?</p> <p>5: In Block 3E, what is the connection to safety?</p>
38.	Attachment 2, Part 4	Same comments as on Part 3 above.

IMC 0308, Attachment 3, Appendix M – Technical Basis for SDP Using IRIDM

No.	Location	Comments on Appendix M Basis Document
1.	Section 5.02.03	This section uses the term Regulatory Guidelines for conditions which licensees are required to comply with and then refers to 10 CFR 50.12 for exemptions. This a non sequitur since 50.12 only applies to regulations. Additionally, this criterion should not be relevant for determining significance, especially given that no credit or penalty is given for a history of compliance or noncompliance. Compliance history is a factor in traditional enforcement credit and should not be a factor in determining significance of a finding.
2.	Section 5.02.04	Items 2 and 3 under this section could impact significance if a condition could've been made more or less significant based on monitoring of parameters that were applicable to the performance deficiency or resulting event or consequence. However, operating experience (OE) is too subjective an area to use for penalty or credit since the likelihood of finding OE that could be relevant is high given the substantial number of cumulative operating reactor years.
3.	Section 5.02.09	Similar to the comment regarding regulatory compliance, this decision attribute should be eliminated since it has no bearing on the significance of a finding. These two areas are not considered in any other SDP appendices and should not be introduced here. They can have the same net effect as aggregating Severity Level IV violations to Severity Level III as was previously done under traditional enforcement; thereby inflating significance.

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