

# IMC 0609, Appendix M, Significance Determination Process Using Qualitative Criteria

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# Purpose:

- Appendix M provides guidance to the NRC management and inspection staff for assessing the significance of inspection findings when the probabilistic risk assessment (PRA) methods and tools, including other significance determination process (SDP) guidance, are not adequate to provide reasonable estimates of the significance of inspection findings within the established SDP timeliness goal of 90 days or less.

# Basis:

- Existing SDP tools aren't suitable for the risk significance determination of certain issues
- Uncertainty associated with the significance outcomes are too large for appropriate decision making
- Small number of findings have challenged the staff's ability to make a timely risk assessment
- Safety significance ultimately determined using qualitative judgments

# Process:

- Must be a Performance Deficiency
- Must be more than minor
- Bounding quantitative and/or qualitative evaluation performed, if feasible, using best available information
- If Green, document in inspection report;
- If potentially >Green, evaluate against the six attributes, as applicable, and document the basis for consideration (Table 4.1); then SERP

# Attributes:

- Impact on one or more Defense-in-Depth elements ?
- Reduction in Safety Margin (quantifiable) ?
- Extent of condition of the PD on other affected equipment ?
- Degree of degradation or unavailability of impacted system(s) ?
- Exposure time for the PD (including missed opportunities to identify earlier) ?
- Likelihood of recovery action success ?

Table 4.1  
Qualitative Decision-Making Attributes for NRC Management Review

Decision Attribute	Applicable to Decision?	Basis for Input to Decision - Provide qualitative and/or quantitative information for management review and decision making.
Finding can be bounded using qualitative and/or quantitative information?		
Defense-in-Depth affected		
Performance Deficiency effect on the Safety Margin maintained?		
The extent the performance deficiency affects other equipment.		
Degree of degradation of failed or unavailable component(s)		
Period of time (exposure time) affect on the performance deficiency.		
The likelihood that the licensee's recovery actions would successfully mitigate the performance deficiency.		
Additional qualitative circumstances associated with the finding that regional management should consider in the evaluation process.		

# Recent Examples:

- Quad Cities – TFPI identified two 10CFR50, Appendix R, Section III.G.2 NCVs. Licensee credited III.G.3 equipment, without full analysis and procedures to support.
- “This finding was not suitable for SDP evaluation, but has been reviewed by NRC management and was determined to be a finding of very low safety significance.”  
(05000254/2006002, dated July 31, 2006)

Questions ?