

## **NRR-DMPSPeM Resource**

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Slides for the subject meeting are attached.

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# 50.69 LARs NRC Observations

January 18, 2018 public meeting

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# Topics

- Status
- Categorization Process Description
- PRA Quality Issues
- F&O Dispositions
- PRA Model Uncertainties
- External Hazards
- Passive Categorization
- Conclusions

# Status

- Pilot submitted August 2012, issued December 2014
- Draft NEI template provided for NRC comment August 2016
  - Template differed from pilot LAR
  - Formal NRC review not requested, not performed
- Public meetings August 2016, January 2017, June 2017, October 2017.
- As of January 18, 2017, 9 LARs based on template in house, many more LARs expected

# Categorization Process Description - Pilot

- The Pilot LAR included a detailed description of the process for categorization
  - Procedures governing process
  - Observation of trial IDP deliberations
  - Observation of results of two systems categorizations
- The Pilot LAR included explanation of how the process was consistent with process endorsed in NEI 00-04
- The pilot review revealed the categorization process is fairly complex and flexible

# Categorization Process

## Description - Template

- 10 CFR 50.69 (b)(2)(i) requires a description of the categorization process in LARs
- Template LAR provides no description of process
  - states that the categorization process will be "in accordance with NEI 00-04"
  - followed by deviations and clarifications
- Previous staff comments on LAR template
  - Text in template descriptive of required information, not boilerplate
  - LAR should address plant specific implementation and procedures
- Template should be revised to provide the required plant specific process description

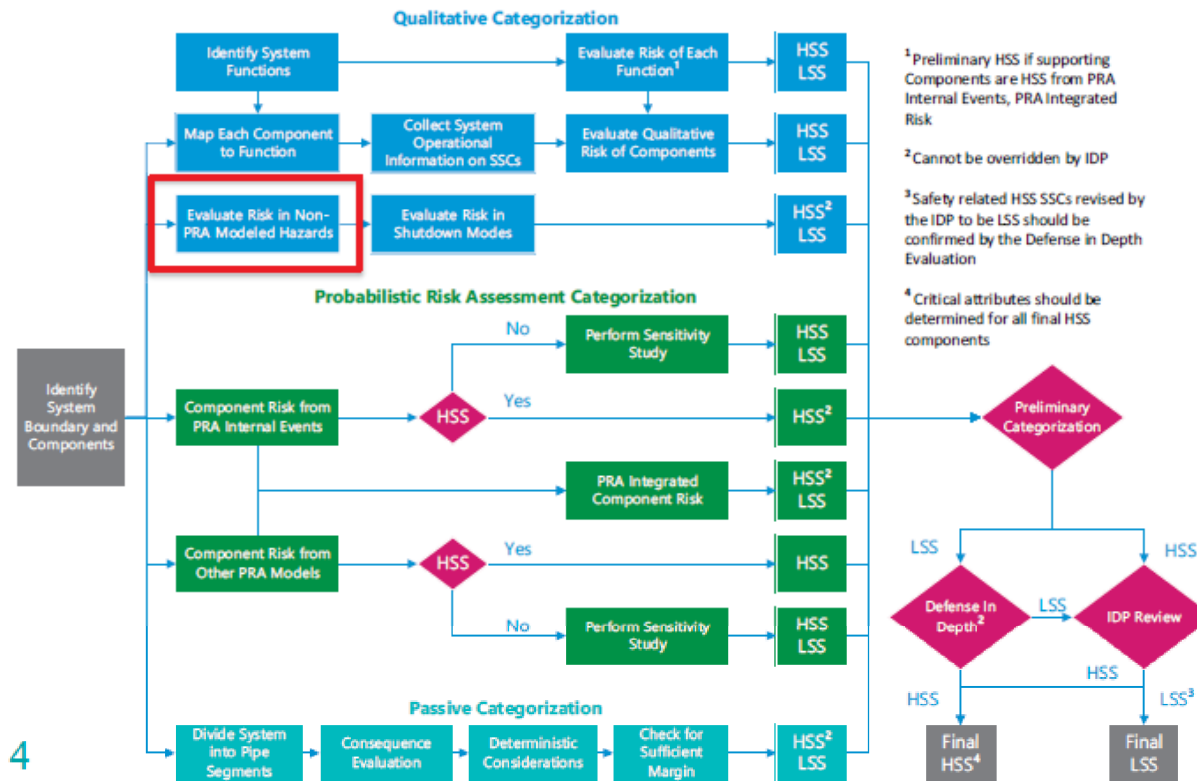
# Categorization Process

## Description – Current LARs

- NEI 00-04 contains a number of steps performed in certain order
  - Changing the steps or the order could impact the results presented to the IDP and thus the categorization
- Staff has developed an RAI requesting a summary description of the process, e.g.,
  - sequence of steps
  - when IDP can re-assign preliminary HSS components
  - component vs. function categorization
  - how the passive categorization integrates in the overall process
- Expectation is that future LARs will include a plant specific summary description of process that will be implemented at the plant



# Categorization Process Description – Plant Specific



# PRA Quality Issues

- Adequate PRA quality needed
- Need the peer and F&O review history up to the date of the LAR
- PRA models need to reflect the current as-built, as operated plant
- All unclosed F&Os need to be reported in the LAR and dispositioned for this application
- General statement that “only methods acceptable to NRC are used” could help minimize RAIs about fire and seismic methods
  - Summary about how this conclusion was reached should be added to the LARs
  - F&Os should be consistent with this observation

# F&O Dispositions

- F&O Disposition should either:
  - justify why the F&O has no impact on the categorization, either with a reasonable technical discussion or a sensitivity study, or
  - summarize an acceptable change to the PRA and commit to implementing it, followed by a focused scope peer review if it was an upgrade
- Insufficient to state that the impact of resolving F&O will be evaluated and fixed if it could affect categorization

# PRA Model Uncertainties

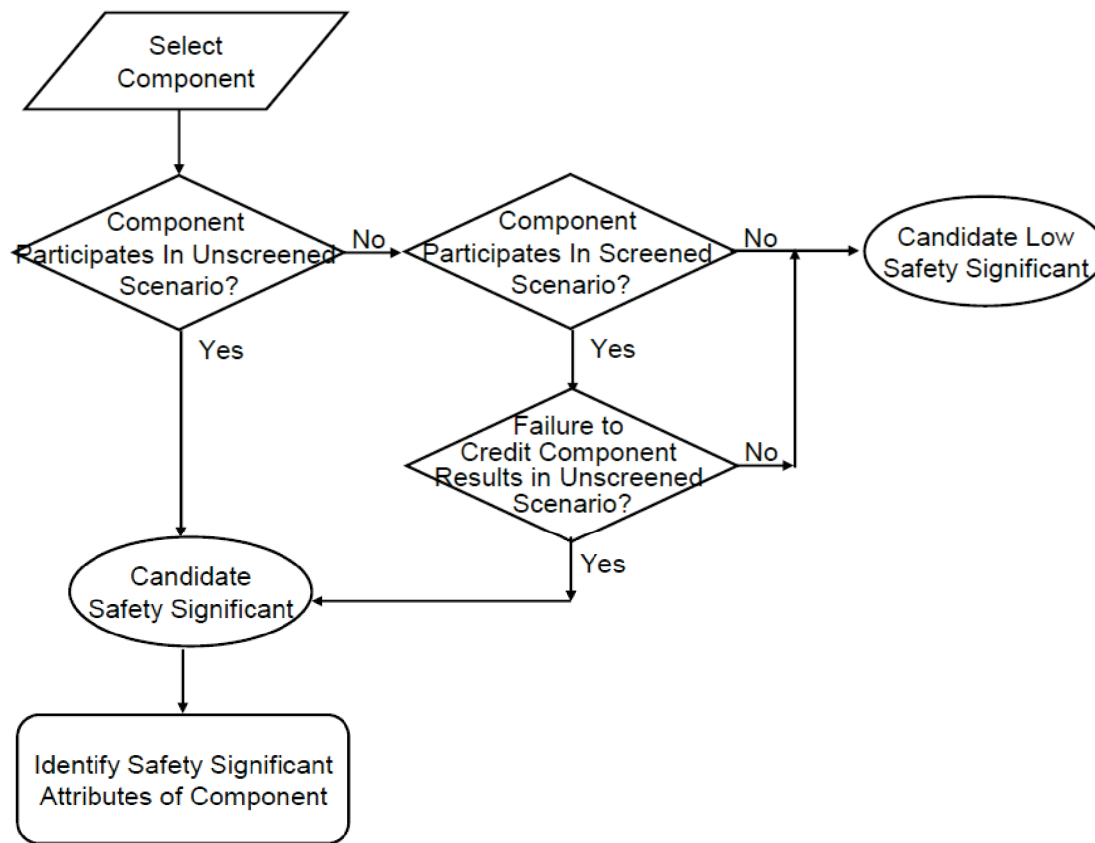
- NEI 00-04 discusses “[A]pplicable sensitivity studies identified in the characterization of PRA adequacy”
- RG 1.201, interprets this as dealing with uncertainties “associated with the licensee’s choice of specific models and assumptions”
- NUREG-1855 discusses identifying key sources of uncertainty and assumptions
- Includes any not commonly accepted methods and assumptions
- Like F&O resolution, disposition for each important model uncertainty is PRA model specific and should be reported in the LAR

# External Hazards

- Fire – PRA, updated FIVE (screening) in NEI 00-04; Safe Shutdown list proposal under review
- Seismic – PRA, updated SMA (screening) in NEI 00-04; generic alternative proposal part of this meeting
- Other screening (e.g., meets the SRP or low CDF) which assigns nothing to HSS based on “low risk” does not meet the guidance in NEI 00-04
  - hazards of less magnitude but higher frequency not automatically low risk
  - SSCs that cause low CDF/LERF might be HSS
  - Step in Fig. 5-6 asks if removal of SSC could result in screened scenario becoming unscreened

# External Hazards (cont'd)

- Figure 5-6 in Section 5.4 of NEI 00-04 summarizes the process that begins with the SSC selected for categorization and then proceeds through the flow chart for each external hazard



# Passive Categorization

- ANO-2 passive categorization methodology excludes all Class 1 pressure boundary components
- Code Case N-660 allows including the following Class 1 components, but includes additional steps
  - i. breaks small enough for makeup provided by the reactor coolant makeup system; or
  - ii. The component is or can be automatically isolated from the reactor coolant system by two valves in series
- RG 1.147, referenced in RG 1.201, accepted Code Class N-660 with limitation that it must be applied to only Code Class 2 and 3, and non-code
- Deviation from ANO-2 or accepted N-660 is not a short term solution

# Conclusions

- LARs need to include categorization process summary description
- RG 1.200 PRA quality guidelines apply
- Any deviations should be minimized
- Methods not accepted by NRC should be avoided
- Consistency with Figure 5-6 should be demonstrated in LAR
- Passive categorization should not deviate from accepted methods in LARs