

Multiple Spurious Operations (MSO) Process Summary

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Multiple Spurious Operations (MSO) Process Overview

- Appendix R / NUREG 0800
- NEI 00-01
- NEI 04-02
 - ▶ Modify approach to include risk methods to address multiple spurious operations
 - ◆ Expert Panel
 - ◆ Identify MSOs prior to Fire PRA Upgrade
 - ◆ Review cut sets using final Fire PRA
 - ◆ Evaluate MSO candidates for inclusion in SSA

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 - ▶ Any and all one at a time
 - ▶ Search for pairs – Part of SSA revalidation
 - ◆ Two valves in series, etc
- NEI 00-01
 - ▶ Chapter 3 deterministic method endorsed by NRC
- NEI 04-02
 - ▶ Required comparison to NEI 00-01 Chapter 3 deterministic method
 - ▶ Will use risk methods to address multiple spurious operations as allowed by RG 1.205.

Multiple Spurious Operations (MSO)

NFPA 805 Risk Informed/Performance Based

- Expert panel – identify scenarios beyond current deterministic analysis
 - ▶ Initiating events
 - ▶ Diversion paths
 - ▶ Multiple train/path spurious operations may need to be evaluated further

Multiple Spurious Operations (MSO)

NFPA 805 Risk Informed/Performance Based

- Utilize PRA internal events information to identify MSOs – prior to Fire PRA upgrade:
 - ▶ Search assumptions for previously screened components based on low probability
 - ▶ Risk ranking of spurious event combinations

Multiple Spurious Operations (MSO)

NFPA 805 Risk Informed/Performance Based

- PRA search using completed Fire PRA
 - ▶ Use similar risk ranking tools as with internal events
 - ◆ Focus search on important functions
 - ▶ Review cutsets
 - ◆ Extract spurious event combinations

Multiple Spurious Operations (MSO) Summary

- Multiple spurious candidates are identified and evaluated for inclusion in the analysis
- Criteria for Acceptability provided in RG 1.205