

Identified Different Methods, Approaches, Factors in Current Applications

Users or Impact **Method or Guidance Development Needed** **Resolve Near-Term or Highest Priority** **Comment**

NFPA 805

Compliant plant base risk calculation (analysis assumes only 1 train available even if more trains may be available)

1+ maybe for control room (CR) use accepted approach - for CR use total CDF (LERF) as delta CDF (LERF) - may need guidance to handle CR differently

Generic

1 CPT probability of spurious operations

all no info coming soon

2 Hot short duration for DC circuits

some no info coming soon

3 Incipient detection (very early warning fire detection system) credit

a. Area-wide few maybe credit beyond regular detection requires justification

b. Control Room/Complex some maybe credit in occupied areas requires justification

c. Used to justify Non-Abandonment 1 no justification needed

4 Non-abandonment with loss of function

most yes need consistent industry approach or guidance

5 Control room abandonment (0.1 CCDP screening value)

most yes need common approach to addressing if screening value applies to plant. Does it bound all actions or just address action at remote panel and add on all other actions

6 Administrative control frequency reduction

a. FAQ 64: includes credit for significant administrative control

some no technical development completed; staff memo coming soon

b. Controls for storage/placement (HRA/value for administrative violation)

1+ yes need common approach or value and should consider FAQ 64

c. Areal factor

0 yes handle separate from FAQ 64

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7 Generically use lower HRR for transient combustibles (even though higher HRR is possible) to compensate for perceived lower frequency of occurrence	few	no	X	use accepted approach - use HRR appropriate for area and adjust frequency (with justification - considering item 6a/b)
8 Fire propagation from self-ignited cable fires, hot work induced cable fires, and junction box fires	few	no		RES addressing self-ignited cable fires and hot work induced cable fires
9 Reducing frequency based on component count (e.g., counting bus ducts differently than FAQ 35)	few	no		database issue - need to change the plant frequency approach to component frequency approach in database to support this change - then would impact ALL - long-term issue
10 Not using 0.001 as lowest value for failure of manual suppression (using values less than 0.001, even 0)	some	no	X	use accepted approach - lowest value of 0.001
11 Not modeling loss of instrumentation (assumed available)	some	no		use accepted approach - consider potential for loss of instrumentation
12 Not putting transient fires at pinch points (i.e., putting them at non-pinch point locations)	some	no	X	use accepted approach - put transient fires at pinch points
13 Not spreading fires to nearby combustibles (e.g., crediting IEEE-383 "qualification" as basis for not assuming fire spread)	some	no	X	use accepted approach - use appropriate spread rates for thermoplastic or thermoset cables
14 Not using lower failure threshold for sensitive electronics	some	no		use accepted approach - use sensitive electronics failure threshold
15 Not updating generic data with plant-specific data (ignition frequency or suppression reliability)	few	no		use accepted approach - update using plant-specific data as appropriate
16 Credit for cable coatings	few	yes		industry provided - believe is related to crediting flammable to eliminate/reduce fire spread

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17 Credit for solid metal bottom cable trays	few	yes		industry provided - believe is related to eliminating/reducing fire spread to other cable trays limited use
18 Diesel generator fire reduction factor	1	yes		
Related to methods with a staff position (though different than the originally authored method)				
1 Electrical cabinet heat release rate or severity factors and cabinet to cabinet fires (one method rejected, one method commented, others exist)	some	yes	X	alternative approaches that are developed should have phenomenological basis
2 Hot work adjustment factor (one method accepted; including administrative control credit)	some	no		
3 Transient fires (one method accepted, some use 75%ile values)	some	no		justification needed if using 75%ile values instead of 98%ile
4 Alignment factor for oil pump fires (one method accepted; similar approach to FAQ 44)	some	no		