

ACRSM-0020  
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Fire Protection Working Group

COMMENTS ON FIRE PROTECTION REG. GUIDE 1.120 (JCE)

1. Not methodical in check-off sense.
2. Too much automation of systems may present hazards greater than fire (i.e., wetting of "redundant" equipment and circuitry).
3. Flooding and collapse of trays during course of fire-fighting may be serious. Water resistance of aged dry cables normally in dry condition unknown.
4. Operator commitment to fire fighting versus safe shutdown not clear.
5. Under some conditions "external" hose stations would be preferable to "go in" to fire areas from external points.
6. Separation within containment not as specifically treated as in spreading room, control room, tunnels, et cetera.
7. Dry-pipe system within containment probably preferable over others. Spurious cold water deluge may impose significant thermal stresses on hot pressurized systems.
8. No precise knowledge appears to be required of what may be challenged by a given fire or fire protection effort.
9. Preliminary announcement of occurrence of automatic sprinkling function would appear desirable.
10. No discussion of merits of passive information center or auxiliary control center characteristics if used. No apparent credit given to or suggestion to use auxiliary control room (backup control).

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11. Because of inevitable severe consequences of class 8 or 9 conditions to contiguous or nearby nuclear units the idea of separate spreading rooms for each unit cannot be used to diminish requirements on each spreading room. Basis for this must be to avoid compounding the safe shutdown problem as regards personnel commitment.
12. Treatment of duct work, damper systems, is adequate, but air and gas transport control is not adequate.
13. Not clear that only "one division" may be sprinkled or inundated at one time, nor are requirements for tests (in context of causing circuit faults). Define boundaries of "wetting down" clearly in terms of divisions of cabling and equipment.
14. Idea of "Fire Manager" is respondent to current emphasis in fires. May result in diminishing "system" responsibility.
15. For the less probable LOCA, redundancy of mitigating system is required (diversity if possible). For the more likely case of fire this is done by invoking direct manual involvement by operators. Is additional "automatic" redundancy not justifiable considering disastrous fire potential in contrast to "LOCA" potential.
16. Fear of taking effective fire extinguishing action (based on ignorance circuits) is one of the main reasons which inhibits prompt and effective steps to minimize fire effects. To counteract this fear, operator cognizance is required of where elements of critical shutdown systems are physically located; including wiring between operating points, not just at operating points. Guide does not address this.

SEE ALSO ITEM 8.

17. Fire Barriers may impose substantial de-rating requirements on cables.

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