

Comments on FPRA FAQ 13-0005, Cable Fires (Special Cases)

- 1) The FAQ is not presented in the format of an FAQ see FPRA FAQ 13-0002 for the correct format.
 - **Response: Agree. Content will be placed into the FAQ template.**
- 2) As the industry and NRC had agreed to consider recent fire events, since old fire events may not reflect the modern power plant design /program practices. The long discussion regarding the 1968 fire doesn't appear to be germane since that occurred prior to current NRC fire regulations. A long description of the fire is provided then a long discussion to describe it's not applicable. The FAQ should simply state there was a fire in 1968 that was significant, but that was before NRC FP regulations so this event not considered further.
 - **Response: The fire was discussed in terms of relevance. The thoroughness of the discussion is necessary due to the constraints on the extent of fire damage in this FAQ resolution. We need to show that this particular fire was considered in the analysis and all of the contributing factors were addressed. Content will be retained.**
- 3) There should be text stating the current method of evaluating cable fire risk is an acceptable method and the new method described within the FAQ is an alternative.
 - **Response: Agree. Sentence has been added.**
- 4) Section 3 Step 1 - It appears the first step (1.1) should be a screen to identify those cable trays with FPRA cable in them in a physical analysis unit. The remainder of the cable trays screen out because its assumed the fire is contained to the initiating tray with no propagation. Then you calculate a CCDP for the remaining trays step (1.2).
 - **Response: Agree, text has been edited.**
- 5) The Subsequent Screening Steps should be numbered Step 3 then 1,2,3....
 - **Response: Agree, section is numbered.**
- 6) The Subsequent Screening steps appear to be multiple methods with no basis for the methods provided within the FAQ discussion / basis sections.
 - **Response: The intent of this iterative process is to identify only cable trays with values for CCDP that are risk significant, and then the analyses can stop. This point is made in the paragraph following the subsequent screening steps.**
- 7) Sub Screening Step 7- based on an earlier statement you only need to calculate a CCDP for cable tray with FPRA cable in them this Sub Screening step in not required these trays are already screened out and no CCDP was calculated.
 - **Response: Agree, however, text left in for clarity.**
- 8) Sub Screen Step 7 - The paragraph following this section appears to belong in the initial parts of Section 6 and not at the end as its describing the methods and purpose.
 - **Response: This paragraph wraps up and provides closure to the method. It will be retained, especially due to the removal of the under-ventilated discussion following it.**
- 9) The inadequate or under ventilated conditions guidance has no basis and it's unclear as to the intent, and "under-ventilated" is not a clearly defined term. It's not clear if its referring to cases where the unit/area/room is under ventilated during normal conditions causing the cables operate at elevated temperatures when energized or the case where the ventilation may be inadequate to carry away the cable fire HR. Regardless of the intent, the industry OE /fire events include both well ventilated and moderately ventilated and under ventilated conditions so the fire events database bounds all conditions already and no special treatment is required. The industry fire testing discussed would not have included ventilation that was sufficient to dissipate the heat from the ignition source or cable fires because that would skew the fire test data and purpose of the testing which was to investigate fire propagation in cables. Additionally, the statements in this treatment conflict with the current guidance

and earlier statements within this methodology which state qualified cable is not in scope of this methodology.

- **Response: Agree that no special treatment is needed for underventilated conditions. This section has been deleted.**

10) Consider allowing suppression credit. No credit for suppression suggests that these are fires with no growth period (like in the case of high energy arcing faults or flammable liquid fires). In the case of cable fires due to welding, the events in EPRI's FEDB suggest a period where the welding sparks begin to affect cable jackets before actual cable damage. Since the recommended process suggest failing an full cable tray, manual suppression from the fire watch using the welding is reasonable for a period of time where the fire grows from a spark or slag falling in the cables to actual cable damage. In the case of self ignited cable fires, since these are overheating events, there is an incipient stage that could be picked up by the smoke detection system before a full tray is in flames. Some credit for manual suppression using the cable fires curve may be appropriate.

- **Response: The growth period is not why the whole cable tray is damaged. The whole tray is damaged because we do not know which specific cable in the tray is damaged first or surrounding cables. The initiating cable could be any cable in the tray. This method does not imply we are igniting a full tray. Therefore, no suppression credit will be included.**