NRC staff comments to Industry's point by point on FAQ 18-0017 – 3/12/2019

Some clarifying statements in response to the NRC comments on FAQ 18-0017:

- Some of the comments provided useful recommendations that would improve and strengthen the FAQ. But rather than responding to individual comments, these statements are intended to ensure a common understanding of the FAQ's purpose and approach.
    - If there is agreement on the fundamental objective, then a revised FAQ can be pursued.

  The staff agrees that that industry and NRC must reach a common understanding of the draft FAQ in order to proceed any further, given the extent of the staff's comments on the draft FAQ. Please reference the staff's former comments on the FAQ.

- FAQ 18-0017 describes a PRA technique for capturing risk insights for fire scenarios where no "plant trip" is required and without introducing overly conservative impacts to CDF/LERF.
    - No required "plant trip" means fire-induced equipment failure would not: 1) cause an automatic trip, 2) prompt a manual trip, and 3) prompt a shutdown in less than (typically) 8 hours.
        - When no "plant trip" is required, NUREG/CR-6850 states that no initiator need be assigned, or the analyst may conservatively assign a "reactor trip" if in doubt.
        - To the extent that the operator has the discretion to shut down the plant beyond any such required plant trip, this technique represents a more realistic treatment than making an "all or nothing" assumption.
    - As long as the condition trip probabilities yield cutsets but do not inflate CDF/LERF, the actual values are not important. But, the selected values (i.e., 0.1 and 0.01) are reasonable for typical screening purposes.

  The staff is still concerned about the conditions that must exist to conclude that fire induced equipment failure would not produce an automatic trip. For example, since some cables may remain untraced in a fire area, the staff has trouble concluding that an automatic trip would not occur. Is this consistent with industry's view?

  Furthermore, in order to improve realism, the conditional trip probabilities must be justified. Currently, these probabilities are proposed, but seem arbitrary as they contain no basis other than they support a graded approach to the problem. The validity of a graded approach will lie in the justification for the different probabilities, if that case can be made.

- Input from operators is used but the technique described in FAQ 18-0017 is not related to HRA.
    - In particular, this technique does not credit operator action to mitigate the consequences of the trip. The actions of the operator factor into the initiator.

- Under the conditions established in FAQ 18-0017, there can be no procedure requiring the operator to initiate a reactor trip. If one existed or was created, then this technique would not apply.

The staff is interested in the basis in order to understand what must go into the development of the probabilities.

- The technique in FAQ 18-0017 is consider a good approach for capturing risk insights but is not mandatory. Analysts may continue either to assign no initiator or to assume a reactor trip and be in full compliance with NUREG/CR-6850.

  The staff cannot be certain if this approach, if developed, will have any bearing upon the validity of prior analysis approaches.