

Summary of the 14th Technical Advisory Committee (TAC) Meeting

Date: July 27, 2021
Place: Nuclear Risk Research Center (NRRC), Central Research Institute of Electric Power Industry
Participants:
TAC: Mr. Stetkar (Chair), Mr. Afzali, Dr. Chokshi, Mr. Miraucourt, Prof. Takada, Prof. Yamaguchi
NRRC: Dr. Apostolakis (Director), Experts of the Nuclear Risk Research Center
Observers: The Japanese Utilities and Vendors, Federation of Electric Power Companies of Japan (FEPC), and Atomic Energy Association (ATENA)

Proceedings

The topics on Fire PRA Guide (FPRAG) and the trial application (Model plant PRA) were discussed. NRRC will respond within several weeks to about 70-pages document of Mr. Stetkar's technical comments on the FPRAG.

Topic 1 : Road Map and Recent Major Outcomes of Fire PRA (FPRA) Research

- NRRC presented "Road Map and Recent Major Outcomes of FPRA Research".

Topic 2 : Response on RIDM Application, Feedback from stakeholders, Scope, Peer review, Walkdown

- NRRC presented "Response on RIDM Application, Feedback from stakeholders, Scope, Peer review, and Walkdown."
- TAC members commented as follows:
 - Although the expression "burden reduction" through the utilization of risk information is used in the NRRC materials, this is not the only purpose of RIDM. One of the most important goals is not the relaxation of regulatory requirements for safety enhancement measures through proper plant operation and the concentration of the resources on safety-critical matters but the optimization of them. In the United States, the parallel development of PRA methodology and utilization of risk information caused rework and adverse effects. I would like to recommend that Japan work on the utilization of risk information based on the lessons learned from the failure experience in the United States.

- Peer review is important in conducting PRA under the following conditions: (1) the Regulatory authority accepts the importance of peer review and (2) the peer review process is trusted by the stakeholders.
- The idea to develop the LPSD FPRA guide is not recommended. It is sufficient to revise the following three points regarding the LPSD FPRA: (1) plant response model, (2) fire ignition frequencies and (3) fire of transient combustible materials.
- Walkdown is important, and it is recommended to describe the form in the guide.

Topic 3 : Estimation method of Fire Ignition Frequencies of the Japanese NPPs

- NRRC presented “the estimation method of fire ignition frequencies of the Japanese NPPs.”
- TAC members commented as follows:
 - The fire ignition frequency is very important. We will check the contents of the presentation materials and send our comments by mid-August.

Topic 4 : Trial Application of NRRC's FPRAG to Model plant PRA

- NRRC presented "Trial Application of NRRC's FPRAG to model plant PRA.”
- TAC members commented as follows:
 - Since the Human Reliability Analysis (HRA) of Task 3 and Task 7 is important, we hope the NRRC's HRA Guide will be used in these tasks. We strongly recommend that the NRRC's HRA team be involved in the implementation of Tasks 3 and 7.
 - In implementing FPRA, the collaboration among the personnel involved in creating FPRA models, implementing walkdown, and defining fire compartments is very important. Therefore, we recommend checking the areas where detailed analysis is required in Phase B when walkdown of phase A is carried out.