

## Summary of the 2nd Technical Advisory Committee (TAC) Meeting

Date: January 19-23, 2015  
Place: Central Research Institute of Electric Power Industry (CRIEPI)

### Participants:

TAC: Mr. Stetkar (Chair), Mr. Afzali, Dr. Chokshi, Mr. Pouget-Abadie, Prof. Takada, Prof. Yamaguchi  
NRRC: Dr. Apostolakis (Head), Experts of Nuclear Risk Research Center for respective topics  
Industry: Representatives of Federation of Electric Power Companies (FEPC), Experts of Shikoku EPCO and Mitsubishi Heavy Industries (MHI) for respective topics

### Proceedings:

#### Jan. 19 (Mon)

#### Topic 1: Ikata Unit 3 PRA Project Plan

- PRA Promotion Task Team, which is organized by FEPC, presented its principal task, organization chart, and schedule for PRA promotion.
- Shikoku EPCO presented its safety improvement activities including PRA utilization, the organization chart of Ikata Unit 3 PRA Project, and various safety measures implemented at Ikata NPP.

#### (Handouts)

- Outline of PRA Promotion Activities
- Risk Informed Safety Improvement Program
- Added Safety Functions of Ikata Unit 3
- Ikata Project Organization Chart

#### Topic 2: Ikata Unit 3 PRA Event Trees

- MHI, as a contractor of Shikoku EPCO for technical support of PRA, presented a sample of the Ikata Unit 3 event trees and how to select initiating events for the Unit 3 PRA for internal events at power.
- TAC plans to send Shikoku EPCO a list of questions about detailed information in the Ikata Unit 3 PRA event trees.

#### (Handouts)

- Ikata Unit 3 Level 1 PRA for Internal Events at Power Event Trees

**Jan.20 (Tue)**

**Topic 3: Ikata Unit 3 PRA Fault Trees**

- MHI presented a sample of the Ikata Unit 3 fault trees and explained Unit 3 design features, success criteria, and system analysis.
- TAC plans to send Shikoku EPCO a list of questions about details in the fault trees for selected front line and support systems.

(Handouts)

- Ikata Unit 3 Level 1 PRA for Internal Events at Power Fault Trees

**Topic 4: Ikata Unit 2 PRA Event Trees**

- MHI presented a sample of the Ikata Unit 2 event trees and the differences in design, selection of initiating events, and event tree success criteria between Unit 2 and Unit 3.
- TAC plans to send Shikoku EPCO a list of questions about detailed information in the Ikata Unit 2 PRA event trees.

(Handouts)

- Ikata Unit 2 PRA for Internal Events at Power Events Trees

**Topic 5: Ikata Site Seismic Hazard Analysis**

- Shikoku EPCO introduced AESJ-SC-P006:2007 as the seismic PRA standard, and presented the results of the seismic hazard evaluation that has been implemented and a summary of the proposed improved evaluation method.

(Handouts)

- Process of Seismic Hazard Evaluation on Ikata Unit 3

**Topic 6: Ikata Site Seismic Fragility Analysis**

- Shikoku EPCO presented the procedure for fragility evaluations that have been implemented and a summary of the proposed improved evaluation method, and reported the results of the plant walkdown for the Ikata seismic PRA project.

(Handouts)

- Process of Seismic Fragility Evaluation on Ikata Unit 3

**Jan. 21 (Wed)**

**Topic 7: Ikata Unit 3 PRA Data Analysis**

- Shikoku EPCO presented the methods for evaluating data such as initiating event frequencies and component failure rates, and the results of the evaluation.
- NRRC presented features of the Japanese generic data for component failure rates, common cause failure analysis, and unavailability analysis.

(Handouts)

- Ikata Unit 3 PRA Data Analysis
- R&D of PRA Parameters for Japanese NPPs
- Common Cause Failure Analysis in Japan
- Unavailability and Recovery Failure Probability

**Topic 8: NRRC Research Plan**

- NRRC presented its process for developing the R&D plan and R&D portfolio.
- The Risk Assessment Research Team of NRRC presented its R&D plan.
- The Risk Assessment Research Team of NRRC presented the current status of research on the issue of recriticality in severe accidents as a specific technical topic.

(Handouts)

- Developing Process of R&D by NRRC
- NRRC R&D Portfolio
- R&D Plan Related to Risk Assessment
- Criticality Issue in Severe Accidents

**Jan. 22 (Thu)**

**Topic 8: NRRC Research Plan**

- The Risk Assessment Research Team of NRRC presented the specific research plans for Fire PRA, Flooding PRA, and Human Reliability Analysis.
- The External Natural Hazard Research Team of NRRC presented its R&D plan, then presented its specific research plans for Tsunami PRA, Seismic Motion / Fragility Assessment, Combination of External Hazards, Volcanic Activities, Tornado, and Fault Displacement.

(Handouts)

- Fire PRA
- Flooding PRA
- Human Reliability Analysis
- R&D Plan related to Natural External Events

**Jan. 23 (Fri)**

**Topic 9: Planning Session**

- TAC, NRRC, and the PRA Promotion Task Team had a general discussion about schedules for this year and plans for the TAC meeting in May.
- The group agreed to a process for the exchange of focused technical information during the periods between TAC meetings to facilitate TAC members' in-depth understanding of complex technical issues.