

Summary of 12th Technical Conference

1. Date: September 1, 2016 (Thur.) 15:00 ~ 17:30
2. Place: Board Room, Otemachi Headquarters, Central Research Institute of Electric Power Industry

3. Participants:

Chair: Yokoo (NRRC)

Members: Furukawa (Hokkaido EPCO, substitute for Maki), Obonai (Tohoku EPCO, substitute for Kato), Igarashi, Kawamura (Tokyo EPCO), Nakagawa, Nagura (Chubu EPCO), Kuwahara (Hokuriku EPCO, substitute for Takahashi), Oishi, Suzuki, Urata (Kansai EPCO, substitute for Yoshihara), Hayashi (Chugoku EPCO, substitute for Iwasaki), Nishimura (Shikoku EPCO, substitute for Kawanishi), Okano (Kyushu EPCO), Ishizaka (JAPC), Okamura (JNFL), Kuramoto (J-Power), Noda (Toshiba), Konno (Hitachi-GE), Kono (MHI), Kurata (JANSI), Takahashi, Shimeno, Zama, Sakai, Ueda, Yamamoto (NRRC)

Observer: Ono (FEPC), Apostolakis, Omoto (NRRC)

4. Proceedings:

(1) Tentative R&D Plan for FY2017

NRRC made a presentation on the tentative R&D plan for FY2017.

(2) Tentative Action Plan of RIDM Promotion Team

The RIDM promotion team presented its major near-term activities.

(Remarks from members) (◆Industry members, ◇CRIEPI members)

- ◆We expect much contribution from the activities and the strategic plan of the RIDM team. It is important to promote NRRC's various R&D activities as a concerted effort based on this strategy so that we can make steady progress in the practical application at the sites.
- ◇As the RIDM team starts developing a strategic plan, NRRC can obtain a clearer understanding of each R&D such as when and where the output of R&D will be applied. Also, as we have made progress in PRA development,

we have become aware of a new task to connect internal event PRA models and external natural event PRA models. In this context, NRRC's individual teams must work in a closer collaboration.

- ◇ So as to provide research outcomes in a more timely manner, we are discussing enhanced release of interim results in addition to the final output. (Apostolakis)
- ◇ We are engaged in the Senior Seismic Hazard Analysis Committee (SSHAC) process for the Ikata 3 pilot project. It is an effort to demonstrate the process which has a proven track record in the US. It also represents a first opportunity for Japanese and US experts to develop a seismic hazard evaluation method in Japan by introducing a probabilistic approach.
- ◆ We expect that insights and information gained from the demonstration of the SSHAC process will be shared by all utilities.

(3) Discussion with NRRC Head

(Remarks from NRRC Head)

- ◇ It was an issue of controversy in the US whether or not to integrate the internal event PRA models and external event PRA models because the evaluation of external events entails far greater uncertainties in comparison to the internal event PRA. But, from a practical viewpoint of risk management, we must concentrate on the high probability area in the probability distribution of CDF, not on extremely low numbers such as 10^{-9} or 10^{-10} . (Apostolakis)
- ◇ Whenever the topic of risk-informed regulation came up in the US, some focused only on the shortcomings or deficiencies of PRA, without mentioning similar problems of the deterministic approach. But it is only PRA that could identify the specific accident sequences in a loss of all AC power event and also highlight the importance of support system and human error. We must recognize there is no perfect regulatory system and each system (probabilistic and deterministic) has its own advantages and disadvantages. (Apostolakis)