Summary of the
Nuclear Risk Research Center Workshop in 2019
-Improvement of Risk Management on Nuclear Power Plants-

Purpose of the Workshop

In order to continue the safe operation of nuclear power plants, it is necessary to continuously improve the risk management processes at the utilities. The NRRC and the industry are developing technologies to support risk management following the objectives and recommended actions in the Strategic Plan and the Action Plan that were announced at the NRRC sponsored symposium in February 2018.

This time, we organized a workshop that would allow the exchange of technical views on the NRRC and utilities' activities, between the NRRC and domestic and international experts from the industry and regulatory authorities.

Event Information

Host	Nuclear Risk Research Center, CRIEPI, in coordination with OECD/NEA WGRISK
Date	January 29, Tuesday and 30, Wednesday, 2019
Venue	Fukutake Hall, University of Tokyo
Participants	189 (presenters: about 20, utility experts: about 70, Nuclear Regulation Authority experts: about 15 and Atomic Energy Society of Japan)
Language	Japanese-English simultaneous translation

Program

Attachment (Link)

Summary

【Opening Session】

After welcoming address by Dr. George Apostolakis, the Head of Nuclear Risk Research Center, Mr. William Magwood, Director General of Nuclear Energy Agency, OECD gave the opening address and asked for active discussion.

【Session A: Enhancing Risk Assessment Technologies】

Initiatives and tasks aimed at putting the probabilistic risk assessment (PRA) technology into practical use were introduced.

As for Level 1 PRA, the status of the improvement of PRA technology which was modeled on Shikoku Electric Power Company's Ikata Nuclear Power Station Unit 3 as Japan's efforts were presented. Then, the status of PRA development and utilization in USA was reported, and issues in promoting PRA's improvement in Japan were discussed.

As for Level 2 PRA, the status of PRA utilization in USA and OECD/NEA member countries was reported.

After that, Japanese experts reported the guideline for Human Reliability Analysis (HRA) and the implementation guidance for fire PRA in nuclear power plant as an example of efforts to enhance PRA technology. Regarding natural external events PRAs, the Research and Development (R&D) status of earthquake and tsunami were reported by domestic and international experts. Also the development of PRA Standards in the USA was presented.

【Session B; ROP (Reactor Oversight Process): An example of Risk Management】

The preparations and challenges for the full-scale introduction of ROP in FY 2020 were reported from both the utilities and the regulatory authorities.

Experts with experiences of foreign utilities and regulatory authority made recommendations and suggestions to Japan.

【Session C; Discussions on overall program】

An academic organization's expert gave a presentation on their support for risk management activities in nuclear industry. Finally, based on the presentations and discussions in the overall program, we conducted a general discussion with all participants with moderator the Head of NRRC, Dr. Apostolakis.

Results

In this workshop, the R&D activities of NRRC were also reported, and they were proved to be effective. NRRC also recognized that it was important to continue R&D activities on PRA in collaboration with utilities and domestic and international experts.

To operate and utilize ROP, which will be introduced in full scale in FY 2020, we have clarified what the utilities, the regulatory authorities and NRRC should work on about PRAs.

In addition, it was confirmed that the introduction of ROP makes it possible for the utilities and the regulatory authorities to enhance safety with the same standards, and to greatly contribute to the improvement of nuclear safety.