

## Draft Program

### A Workshop on Proper Treatment of Uncertainties in Reactor Safety Assessment

- How can it be augmented by utilizing probabilistic approaches? -

#### Purpose of the Workshop

It is globally recognized that making continuous efforts to improve and enhance risk-informed decision making (RIDM) processes is an essential part of achieving safe design, construction and operation of nuclear facilities. In January 2019, the NRRC hosted, in coordination with the OECD/NEA WGRISK, a workshop on this subject. International experts and knowledgeable people from the industry, authority and academia participated in this workshop and discussed the status of development and utilization of RIDM processes: <https://criepi.denken.or.jp/en/nrrc/event.html#2019>.

Now, as a sequel to that workshop, the NRRC and the OECD/NEA co-host a workshop to further discuss the potential benefit of applying RIDM processes, focusing on the treatment of uncertainties.

#### Event Information

Host: CRIEPI-NRRC and OECD/NEA

Date: May 26 and 27, 2020

Venue: Tokyo

Participants: ~ 100, invited from industry, government and academic society

(After the workshop, presentations and summary of discussions will be posted on NRRC's & OECD/NEA's homepages)

Language: English - Japanese simultaneous translation

Tentative Program

[Day 1]

09:00 – 10:00 Opening Session

Chair: T. Yokoo (NRRC)

Talk 1 G. Apostolakis (NRRC)

Welcoming Remark

Talk 2 W. Magwood (OECD/NEA)

Opening Remark

10:15 – 11:45 Session 1, Introduction

Chair: G. Apostolakis (NRRC)

Talk 1 a professor

- On the sources of uncertainties such as Parameters/Models/Completeness, their nature i.e. aleatory vs. epistemic.

Talk 2 an expert

- On the history and current status of technology development for the treatment of uncertainties.

Discussions

11:45 – 13:00 Lunch

13:00 – 15:30 Session 2, Core Damage Accident Assessment

Chair: an expert

Talk 1 an expert

- On the current practice of treating uncertainties in deterministic analysis and L1 internal PRA, including challenges.

Talk 2 and Talk 3 experts

- On the actual issues in practical applications such as SDP.

Talk 4 and Talk 5 experts

- On the R&D for technology improvement, such as HRA, MUPRA, etc.

Discussions

15:45 – 17:45 Session 3, Radioactive Release Assessment

Chair: a professor

Talk 1 an expert

- On the current practice of treating uncertainties in deterministic analysis and L2, L3 PRA, including challenges.

Talk 2 an expert

- On the treatment of uncertainties in RIDM; actual issues in practical applications.

Talk 3 and Talk 4 experts

- On the R&D for technology improvement, such as containment failure scenario simulations, mitigating measures evaluation, etc.

Discussions

18:00 – 19:00 Reception

[Day 2]

09:00 – 12:30 Session 4, External Event Assessment

Chair: an expert

Talk 1

- On the current practice and issues of uncertainty treatment in deterministic analysis and L1 PRA of natural hazards.

Talk 2 and Talk 3 experts

- On the actual issues in practical applications including development of protecting or mitigating measures.

Break

Talk 4 and Talk 5 experts

- On the R&D for technology improvement, such as natural hazards PRA.

Discussions

12:30 – 13:45 Lunch

13:45 – 16:15 Closing session

Chair: G. Apostolakis (NRRC)

Talk 1 a professor

- On the importance of the public discussion on the safety framework that can serve as the basis for reasonable assurance of adequate protection.

Panel discussion all Chairs & Speakers

- Recap. of workshop. The way to go forward - practical applications, R&D, etc.

Break 15min.

Discussions

Closing remark