

NRRC Activities and Future Direction

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Overview

- **Completed Projects**

- HRA Guide under testing
- Report on Survey of U.S. Experience with RIDM (available on the NRRC website:
<http://criepi.denken.or.jp/jp/nrrc/index.html>)

- **On-Going Projects**

- RIDM Strategic Plan
- Fire PRA Guide
- Research on Tsunami, Earthquakes, MUPRA, HRA, et al

Report Contents

“Risk-Informed Decision Making: A Survey of United States Experience”

Chapter 1: Introduction and Summary

Chapter 2: The History of United States Nuclear Regulation

Chapter 3: Case Studies

1. STP - Diagnostic Evaluation
2. STP - Emergency Diesel Generator (EDG) Failure
3. The Emergence of Outage Risk Management
4. Outage Duration and Risk Management
5. Component Risk Significance and Notification
6. Operator Training Insights based on Best-Estimate Accident Analysis
7. Utilizing Insights from Operating Experience
8. Risk Information and Insights in Operational Decision Making
9. Transfer of Emergency Diesel Generator (EDG) Maintenance from Shutdown to On-Line
10. Insights from a Spent Fuel Pool (SFP) PRA
11. Reactor Trip Rates
12. Generation Risk Assessment
13. Building a Safety Culture
14. Risk Monitoring to Integrate Risk Thinking into Daily Plant Status
15. Communicating Risk Insights
16. Successful application of RI-ISI of reactor coolant system piping
17. Risk-Managed Technical Specifications (RMTS)
18. Reactor Oversight Process (ROP)
19. Limited Success of Risk-Informed Graded Quality Assurance (RI-GQA) or Rule 10 CFR 50.69
20. Risk-Informed In-Service Testing

Workshop (June 1, 2017)

Lecturers **Dr. George Apostolakis (NRRC Head);**
Prof. Ali Mosleh (Director, Garrick Institute for the Risk Sciences,
UCLA); Mr. Mark Cunningham (Consultant; formerly USNRC);
Mr. Rick Grantom (Consultant; formerly South Texas Project)

Participants: Total 91

***Nuclear Operators:* 42 (Hokkaido EPCO, Tohoku EPCO, Tokyo Electric Power Company Holdings, Chubu EPCO, Hokuriku EPCO, Kansai EPCO, Chugoku EPCO, Shikoku EPCO, Kyusyu EPCO, JAPC, JNFL, J-Power)**

***Nuclear Industry:* 15 (FEPC, JANSI, Toshiba, Hitachi-GE Nuclear Energy, Mitsubishi Heavy Industries)**

***Government Agencies:* 13 (Nuclear Regulation Authority, Agency for Natural Resources and Energy)**

***CRIEPI NRRC:* 21**

Lectures

- **(Apostolakis) Major lessons learned from U.S. RIDM experience**
 - External interventions for major regulatory changes
 - Cultural challenges
- **(Grantom) Organizational Infrastructure for RIDM**
 - Skill sets required
- **(Cunningham) Reactor Oversight Process**
 - SPAR models
- **(Grantom) Operational Risk Management**
 - All plant personnel should be PRA cognizant