

# NUCLEAR ENERGY & GLOBAL SECURITY



# T E C H N O L O G I E S

## East Asia Forum on Radioactive Waste Management (EAFORM)

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## Background

- **Representatives from waste and spent fuel management organizations in the Republic of Korea, Japan, and Taiwan approach and seek Sandia's support to facilitate a regional dialog (Spring 2006)**
  - All express interest in China participation
- **First planning meeting held in Taiwan (June 2006)**
  - Activities and interactions will take place at the “institute-to-institute” level
  - Taiwan assumed the management responsibilities for the first EAFORM conference in 2006
  - Focus should be on identifying areas for technical cooperation
  - Sandia will offer technical support as appropriate
  - Engage PRC as soon as possible
  - Management of Forum will rotate among primary members every two years
    - Japan assumed management responsibilities in Summer 2007

**Sandia consulted with NNSA, DOE, and State prior to and following June planning meeting**



# Participating Organizations

- **Nuclear utilities and research organizations**
- **Taiwan**
  - **Institute of Nuclear Energy Research (INER)**
  - **Atomic Energy Commission (AEC)**
  - **Taiwan Power Company (TPC)**
- **Japan**
  - **Radioactive Waste Management Funding and Research Center (RWMC)**
  - **Nuclear Waste Management Organization of Japan (NUMO)**
  - **Central Research Institute of Electric Power Industry (CRIEPI)**
- **Republic of Korea**
  - **Korea Atomic Energy Research Institute (KAERI)**
  - **Korea Hydro Nuclear Power Co. (KHNP)**



# Identified Scope of EAFORM Activities

- **Conferences, workshops, and technical visits**
- **Technical collaborations**
  - **Strong sentiment that EAFORM *must* move quickly to technical activities and not just hold meetings if it is to add value to participating organizations**
- **Secure web portal for sharing technical information**
- **Main areas of collaboration**
  - **Spent fuel/HLW management**
  - **LLW and ILW disposal**
  - **SNF and HLW disposal**
  - **Decommissioning and decontamination**
  - **Waste treatment**
  - **Security and safety**





# First EAFORM Conference

- **November 27-30, 2006**
  - Conference held at INER
  - Technical tour of Orchid Island LLW storage site
- **Technical Collaborations**
  - **ROK-Taiwan: Repository performance assessment collaboration**
  - Interest in study of impact of alternative waste forms on repository performance (under consideration)
- **Path forward**
  - Spring 2007 meeting of management committee
  - Fall 2008 Second EAFORM Conference in Japan



First EAFORM Conference, INER



Orchid Island LLW  
Storage Site





## Recent Developments

- **July 2007 Meeting of management committee**
  - **Japan will assume the leadership of EAFORM and host 2<sup>nd</sup> EAFORM conference on October 20-22, 2008**
  - **Japan will lead effort to engage PRC research organizations with the goal of PRC participation in 2008 conference**
  - **Security and safety topics will receive greater attention**
  - **Strong interest in topics related to security and transparency of spent fuel storage sites**
  - **Possibility of including states in Asia considering the development of nuclear energy**



## Opportunities

- **How can EAFORM better support broad USG objectives related to the global expansion of nuclear energy?**
  - Best practices – safety, environmental, regulatory
  - Regional collaboration and/or resource sharing
  - Nonproliferation and security objectives
  - Feedback
- **How should EAFORM coordinate with ongoing activities and/or organizations?**
  - IAEA?



## Summary

- **EAFORM is a unique collaboration**
  - Regionally originated, multilateral collaboration on nuclear spent fuel and waste management
- **EAFORM represents a good opportunity for DOE**
  - Opportunity to influence research and collaboration agendas and activities
  - Opportunity to get feedback on needs and opportunities in the region
- **Significant value for minimal investment**
- **Well suited to accommodate an integrated DOE approach**
  - Support for/ participation in individual technical activities as appropriate