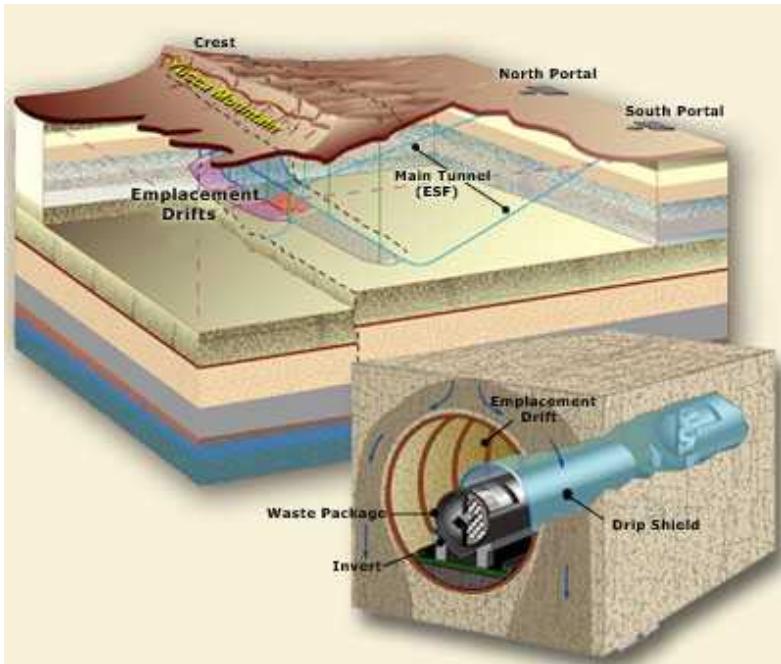


# Low, Intermediate, and High Level Waste Training Program for Korea Hydro & Nuclear Power (KHNP)



Yucca Mountain Repository

**Kay Vugrin, Ph.D.  
Project Manager  
Sandia National Laboratories**

**August 28, 2007**

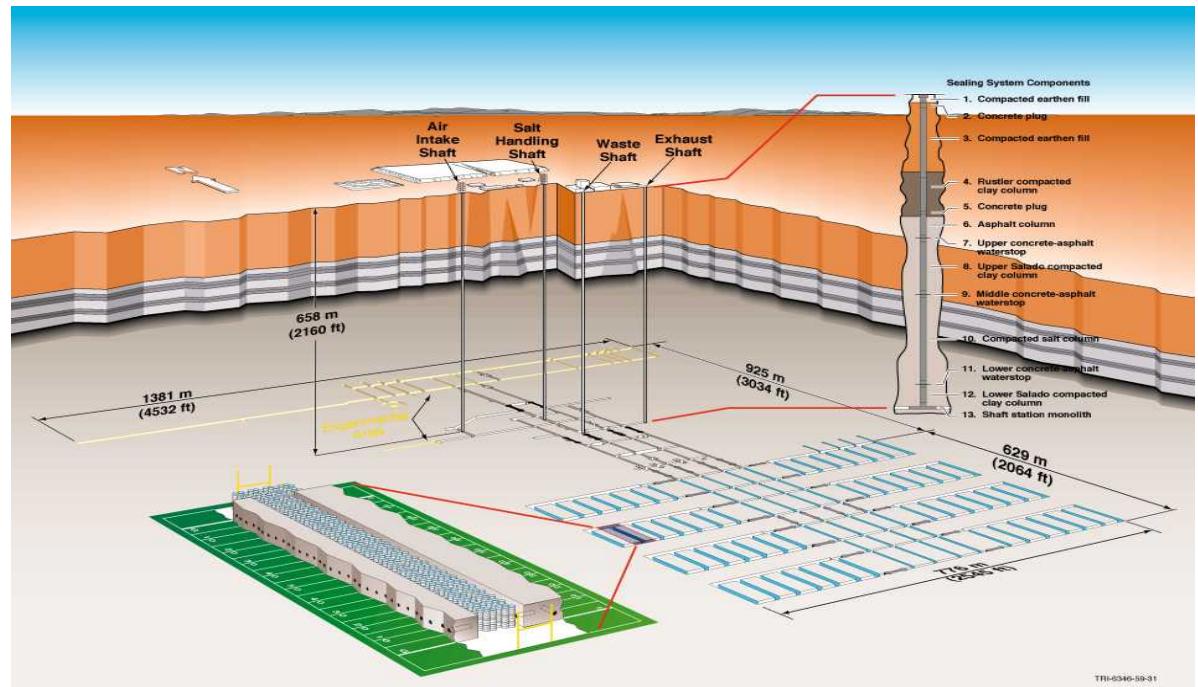
**SAND 2007-xxxP**



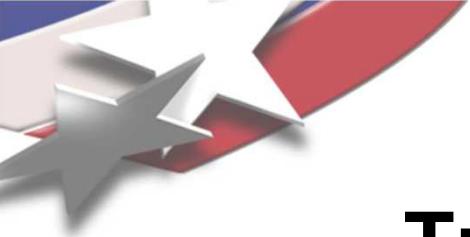
# Outline

---

- Objective
- People
- Curriculum



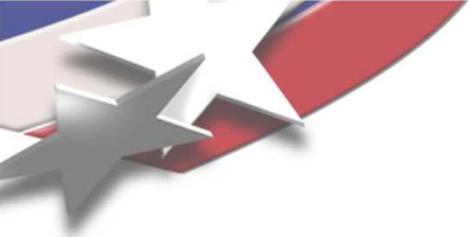
Waste Isolation Pilot Plant



# Training Program Objective

---

- Provide KHN P staff with tools required for development of LILW and HLW repositories in the Republic of Korea
  - Advanced knowledge
  - Capabilities
  - Experience
- Sandia National Laboratories will draw on more than 30 years expertise in repository science (WIPP and YMP) to complete the training program



# Sandia Personnel

---

- Management Team
  - Dave Kessel, Carlsbad Programs Group Senior Manager
  - Moo Lee, Performance Assessment and Decision Analysis Department Manager
  - Kay Vugrin, Project Manager
- More than 100 Sandia National Laboratories staff members and contractors in Carlsbad, NM (WIPP), Las Vegas, NV (YMP), and Albuquerque, NM will support this training effort



# The KHN P Trainees

---

- **Six trainees from KHN P**

- Jin-Goo Huh
- Dong-Hyeun Hwang
- Sang-Gyoo Joo
- Byeoung-Jik Kim
- Eung-il Lee
- Gang-Su Sung



# The KHN P Trainees

---





# Curriculum

---

- The twelve month curriculum includes classroom lecture and on-the-job training activities
- The schedule calls for 31 weeks in the classroom and 20 weeks of on-the-job training
- This week is the fourteenth week of the training program

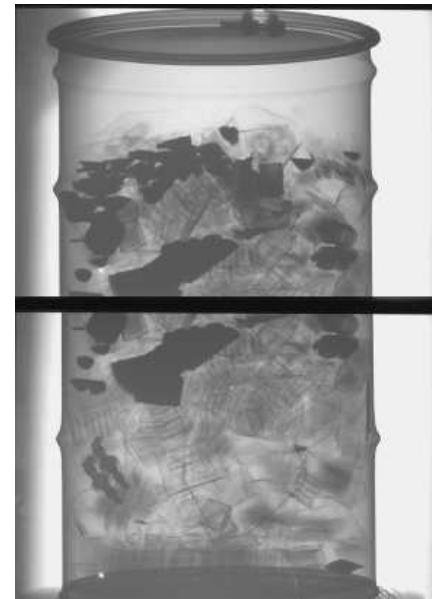




# Completed Training Topics

---

- Quality Assurance
- Regulatory History and Issues
- Ionizing Radiation
- Waste Characterization and Classification



Real-time Radiography



# Completed Training Topics

---

- Repository Siting and Characterization
  - Siting Criteria
  - Site Characterization
  - Data Integration



Geomechanics Test



Drilling Rig



# Completed Training Topics

---

- Packaging and Transport
  - Regulatory Framework
  - Package Development
  - Risk Analysis
  - Operations



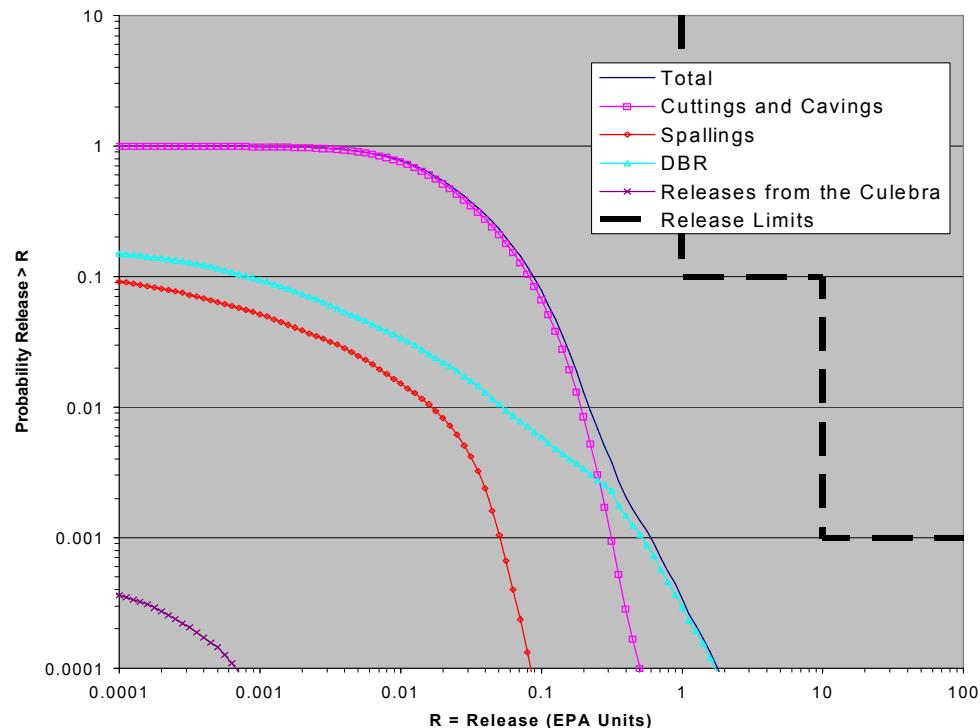
Waste Transport to WIPP



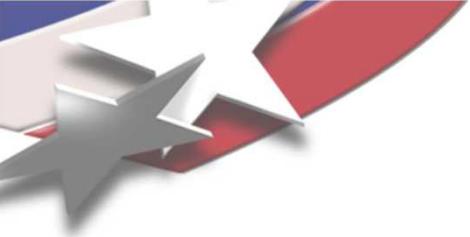
OPEN POOL  
TEST AREA

# Completed Training Topics

- Assembly of a Safety Case
  - Features, Events, and Processes
  - Waste Inventory Issues
  - Performance Assessment Methodologies
  - Numerical Models in Performance Assessment



Calculated Releases



# Future Training Topics

---

- Environmental Monitoring
- Repository Design, Operations, and Closure Plans
- Interim Storage of Spent Fuel
- Transportation of High Level Waste
- Safeguards and Nonproliferation



Package for  
Spent Fuel Storage  
and Transport



# On-the-Job-Training

---

- Tour WIPP, YMP, and Nevada Test Site Facilities
- Stakeholder Interactions (e.g., peer review)
- Additional activities will include technical job assignments





# Questions?

---



**TWILIGHT VIEW OF THE 25 FT. TUNNEL BORING MACHINE ENTERING THE NORTH PORTAL**