

Sept. 17, 2025 14:45~

Hokkaido Summer Institute Advanced Nuclear Waste Management

Outline

Course Objectives

- Understand the sources and characteristics of different classes of nuclear wastes
- Review current technologies for conditioning and treatment of radioactive waste for storage and disposal.
- Learn waste disposal systems and concepts for different classes of wastes in Japan and in France.
- Understand chemical and geochemical mechanisms that govern the long-term strategies and procedures of nuclear waste disposal.

Key Words:

Nuclear waste, waste conditioning, high level waste conditioning, spent fuel reprocessing, nuclear glass, geological disposal, multi-barrier system

Schedule

9/17 (Wed): 1-2 Nuclear Fuel Cycle: Overview / Origin of Radioactive Waste

9/18 (Thur): 3. Spent Fuel / Glass

4. Disposal concept/Engineered Barrier: Overview

5. Engineered Barrier: Clay

9/19 (Fri): 6. Low Level Waste/Fukushima

7. Geological disposal – progress in France, Taiwan, and Japan

8. Student presentation

<Everyone>

- How radioactive waste is managed in your country
 - Origins, categories, quantities, treatment, storage, disposal
 - Disposal facilities

Choose between;

- Site selection and progress in deep geological disposal facilities in your country
 - What is the process of site selection? If the site selection has not started yet, what is the plan?
 - What kind of host rocks are considered?
 - What kind of engineered barrier systems are considered?
 - Compare between different countries
- What kind of radioactive waste is generated from decommissioning of Fukushima Daiichi Nuclear Power Station?
 - Water treatment system
 - Treated water discharge
 - Secondary waste (types and quantities)
 - Characterization of fuel debris