CRIEPI's R&D Program for High Level Radioactive Waste Management

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CRIEPI (Central Research Institute of Electric Power Industry) has been conducting the research program of high level radioactive waste management since 1980's. In 2004, CRIEPI established a Nuclear Fuel Cycle Backend Research Center and this center is responsible for three research programs such as high/low level radioactive waste managements and transport/storage of spent fuel. The objectives of the R&D program of HLW management are as follow;

(1) To support the activity of NUMO (Nuclear Waste Management Organization of Japan) that conducts HLW management.

(2) To develop technologies concerning the HLW management.

We set the short-term (2006-2008) schedule of the R&D program in order to achieve the short-term research target which was decided considering NUMO's HLW management milestone. Our target is to systematize the survey and estimation method for the Preliminary Investigation and to develop element technologies which enable the survey and estimation system more reliable.

Base on the schedule, we have been carrying out research projects whose budget is from not only CRIEPI but METI (Ministry of Economy, Trade and Industry) or NUMO and we recognize following four important research areas related to the HLW management and selected the adequate research item in each research area.

(1) Technology of survey and estimation method for geological condition.

(2) Technology of survey and estimation method for underground cavern stability.

(3) Technology of survey and estimation method for solute migration.

(4) Technology of survey and estimation method for artificial barrier material.

In this presentation, the some of research results will be introduced briefly. Some other research results for HLW/LLW management concerning survey and estimation method for long term stability of geological condition, for geological condition characterization and for underground rock cavern stability will be presented at the poster session.