

## Shallow Underground Disposal of LLW Deemed Fully Viable

On September 1, Japan Nuclear Fuel Ltd. (JNFL) announced that a full-scale investigation had confirmed the viability of constructing a next-phase low-level radioactive waste (LLW) burial center, assumed to be a shallow underground disposal facility.

The investigation, undertaken at the request of the Federation of Electric Power Companies (FEPC), was carried out to the south of the existing facility, the LLW Disposal Center in Rokkasho-mura, to determine whether it would be possible to bury LLW waste with a relatively high level of radioactivity (i.e., shallow underground disposal). Following a preliminary investigation begun in July 2001, the subject investigation ran from November 2002 through March 2005, and considered such issues as geology, underground water, and rock formations.

The results showed a stratum of bedrock 100m underground at the southern plateau, with a very few clefts formed a very long time ago; it is not expected to be active again. Underground water at the site is stable, migrating at a rate of 10cm per year. It contains only small amounts of ingredients that might expedite the deterioration of artificial structures. To investigate the stability of the ground, a test cavity 18m wide and 16m high was excavated. It distorted only about 1cm, confirming that a dynamically stable cavity can be created.

A ministerial ordinance on safety regulation for shallow underground disposal was established in 2000. The Subcommittee on LLW Burial Facilities, under the Special Committee on Radioactive Waste Disposal Safety and Decommissioning Safety, has addressed safety examination guidelines since September 2005. Both committees are under the jurisdiction of Nuclear Safety Commission (NSC).

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