

# The Horonobe Underground Research Laboratory project - Outline of Development of ACROSS -

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Japan Nuclear Cycle Development Institute (JNC) is developing a remote monitoring system using seismic and electromagnetic ACROSS(Accurately Controlled Routinely Operated Signal System), to monitor changes in the geological environment. ACROSS has been researched and developed in Tono Geoscience Center for 9 years, and we introduce it to the Horonobe Underground Research Laboratory (URL) project. The Horonobe URL project is devoted to the technological development over 20-years from March 2001 for a safe geological disposal of high level radioactive wastes in Horonobe-cho in northern Hokkaido, Japan.

We install the monitoring system before the shaft excavation, and collect data before, during and after the excavation, in order to permit assessment of the system's reliability. The source and receivers of electromagnetic ACROSS were installed in last December, and we are carrying out the test of the system. In 2005, the source and receivers of a seismic ACROSS will be installed in Horonobe. Then we will examine the practicability of ACROSS.