

BBG005-02

Room: 301B

Time: May 23 09:25-09:40

## Geomicrobiological Properties of Deep Subterranean Sedimentary Rocks and Associated Groundwater at Horonobe URL site

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In Japan, surface exposed rocks are comprised of about 60% sedimentary rocks. Within a depth range targeted for geological disposal of nuclear wastes (below a depth of 300 m), the areal occupancy of Tertiary consolidated sedimentary rocks is higher than that of Quaternary unconsolidated sediments. It is therefore considered that the evaluation of potential microbial impacts on geological disposal in Tertiary sedimentary rocks is important. The Horonobe URL is being constructed to expand our understanding of the deep Tertiary sedimentary rock environment. Geomicrobiological properties of deep subterranean sedimentary rocks and associated groundwater obtained during a 520-m deep drilling project at Horonobe URL site will be presented to discuss major factors controlling subsurface microbiology and geochemistry.

This study was supported by a grant from Japan Nuclear Energy Safety Organization (JNES).

**Keywords:** Tertiary Sedimentary Rock, Deep Subsurface Environment, Groundwater, Microbial Ecology, Methanogenesis, Redox Conditions