
BBG005-01

Room: 301B

Time: May 23 09:00-09:25

Study of water-mineral-microbe system at Mizunami and Horonobe Underground Research Laboratory

Teruki Iwatsuki^{1*}, Yuki Amano¹, Hideki Yoshikawa¹

¹Japan Atomic Energy Agency

Water-mineral-microbe systems in deep underground were analyzed at Mizunami and Horonobe area, Japan. In the Mizunami area, fresh water, carbonate minerals, sulphide minerals, nitrogen related bacteria and sulphate reducing bacteria interacts in deep granite. While fossil seawater, carbonate minerals, sulphide minerals, nitrogen related bacteria and methane bacteria interact in deep sedimentary rocks at Horonobe area. In the both area, those interaction keeps neutral pH and reducing condition for long-term periods.

Keywords: Geological isolation, Groundwater-mineral-microbe system, Hydrochemical condition, Mizunami area, Horonobe area