Crystalline Rock Retention Processes

A 7th FRAMEWORK PROGRAMME COLLABORATIVE PROJECT (2011-2013)

Introduction

The Collaborative Project CROCK is based on the desire to improve the safety statement for the crystalline rock far-field as a radionuclide migration barrier. The barrier function studied is radionuclide retention. Both key aspects of retention are regarded, i.e. chemical processes and enhanced residence time in stagnant flow-system regions (matrix diffusion). The project started on 1st January 2011 and will last 30 months.

Objectives

Uncertainty and the associated conservatism are the key problems in application of radionuclide retention for the purpose of improving safety statements around geologic disposal of high-level waste.

Partners

Partners: 10 organizations from 5 EURATOM signatory states and Russia. Coordinator: KIT-INE. Management: AMPHOS 21

Project Work Plan

The scientific-technical work program is structured along 6 workpackages (WP1-6). Specific workpackages on knowledge management, education and training (WP7) and administrative management issues (WP8) are also included in the project:

WP 1: Experimental material, characterization and natural chemical homologues
WP 2: Radionuclide transport and sorption studies
WP 3: Real system analysis
WP 4: Conceptualization and modeling
WP 5: Application to the Safety Case
WP 6: Documentation

Different processes conceptualized as retention that will be studied during the CROCK Project

WP 7: Knowledge management, dissemination and training
WP 8: Project Management

Crock status

Start of the project → 1st January, 2011
Final Project Workshop: 14th -16th May 2013, Karlsruhe, Germany

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