BELBaR first Workshop

The EC project BELBaR (Bentonite Erosion: effects on the Long term performance of the engineered Barrier and Radionuclide Transport) is arranging an open workshop at Helsinki University March 5-7 2013. The aim of the workshop is:

- Dissemination of initial findings
- Establish a network of specialists from various areas of the world and with a range of expertise relevant to the project.

The format of the workshop is based on presentations of work relevant to the topics of the BELBaR project. The presentations will be followed by topical discussion forums the last day. The workshop is open to scientists from outside and within the BELBaR project. Anyone working in the field is encouraged to participate.

At this stage, the plan is to publish the presentations on the BELBaR website (www.belbar.eu), but not to make formal proceedings.
Please send confirm your participation to Patrik Sellin (patrik.sellin@skb.se) and Pirko Hölttä (pirkko.holtta@helsinki.fi) before January 20, 2013.
Also indicate whether or not you intend to give a presentation, as well as the title of the presentation. One page abstracts should be submitted by February 20.

Preliminary agenda:

Tuesday March 5:

13:00	Welcome, Introduction and background (Patrik Sellin/Christian Nyström, SKB)
13:15	Colloidal stability: the reverse problem (Bernard Cabane, ESPCI ParisTech)
14:20	Treatment of Colloids and related issues in the safety case (Rebecca Beard, NDA)
14:55	Basic properties and coagulation of clay dispersions by inorganic cations: Czech Rokle bentonite (Radek Cervinka, UJV Rez)
15:15	Montmorillonite colloid size heterogeneity - Impact on stability in solution and radionuclide sorption (Karin Knapp Norrfors, KTH)
15:35	Coffee
16:00	Finnish Research Programme on Nuclear Waste Management (KYT) in brief (Kari Rasilainen, VTT)
16:20	SAXS Studies and Monte Carlo Simulations of Montmorillonite in Mixed Electrolyte Solutions (Bo Jönsson, Lund University)
16:40	The FEBEX bentonite erosion/destabilisation experiment (Muriel Bouby, KIT)
17:00	Bentonite colloid studies at the University of Helsinki (Pirkko Hölttä, Helsinki University)
17:20	End of Day 1
~19:00	Dinner

Wednesday March 6:

9:00	Visit to laboratories at Helsinki University
11:00	Coffee
11:20	Geochemical modelling of bentonite stability and colloidal generation at the buffer/groundwater interface (Jordi Bruno, Amphos21)
11:40	Summary of CIEMAT experimental results in BELBAR (Tiziana Missana, Ciemat)

12:00 Radionuclide transport results with assumed the erosion of bentonite (Henrik Nordman, VTT)
12:20 Lunch
13:30 Application of combined optical coherence tomography and rheometry to montmorillonite dispersions (Rasmus Eriksson, B+Tech)
13:50 Rheology in montmorillonite/bentonite (Magnus Hedström, Clay Technology)
14:10 Micro-scale reactive transport modeling in natural single fractures from Äspö, Sweden (Florian Huber, KIT)
14:30 Coffee
14:50 Prediction of swelling pressures of different types of bentonite in dilute solutions (Longcheng Liu, KTH)
15:10 Swelling bentonite in a narrow channel. Modeling and experiments (Markku Kataja, JYU)
15:30 Hydromechanical Model for Bentonite Based on X-ray Tomography Experiments (Mika Laitinen, Numerola Oy)
15:50 Reversibility in Radionuclide/Bentonite Ternary Systems (Nick Bryan, University of Manchester)
16:10 Microstructural studies of bentonite and modelling of erosion experiments (Veli-Matti Pulkkanen, VTT)
16:30 Modelling smectite erosion- testing model simplifications (Ivars Neretnieks, KTH)
16:50 Bentonite erosion by dilute waters in initially saturated bentonite – some implementations of Neretnieks' model (Markus Olin, VTT)
17:10 End of Day 2

Thursday March 7:

9:00 Testing of sorption and desorption behavior of radionuclides in column with crushed granite: determination of system behavior without colloid presence (Katerina Videnska, UJV Rez)
9:20 The latest results on colloid associated radionuclide mobility from the CFM project, Grimsel (Switzerland) (Thorsten Schäfer, KIT)
9:40 Comparison of the erosion behaviour of different compacted bentonites (Ursula Alonso, Ciemat)
10:00 Behaviour of montmorillonite a low ionic strength (Emilie Hansen, Clay Technology)
10:20 Update on Artificial Fracture Testing at B+Tech (Tim Schatz, B+Tech)
10:40 Coffee
11:00 Topical discussions (suggestions):
1) *How to perform and interpret bentonite erosion tests in artificial fractures*
2) *Clay Colloids and geochemistry – what is the relation?*
3) *Predictive modelling tools – the way forward*
4) *Sorption irreversibility*
5) *Mechanisms of retention/filtration of clay colloids in rocks*

12:00 Lunch
13:00 Summary from topical discussion
13:45 Workshop summary
14:00 End of workshop