

## Oral Programme HE8

### Stability of Clay Minerals in Geological Radioactive Waste Disposals

Conveners: Andreas Bauer, Tsutomu Sato

Friday 19 June, 2009

Chair: Tsutomu Sato

- 08.50 – 09.20 HE8a.Fri.KL1  
*E. C. Gaucher\**, *Ph. Blanc*, *H. Gailhanou*, *N.C.M. Marty*, *F. Claret*, *A. Burnol*, *C. Lerouge*, *S. Gaboreau*, *Ch. Tournassat*  
STABILITY OF CLAY MINERALS IN GEOLOGICAL RADIOACTIVE WASTE DISPOSALS FROM DATA ACQUISITION TO MODELLING
- 09.20 – 09.40 HE8a.Fri.L2  
*S. Kaufhold\**, *R. Dohrmann*  
STABILITY OF BENTONITES IN GEOTECHNICAL BARRIERS FOR HLRW REPOSITORIES
- 09.40 – 10.00 HE8a.Fri.L3  
*Hiroyasu Takase\**, *Kaori Ono*, *David Savage*, *Steven Benbow*  
LONG-TERM STABILITY OF THE BENTONITE BARRIER: HOW MUCH DO WE NEED TO KNOW?
- 10.00 – 10.20 HE8a.Fri.L4  
*Keisuke Fukushi\**, *Tomonori Sugiura*, *Tomoaki Morishita*, *Hiroshi Yamada*, *Noriko Hasebe*, *Noritaka Endo*  
OCCURRANCES OF IRON-BENTONITE INTERACTION FOUND IN BENTONITE DEPOSITES

COFFEE BREAK 10.40-11.00

Friday 19 June, 2009

Chair: Eric Gaucher

- 11.00 – 11.30 HE8b.Fri.L1  
*Camille Rivard\**, *Odile Barres*, *Guirec Ollivier*, *Martine Galmiche*, *Manuel Pelletier*, *Frederic Villieras*, *Nicolas Michau*  
FE(0)-CLAYS INTERACTIONS AT 90°C UNDER ANOXIC CONDITIONS: A COMPARATIVE STUDY BETWEEN CLAY FRACTION OF CALLOVO-OXFORDIAN AND OTHER PURIFIED CLAYS
- 11.30 – 11.50 HE8b.Fri.L2  
*Elisabeth Tinseau\**, *Daniel Bartier*, *Isabelle Techer*, *Stephane Gaboreau*, *Justo Cabrera*  
A 15 YEARS IN SITU ALKALINE PROPAGATION INTO THE TOURNEMIRE ARGILLITE
- 11.50 – 12.10 HE8b.Fri.L3  
*Sergey V. Dvinskikh\**, *István Furó*  
SWELLING, DISSOLUTION, AND SEDIMENTATION OF BENTONITE CLAY IN WATER: NUCLEAR MAGNETIC RESONANCE SPECTROSCOPY AND IMAGING STUDIES
- 12.10 – 12.30 HE8b.Fri.L4  
*Tsutomu Sato\**, *Hideki Takayama*, *Daisuke Chino*, *Ryo Nakabayashi*, *Chie Oda*, *Tetsuro Yoneda*  
EFFECT OF COMPACTION ON DISSOLUTION RATE OF SMECTITE UNDER HYPERALKALINE CONDITION
- 12.30 – 12.50 HE8b.Fri.L5  
*Daisuke Chino\**, *Tsutomu Sato*, *Yusuke Otani*, *Ryo Nakabayashi*, *Chie Oda*, *Tetsuro Yoneda*  
EFFECT OF AQUEOUS ALUMINIUM AND SILICA CONCENTRATIONS ON SMECTITE DISSOLUTION KINETICS AT HYPERALKALINE CONDITIONS

LUNCH 12.50-14.20

Friday 19 June, 2009

Chair: Andreas Bauer

- 14.30 – 15.00 HE8c.Fri.L1  
*Raúl Fernández*, *Urs K. Mäder*, *Manuel Rodriguez*, *Raquel Vigil de la villa*, *Jaime Cuevas\**  
ALTERATION OF COMPACTED BENTONITE BY DIFFUSION OF HIGHLY ALKALINE SOLUTIONS
- 15.00 – 15.20 HE8c.Fri.L2  
*Lorenz Holzer\**, *Beat Münch*, *Roger Wepf*, *Martha Rizzi*, *Paul Marschall*  
CRYO-STABILIZED PORE STRUCTURE OF BENTONITE AND OPALINUS CLAY

15.20 – 15.40

HE8c.Fri.L3

*Carlo A. Arcilla, Meg Honrado, Edmundo Vargas, Chelo Pascua, Ian G. Mckinley, Kazuto Namiki, N. Fujii, Minoru Yamakawa, W. Russell Alexander\**

BENTONITE REACTION IN NATURAL HYPERALKALINE GROUNDWATERS: EXAMPLES FROM THE PHILIPPINES

15.40 – 16.00

HE8c.Fri.L4

*Thierry Allard\*, Stephanie Sorieul, Chloe Fourdrin, Georges Calas*

RADIATION EFFECTS ON CLAY MINERAL PROPERTIES: A REVIEW

## Poster Programme HE8

**Posting:** Wednesday 17 June, 20.30-22.30. **Removal:** Friday 19 June.

**Attendance Time:** Thursday 18 June, 18:30–20:00

**Chairs:** Andreas Bauer & Tsutomu Sato

- HE8.Thu.P1 *Michel Jullien\*, Jocelyne Garnier, Delphine Pellegrini, François Marsal*  
HETEROGENEOUS REACTIVITY OF THE IRON-CLAY SYSTEM: AN OVERVIEW OF THE IMPLICATIONS FOR THE SAFETY OF NUCLEAR WASTE DISPOSAL
- HE8.Thu.P2 *W. Russell Alexander\*, Antoni E. Milodowski, Costas A. Constantinou, Ian G. Mckinley*  
BENTONITE REACTION IN NATURAL HYPERALKALINE GROUNDWATERS: EXAMPLES FROM CYPRUS
- HE8.Thu.P3 *Pablo Chain, María D. Alba\*, Miguel A. Castro, María Del Mar Orta, Esperanza Pavón*  
ACID STABILITY OF CLAY MINERALS: IMPLICATIONS FOR PROCESSES IN GEOLOGICAL RADIOACTIVE WASTE DISPOSAL
- HE8.Thu.P4 *Isabelle Devol-Brown, Elisabeth Tineau\*, Flore Rebischung, Laurent De Windt, Daniele Bartier, Sylvie Motellier, Isabelle Techer*  
EFFECT OF AN ALKALINE PLUME ON THE TOURNEMIRE ARGILLITE (FRANCE): THROUGH-DIFFUSION AND ADVECTION EXPERIMENTS
- HE8.Thu.P5 *Ana María Fernández\*, Ana María Melón, Juan Carlos Mayor*  
EFFECT OF WETTING/DRYING CYCLES ON THE GEOCHEMICAL AND MINERALOGICAL PROPERTIES OF THE OPALINUS CLAY FORMATION
- HE8.Thu.P6 *H. Gailhanou, J. Olives, M. Amouric\*, J. Rogez, J. C. Van Miltenburg, G. J. K. Van Den Berg, G. De Weireld, Y. Belmabkhout, E. Gaucher, P. Blanc*  
THERMODYNAMIC FUNCTIONS AND HYDRATION OF CLAY MINERALS
- HE8.Thu.P7 *Roberto Gómez-Espina\*, María Victoria Villar, Antonio Garralón, Alicia Escribano*  
GEOCHEMICAL AND MINERALOGICAL CHANGES EXPERIENCED BY MX80 BENTONITE SUBMITTED TO HEAT AND WATER GRADIENTS
- HE8.Thu.P8 *Martina Klinkenberg\*, Reiner Dohrmann, Stephan Kaufhold, Siegfried Siegesmund*  
INFLUENCE OF CARBONATE MICROFABRICS ON THE FAILURE STRENGTH OF OPALINUS CLAY AND CALLOVO- OXFORDIAN CLAY STONES
- HE8.Thu.P9 *Beate Riebe\**  
THERMALLY INDUCED CHANGES IN THE ADSORPTION PERFORMANCE OF ORGANOCCLAYS
- HE8.Thu.P10 *María L. Rozalén\*, F. Javier Huertas, Patrick V. Brady*  
EXPERIMENTAL STUDY OF THE EFFECT OF PH AND TEMPERATURE ON THE KINETICS OF MONTMORILLONITE DISSOLUTION
- HE8.Thu.P11 *Elena Torres\*, Alicia Escribano, María Jesus Turrero, Pedro Luis Martin, Trinidad Lopez*  
EFFECT OF IRON-REDUCING CONDITIONS
- HE8.Thu.P12 *Tetsuji Yamaguchi\*, Yoshibumi Mitsumoto, Mitsushi Kadowaki, Seiichi Hoshino, Toshikatsu Maeda, Tadao Tanaka, Shinichi Nakayama, François Marsal, Delphine Pellegrini*  
VERIFICATION OF A REACTIVE TRANSPORT MODEL FOR LONG-TERM ALTERATION OF CEMENT-CLAY SYSTEMS BASED ON LABORATORY EXPERIMENTS AND IN SITU OBSERVATIONS
- HE8.Thu.P13 *Shingo Yokoyama\*, Kunihiko Nakamura*  
ALTERATION BEHAVIOR OF COMPACTED BENTONITE UNDER ALKALINE CONDITIONS
- HE8.Thu.P14 *Borys Zlobenko\*, Ludmila Spasova, Sergey Bugera*  
CHARACTERIZATION STUDIES OF CANDIDATE SWELLING CLAYS FOR BARRIER SYSTEM OF UKRAINIAN GEOLOGICAL REPOSITORY
- HE8.Thu.P15 *Kazuya Morimoto\*, Tsutomu Sato, Sohtaro Anraku, Tetsuro Yoneda*  
ADSORPTION MECHANISMS OF INORGANIC ANIONS ON HYDROTALCITE-LIKE COMPOUNDS AND THEIR POST-ADSORPTION BEHAVIORS
- HE8.Thu.P16 *Omar Al-Qudah\*, John Walton*  
MINERALOGICAL ANALYSIS OF GROUNDWATER IN THE VICINITY OF YUCCA MOUNTAIN
- HE8.Thu.P17 *Ana María Fernández, Scott Altmann, Norbert Maes, Ana María Melón, Christophe Tournassat, Eric Gaucher, Mieke De Craen\**  
CHARACTERIZATION AND COMPARISON AMONG DIFFERENT ARGILLACEOUS FORMATIONS
- HE8.Thu.P18 *Chloé Fourdrin\*, Thierry Allard, Nicolas Menguy, Isabelle Monet, Marc Benedetti, Georges Calas*  
EFFECT OF RADIATION-INDUCED AMORPHIZATION ON SMECTITE DISSOLUTION

HE8.Thu.P19

*Ursula Alonso, Tiziana Missana, Alessandro Patelli, Miguel Garcia-Gutierrez, Nairobi Albarran\*, Valentino Rigato*  
ANALYSES OF COLLOID DIFFUSION IN CLAY BARRIERS OF RADIOACTIVE WASTE REPOSITORIES