



**IGD-TP**  
**6<sup>th</sup> Exchange Forum**  
November 3-4<sup>th</sup> 2015, London, UK  
Venue: The Thistle Marble Arch hotel

**AGENDA**  
**DRAFT VERSION – 30/10/2015**

**Tuesday 3<sup>rd</sup> November 2015**

**Registration**

**8:30 - 9:00** Registration

**Plenary Session1 - Jonathan Martin, RWM**

**9:00 - 9:20** **EF6 meeting objectives**  
Monica Hammarström, IGD-TP Chair

**9:20 - 9:50** **Key Note: Siting Process in UK**  
Bruce Cairns (DECC)

**9:50 - 10:10** **Key Note: H2020 WP 2016-2017 and future Euratom programmes**  
Christophe Davies, European Commission, DG Research and Innovation, Fission Energy

**10:10 - 10:40** **Key Note : Radiation Protection Research in Europe: Reaching out to IGD-TP**  
Hildegard Vandenhove, Nathalie Impens, SCK-CEN

**10:40 - 11:10** *Coffee Break*

**11:10 - 11:40** **Key Note: NEA IGSC Interaction with the IGD-TP**  
Lucy Bailey, RWM

**11:40 -12:10** **Key Note: state of high-level waste disposal in the U.S.**  
James Rubenstone, Yucca Mountain Directorate

**12:10 - 12:30** **RD&D Planning Guide, Conclusion of the PLANDIS Workshop and future activities**  
Ray Kowe, RWM

**12:30 - 12:35** **Organisation of the parallel Sessions - Jacques Delay, IGD-TP Secretariat**

**12:35** *Lunch*

**Parallel Sessions – Technical Working Groups Session**

**14:00 - 15:40** **Technical Working Groups - presentations and discussions - Rapporteurs WG**

**15:40 - 16:00** *Coffee Break*

**16:00 - 17:30** **Cont. Working Groups' presentations and discussions - Rapporteurs WG**



## Wednesday 4<sup>th</sup> November 2015

### Parallel Sessions – Technical Working Groups Session (Cont.)

**09:00 -10:15** Cont. Working Groups' presentations and discussions - Rapporteurs WG

**10:15 - 10:30** Conclusion WG session rapporteurs

**10:30 - 11:00** *Coffee Break*

#### Session 2a : Chairman's and rapporteurs' commission session (Chairman & rapporteurs only)

**11:00 - 12:00** Rapporteurs' meeting - Summary of discussion, draft of WG conclusions

#### Session 2b : Technical session New H2020 technical projects - Walter Steininger

**11:00** **MODERN2020** Johan Bertrand, Andra

**11:20** **CEBAMA** Xavier Bourbon, Andra

**11:40** **MIND** Birgitta Kalinowski, SKB

### Session 3: Evaluation of completed projects -Juan Carlos Mayor

**12:00 -12:25** **PEBS** - Annika Schäfers/Klaus-Jürgen Röhlig/Irina Gaus

**12:25 - 13:55** *Lunch*

### Session 3: Evaluation of completed projects (cont.) - Tiina Jalonen

**13:55 - 14:20** **FIRST Nuclides** - B. Kienzler / Johan Andersson

**14:20 - 14:45** **MODERN** – Johan Bertrand/Frédéric Plas

**14:45 - 15:00** **REDUPP** – Lena Evins/ David Shoosmith /Johan Andersson

### Session 4: Conclusion and way forward - Philippe Lalieux

**15:00 -15:15** **Rapporteur WG1 - Novel thermal treatments for waste**  
Cristiano Padovani and Amy Shelton, RWM

**15:15 - 15:30** **Rapporteur WG2 - Bentonite homogenization** Patrik Sellin, SKB

**15:30 - 16:00** *Coffee break*

**16:00 - 16:15** **Rapporteur WG3 - Cement Organics Radionuclide Interactions – (CORI)**  
Marcus Altmaier, KIT-INE

**16:15 - 16:30** **Rapporteur WG4- Spent fuel dissolution & chemistry in container**  
Lena Evins, SKB

**16:30 - 16:55** **Conclusion & way forward for IGD-TP Towards H2020**  
Monica Hammarström, SKB, IGD-TP Chair

**16:55 - 17:00** **Closing IGD-TP 6<sup>th</sup> Exchange Forum**  
Monica Hammarström, SKB , IGD-TP Chair

**17:00** **End of the EF6**

## Parallel sessions – Technical Working Groups (TWGs)

### TWG1 – Novel thermal treatments for high activity wastes

*Rapporteurs:* C. Padovani, A. Shelton

#### Programme

#### Tuesday 3<sup>rd</sup> November

14:00-14:10	<b>Introduction</b> C. Padovani, RWM
14:10-14:40	<b>Collaboration on the Thermal Treatment of Waste</b> , Anthony Banford, NNL
14:40-15:10	<b>Novel Treatments to Improve Radioactive Waste Disposal</b> , Laurence Petit, Andra
15:10-15:40	<b>Application of Joule Heated Ceramic Melter (JHCM) Technology for Stabilization of Radioactive Wastes in the United States</b> , Eric Smith, Energy Solutions
15:40-16:00	<i>Coffee break</i>
16:00-16:30	<b>The Innovative Plasma Tilting Furnace for Industrial Treatment of Radioactive Waste</b> , Jan Deckers, Belgoprocess
16:30-17:00	<b>Title TBC</b> , Neil Hyatt, University of Sheffield
17:00-17:30	<b>Nano Flex HLW / Spent Fuel Rods Recycling and Permanent Disposal</b> , Dimitre Assenov, Nano Flex HLW

#### Wednesday 4<sup>th</sup> November

9:00	<b>Start of day 2</b>
9:00-9:30	<b>Geological Disposal of Silicon-rich Vitrified ILW Products in a Cement-based Engineered Barrier System: Addressing Key Uncertainties</b> , Steve Swanton, AMEC-FW
9:30-9:55	<b>Plasma Vitrification of Nuclear Waste</b> , Mark Rogers, Costain
9:55-10:15	<b>THOR and the Leachability of THOR Residues</b> , Maria Lindberg, Studsvik
10:15-10:30	<i>Conclusion WG session Rapporteur</i>

## TWG2 – Bentonite homogenization

*Rapporteurs:* P. Sellin - J.C. Mayor

### Programme

Tuesday 3<sup>rd</sup> November

<b>14:00 -14:10</b>	<b>Introduction</b> – Patrik Sellin/Juan Carlos Mayor
<b>Strategic issues: feedback to Design and Safety assessment</b>	
<b>14:10 -14:35</b>	<b>Proposal for a project focussed on bentonite homogenization – some examples of ongoing activities in the area</b> – Patrik Sellin, SKB
	<b>Bentonite Homogenization: the safety relevance of the even distribution of bentonite buffer properties</b> - Olivier Leupin, NAGRA, Switzerland
	<b>Posiva's plans to assess bentonite homogenisation</b> - Kari Koskinen, POSIVA, Finland
	<b>Development of a Design Basis for Bentonite Homogenization: Lessons from the DOPAS Project Applied to WG2 Bentonite Homogenization</b> - Matt White, Galson Sciences Limited, UK
<b>14:35-15:00</b>	<b>Questions and discussion</b>
<b>Large and field scale experiments</b>	
<b>15:00-15:35</b>	<b>Homogenization of bentonite plugs – what are the issues?</b> - Jean Talandier, Andra, France
	<b>State of a barrier of bentonite blocks after 18 years of operation</b> - María Victoria Villar, CIEMAT, Spain
	<b>Examples of Finland's experiments for assessing buffer-backfill-pellet homogenization and performance</b> - Erika Holt, VTT, Finland
	<b>Impact of the sand/bentonite homogenization on the performance of an EGTS</b> - Niels Giroud, NAGRA, Switzerland
	<b>Geophysical monitoring of evolutions of buffer materials and EBS</b> - Kristof Schuster, BGR, Germany
	<b>An impact of bentonite homogenization on its changes by degradation processes</b> - Jiri Mikes, TERAMED s.r.o., Czech Republic
<b>15:40-16:00</b>	<b>Coffee break</b>
<b>Laboratory experiments</b>	
<b>16:00-16:30</b>	<b>Understanding the homogenisation behaviour of bentonite</b> - Jon Harrington, British Geological Survey, UK
	<b>The Affect of Accessory Minerals on Bentonite Erosion Rates</b> - Rebecca Lunn, University of Strathclyde, UK
	<b>Saturation and mechanical properties of clays with defined composition</b> - Vaclava Havlova, UJV Rez, a.s., Czech Republic
	<b>Bentonite homogenization : Experimental contribution of CEA/LECBA</b> - Claude Gatabin, CEA, France
	<b>Bentonite homogenization: laboratory tests to answer open questions related to the German disposal concept in claystone</b> - Artur Meleshyn GRS Braunschweig, Germany
<b>16:30-17:30</b>	<b>Questions and discussion - End of day 1</b>

## Wednesday 4<sup>th</sup> November

<b>9:00</b>	<b><i>Start of the Day</i></b>
<b><i>Modelling - Conceptual model/ processes understanding</i></b>	
<b>9:00-9:40</b>	<b>Bentonite homogenization: processes and modelling</b> - Antonio Gens, Universitat Politecnica Catalunya, Spain
	<b>A Poroplastic Model of Structural Reorganisation in Porous Media</b> - Gabriel Wittum TechSim, G-CSC, U Frankfurt Germany
	<b>Hydromechanical behaviour of bentonite under in situ conditions</b> - Robert Charlier, University of Liege, Belgium
	<b>Proposal for a project focussed on bentonite homogenization – some examples of ongoing activities in the area</b> - Vasileios Mantikos, Imperial College London, UK
	<b>Constitutive mechanical modelling of bentonite behaviour in THEBES project</b> - Markus Olin, VTT Technical Research Centre of Finland Ltd, Finland
	<b>SEALEX In-Situ Experiments-Performance Tests Of Repository Seals: Experimental observations and modelling</b> - Nadia Mokni, IRSN, France
	<b>Relevance of hydrodynamic and hydrogeochemical reactions on buffer homogeneization-</b> Javier Samper, University of A Coruña, Spain
<b>9:40-10:15</b>	<b><i>Questions and discussion</i></b>
<b>10:15-10:30</b>	<b><i>Conclusion WG session Rapporteur</i></b>

Yellow = 10 minute presentation

Cyan = Questions and discussion

## TWG3 – Cement Organics Radionuclide Interactions (CORI)

*Rapporteurs:* M. Altmaier – F. Plas

### Programme

Tuesday 3<sup>rd</sup> November

14:00 - 17:00	<b>Introduction</b> M. Altmaier, KIT- INE
	<b>Overview of the outcome of the TSWG CORI “Cement Organics Radionuclide Interactions”</b> - Marcus Altmaier, KIT-INE, Germany
	<b>CORI-WP - WMOs priorities and expectations</b> - Eric Giffaut Andra France
	<b>Degradation of organics - result of hydrolysis and radiolysis-</b> Johan Vandendorre, SUBATECH, France
	<b>Mobility of organics in cementitious environment and their interaction with Fe</b> - Mireia Grivé, Amphos 21 Consulting, S.L., Spain
	<b>CORI-Work Package on “Mobility of organics-RN complexes in a cementitious environment</b> - Virginie Blin, CEA, France
	<b>CORI: WP on “Modelling, upscaling, application to PA”-</b> Vanessa Montoya, KIT-INE, Germany

Wednesday 4<sup>th</sup> November

9:00 – 10:30	<b>Discussion</b>
--------------	-------------------

## TWG4 – Spent fuel dissolution & chemistry in container

*Rapporteurs:* L. Evins – J. Andersson

### Programme

#### Tuesday 3<sup>rd</sup> November

14:00	<b>Introduction Waste form and behaviour: Chemistry and dissolution in a high-level waste container</b> - JA Leader: SKB (L.Z. Evins, J. Andersson)
14:15	<b>Leaching of doped irradiated fuel under H2 conditions</b> , Studsvik (O. Roth)
14:35	<b>Dissolution rate of MOX and Cr-doped UO2 fuel</b> , JRC-ITU (D. Wegen)
14:55	<b>Remaining questions after FIRST-Nuclides</b> , KIT-INE (B. Kienzler)
15:15	<b>Thermodynamics as a support for the interpretation of spent fuel leaching experiments</b> , PSI (E. Curti)
15:40	<b>Coffee break</b>
16:00	<b>Simfuel approaches to understanding spent fuel behaviour</b> , University of Cambridge (I. Farnan)
16:20	<b>UO2 interactions inside canister conditions</b> , VTT (K. Ollila, E. Myllykylä)
16 :30	<b>Corrosion mechanisms of modern LWR-fuels using UO2-based model systems</b> , FZ Jülich (D. Bosbach)
16:40	<b>Andra proposal for a future European project dealing with geochemical processes within a HLW/Spent fuel disposal cell</b> , Andra (C. Martin)
17:00 – 17:30	<b>General Discussion</b>

#### Wednesday 4<sup>th</sup> November

09:00	<b>Start &amp; recap of 3<sup>rd</sup> October</b>
09:15	<b>Project proposal preparations</b>
10:00	<b>Final discussion</b>
10:15	<b>Conclusion WG session</b> , Rapporteurs
10:30	<b>Coffee Break</b>