

**The IAEA's Programme on
Environmental Modelling for Radiation Safety
(EMRAS II)**

**EMRAS II
Reference Approaches for Human Dose Assessment
Working Group 3
Reference Models for "Waste Disposal"**

MINUTES

**of the Fifth WG3 Meeting held in Baden, Switzerland
21–23 September 2011**

IAEA Scientific Secretary	Working Group Leader
<p>Mr Gerhard Proehl (<i>GP</i>) Head, Assessment & Management of Environmental Releases Unit, Waste & Environmental Safety Section (Room B0765) Division of Radiation, Transport & Waste Safety International Atomic Energy Agency (IAEA) Vienna International Centre PO Box 100 1400 VIENNA AUSTRIA Tel: +43 (1) 2600-22854 Fax: +43 (1) 26007-22692 Email: G.Proehl(x)iaea.org</p>	<p>Mr Tobias Lindborg (<i>TL</i>) Biosphere Safety Assessment Manager, Safety & Analysis Swedish Nuclear Fuel & Waste Management Company (SKB) Blekhölmstorget 30 Box 250 10 124 STOCKHOLM SWEDEN Tel: +46 (8) 459-8407 Fax: +46 (8) 661-5719 Email: tobias.lindborg(x)skb.se</p>

Others Attending	
Name / Initials* / Email	Organization / Country
Mr Sten Berglund (<i>SB</i>) (sten.berglund(x)skb.se)	Swedish Nuclear Fuel & Waste Management Company (SKB), SWEDEN
Mr Ari T.K. Ikonen (<i>AI</i>) (ari.ikonen(x)posiva.fi)	Posiva Oy, FINLAND
Mr Ulrik Kautsky (<i>UK</i>) (ulrik.kautsky(x)skb.se)	Swedish Nuclear Fuel & Waste Management Company (SKB), SWEDEN
Mr Sven Keesmann (<i>SK</i>) (sven.keesmann(x)nagra.ch)	National Cooperative for the Disposal of Radioactive Waste (NAGRA), SWITZERLAND
Mr Ryk Klos (<i>RK</i>) (ryk(x)blueyonder.co.uk)	Aleksandria Sciences, UNITED KINGDOM
Ms Maria Nordén (<i>MN</i>) (maria.norden(x)ssm.se)	Swedish Radiation Safety Authority (SSM), SWEDEN
Ms Natalia Semioschkina (<i>NS</i>) (semi(x)helmholtz-muenchen.de)	Helmholtz-Zentrum München GmbH, GERMANY
Mr Christian Staudt (<i>CS</i>) (christian.staudt(x)helmholtz-muenchen.de)	Helmholtz-Zentrum München GmbH, GERMANY
Mr Shulan Xu (<i>SX</i>) (shulan.xu(x)ssm.se)	Swedish Radiation Safety Authority (SSM), SWEDEN
Mr Danyl Pérez-Sánchez (<i>DPS</i>) (d.perez(x)ciemat.es)	CIEMAT, SPAIN

*Initials used to refer to participants within minutes and actions as appropriate.

Objectives and content of the meeting

The objectives of the meeting were to present and discuss the work done and to develop and decide upon the tasks leading to the production of a final WG3 report.

TL began by welcoming the participants and presenting the agenda. Some minor changes were made and three additional presentations by *SK*, *TL* and *AI* were added. The main WG3 work plan was presented and the general time line was discussed.

Presentation of NAGRA programme (hosting organisation)

SK presented the NAGRA programme, including the method and site selection strategy. The biosphere programme was described in an environmental change (*Biosphere Assessment within the Context of Disposal of Radioactive Waste in Switzerland, Aspects of Dealing with Environmental Change).

Presentations of progress in subgroups

The subgroups presented the work done and the results obtained

Other presentations and discussion

AI presented the results from a shore line displacement workshop held in Finland 2010.

TL described the status in the Swedish Greenland Analogue Surface Project. The project is providing analogue information for conditions which may pertain in future at the Forsmark site of interest to SKB, as well as the dynamics of surface and near-surface processes. The project will run until 2015 and is expected to produce a number of scientific papers.

Subgroup workshop and presentations

During the second day of the meeting the subgroups worked separately. The outcome of this work was presented on day three and discussions were held after each presentation on issues related to integration between the subgroups.

Time table for WG3 second draft report preparation

31 October 2011: Subgroups deliver report contributions to *GS*.

30 November 2011: Draft report sent out to project members for first internal review.

20 December 2011: Return of review comments to *GS*.

20 January 2012: Revised report distributed to project members.

26 March 2012: Final report delivered to IAEA.

Next meeting

There is no planned final meeting of EMRAS II as was originally anticipated.

The follow-up programme to EMRAS II – “MODARIA” **MO**delling and **DA**ta for **R**adiological **I**mpact **A**ssessments – will run for 4 years (2012–2015) and the first Technical Meeting will take place at IAEA headquarters in Vienna, 19–22 November 2012.

* Indicates the name of the presentation given on the WG3 web page
(<http://www-ns.iaea.org/projects/emras/emras2/working-groups/working-group-three.asp?s=8>).

WG3 MEETING AGENDA

Wednesday, 21 September 2011

09:00–09:15	Opening of the Meeting and Introductions	Tobias Lindborg, WGL (SKB, Sweden)
09:15–09:30	Review of Meeting Objectives and Preliminary Agenda	
Presentations and Discussion of Progress with Subgroup (SG) Activities		
09:30–10:30	SG1 Analogue Approach	^Christian Kaiser (Helmholtz-Zentrum, Germany)
10:30–11:00	<i>COFFEE BREAK</i>	
11:00–12:30	SG2 Soil-Plant Processes (Results were provided by SCK/CEN, HMGU and SSM)	Shulan Xu (SSM, Sweden) & Ryk Klos (Aleksandria Sciences, UK)
12:30–13:30	<i>LUNCH BREAK</i>	
13:30–15:00	SG3 Dynamic analysis of future biosphere systems at specific sites	Sten Berglund (SKB, Sweden)
15:00–15:30	<i>COFFEE BREAK</i>	
15:30–16:00	SG4 Demonstrating compliance with protection objectives	Maria Nordén (SSM, Sweden)
16:00–17:00	Discussion of Cross-cutting Issues and Opportunity to Present New Information	All participants

Thursday, 22 September 2011

09:00–16:30	Subgroup Work	All participants
16:30–17:00	Plenary Presentation of Key Issues from Subgroup Work	

Friday, 23 September 2011

09:00–10:30	Discussion of Integration and Synthesis of Subgroup Activities	All participants
10:30–11:00	<i>COFFEE BREAK</i>	
11:00–12:30	Development of Work Plan to Achieve a Draft Final WG3 Document	All participants
12:30–14:00	<i>LUNCH BREAK</i>	
14.00 onwards	Opportunities for continuing discussions, as required until Meeting Close	All participants

^ Presentation submitted, but participant absent from the meeting.