

JOINT NEA / IAEA WORKSHOP OPERATIONAL SAFETY OF GEOLOGICAL REPOSITORIES

June 29 – July 1, 2016

OECD CONFERENCE CENTRE
2 Rue André Pascal, 75016, Paris

PROVISIONAL PROGRAMME

OBJECTIVES:

1. Explore how implementers address operational safety in developing geological repositories for radioactive waste disposal. Reveal effective / practical design alternatives used in achieving operational safety in geological repositories (e.g. design and operations of ventilation system, underground transport vehicles);
2. Evaluate the adequacy / comprehensiveness of existing regulatory framework in guiding implementers in addressing operational safety in geological repositories;
3. Identify areas / topics that require further work.

DAY 1 – Wednesday June 29, 2016

09:00 1.0 OPENING REMARKS

09:00 **Welcome Notes– [5 min]**

- Welcome remarks
- Introduce co-organizer IAEA and workshop chairs
Michael SIEMANN, NEA

09:05 2.0 NEA & IAEA ACTIVITIES ON OPERATIONAL SAFETY OF GEOLOGICAL REPOSITORIES

Chairs: W. Bollingerfehr / M. Tichauer Rapporteur: Paul Smith

09:05 a. **Overview of EGOS accomplishments, current work and future activities**

W. Bollingerfehr, Chair of EGOS

[20 min + 5 min questions]

09:30 b. **Overview of GEOSAF accomplishments, current work and future activities**

M. Tichauer, Chair of GEOSAF II

[20 min + 5 min questions]

09:55 3.0 TECHNICAL DESIGN SESSION

Chair: W. Bollingerfehr Rapporteur: Paul Smith

[5 min introduction]

10:00 3.1 **Fire risk management and fire safety assessments**

[20min + 5 min questions each]

10:00 a. Fire Risk Management during Repository Construction and Operation in Finland
Barbara Pastina (POSIVA, Finland)

10:25 *BREAK [25 min]*

3.1 Fire risk management and fire safety assessments [cont'd]

10:50 b. WIPP Update DSA/TSR Revision 5 Improvements and Lessons Learned
Jeffrey Carswell (DOE, USA)

11:15 c. Conceptual Ventilation Design for a Deep Geologic Repository
Kelly LIBERDA (NWMO, Canada)

11:40 d. Feasibility study of ventilation and fire risk assessment during operation of a geological disposal facility in Japan
Satoru Suzuki, Shigeru Kubota (NUMO, Japan)

12:05 *LUNCH [1hr 05 min]*

13:10 3.2 On-site transportation and emplacement of radioactive waste
[20 min + 5 min clarification questions each]

a. Cigéo On-site Transportation and Emplacement of Radioactive Waste
Fabrice Peyrolles (Andra, France)

b. Safety of underground operations in LILW repository
Soňa Konopásková, Dmitry Lukin (SURA0, Czech Republic)

c. Design, fabrication and demonstration of safety and reliability of transport and emplacement systems for a HLW-repository in Germany
Wolfgang Filbert (DBE TECHNOLOGY, Germany)

14:25 *Break [25 min]*

14:50 3.3 Small group discussions [2 hrs]

16:50 3.4 Summary of working group discussions on technical issues

16:50 a. Group 1 summary - [10 min]
Group 1 rapporteur

17:00 b. Group 2 summary - [10 min]
Group 2 rapporteur

17:10 c. Group 3 summary - [10 min]
Group 3 rapporteur

17:20 d. Discussion - [30 min]
All

17:50 e. **Session Chair's summary (Session 3)** - [10 min]
W. Bollingerfehr

18:10 End of Day 1

DAY 2 – Thursday June 30, 2016

09:00 4.0 REPOSITORY REGULATORY FRAMEWORK AND REQUIREMENTS
[5 min introduction]
Chair: Sylvie Voinis Rapporteur: Paul Smith

09:05 4.1 Regulatory Framework & Conventional Requirements
[20 min + 5 min clarification questions each]

- 09:05 a. The Swedish legal framework – Allocating responsibilities for safety
Flavio Lanaro (SSM, Sweden)
- 09:30 b. Licensing and operating a geological facility in Finland
Ari Luukkonen, (STUK, Finland)

9:55 BREAK [30 min]

10:25 4.2 Monitoring requirements & capabilities during operations
[20 min + 5 min clarification questions each]

- 10:25 a. NEA findings on monitoring
Gloria Kwong (NEA)
- 10:50 b. Key findings of the MoDeRn project and overview of the Modern2020 project
Johan BERTRAND (ANDRA, France)
- 11:15 c. Monitoring Requirements for the Management and Storage of Transuranic Waste at the Waste Isolation Pilot Plant
Jonathan P. Walsh (EPA, USA)
- 11:40 d. IGSC Communication Group
Gloria Kwong (NEA)

12:05 LUNCH [1hr 25min]

13:30 4.3 Small group discussions on construction and operational requirements (including monitoring), regulatory framework and communications
[2 hrs]

15:30 BREAK [30 min]

16:00 4.4 Summary of working group discussions on Section 4.0

- 16:00 a. Group 1 summary - *[10 min]*
Group 1 rapporteur
- 16:10 b. Group 2 summary - *[10 min]*
Group 2 rapporteur
- 16:20 c. Group 3 summary - *[10 min]*
Group 3 rapporteur
- 16:30 d. Discussion - *[30 min]*
All
- 17:00 e. **Session Chair's summary (Session 4) - [10 min]**
M. Tichauer

17:10 End of Day 2

DAY 3 – Friday Jul 1, 2016

09:30 5.0 RADIOLOGICAL PROTECTION ISSUES IN DGR *[5 min introduction]*
Chair: M. Tichauer Rapporteur: Paul Smith

09:35 a. Operation Radiological Protection in Deep Geological Repository
Edward Lazo (NEA) [25 min + 5 min]

10:05 5.1 Operational safety and long-term repository safety *[20 min + 5 min clarification questions each]*

10:05 a. Post-closure safety requirements and their implication on operation and operational safety
Kristina Skagius (SKB, Sweden), Barbara Pastina (Posiva, Finland)

10:30 b. Operational safety and long-term repository safety: Approach in the Swiss programme
Tobias Steinbach (Nagra, Switzerland)

10:55 *BREAK [30 min]*

11:25 5.1 Operational safety and long-term repository safety [cont'd]

11:25 c. Operational safety and long-term repository safety: French application to Cigéo project
Sylvie Voinis (Andra, France)

11:50 d. Evolution of the Lay-Out of the Belgian Geological Repository to Improve the Operational Safety
Christophe Depaus (ONDRAF/NIRAS, Belgium)

12:15 *LUNCH [1 hr 15 min]*

13:30 5.2 Small group discussions on operational safety & long-term safety [2hrs]

15:30 *BREAK [30 min]*

16:00 5.3 Summary of working group discussions on operational safety & long-term safety

16:00 a. Group 1 summary - [10 min]
Group 1 rapporteur

16:10 b. Group 2 summary - [10 min]
Group 2 rapporteur

16:20 c. Group 3 summary - [10 min]
Group 3 rapporteur

16:30 d. Discussion - [30 min]
All

17:00 e. **Session Chair's summary (Session 5) - [10 min]**
Sylvie Voinis

17:10 6.0 WORKSHOP CHAIRS' WORKSHOP SUMMARY

[20 min]

17:30 Workshop Adjourn