

OECD-NEA WORKSHOP ON FUTURE CRITICALITY SAFETY RESEARCH NEEDS

Agenda

Monday, September 21, 2009

7:30 Registration

8:00 Opening Remarks:

Welcome: George Imel (5 minutes)
Welcome: David Nigg (5 minutes)
Keynote Speaker: Jerry McKamy (30 minutes)
Purpose and Goals: Véronique Rouyer (5 minutes)

8:45 Session I: Status of Development of Innovative Fuel Cycles for Future Nuclear Energy Systems

Fuel cycle innovations, including fuel fabrication, transportation, and storage. Issues associated with innovative nuclear systems, fuel cycles, reprocessing methods, as well as criticality issues, including handling of large quantities of higher actinides.

Phillip Finck (30 minutes)
Pascal Anzieu (30 minutes)
Tomozo Koyama (30 minutes)
Break (30 minutes)
Discussion: Research needs and most probable innovations related to the advanced fuel cycle. (75 minutes)

Co-Chairs:
Edward Fujita
Patrick Cousinou

12:00 Lunch: Hosted by Studsvik

Speaker: Pierre d'Hondt, SCK

13:30 Session II: Current Status and Expectations on Progress of Fuel Cycle Issues

Industry perspectives on the current fuel cycle, such as increased U^{235} enrichment beyond 5 wt.%; new types of burnable poisons, such as erbium; material issues, such as retrieval, repacking, or transportation; and practical needs for criticality safety assessment, staff skills, and training.

Patricia Silva (20 minutes)
Michel Doucet (20 minutes)
Kouji Hiraiwa (20 minutes)
Lon Paulson (20 minutes)
Discussion: Main innovations related to the current fuel cycle. (40 minutes)

Co-Chairs:
Calvin Hopper
Jose Conde

15:30 Break

15:50 Session III: Oriented Basic Research Needs for Criticality Safety Study

Codes, nuclear data, covariance data, and the need for new integral experiments or improved differential nuclear data.

Massimo Salvatores (20 minutes)
Richard McKnight (20 minutes)
Alain Santamarina (20 minutes)
Discussion: Requirements for state-of-the-art criticality codes, nuclear data, and covariance data and integral experiments needs. (40 minutes)

Co-Chairs:
Dennis Mennerdahl
Alain Santamarina

17:30 Adjourn

18:45 Reception: Hosted by AREVA
Dinner: Sponsored by DOE/IINL/ISU

Arthur Vailas, ISU
Finis Southworth, AREVA

September 22, 2009

OECD-NEA WORKSHOP ON FUTURE CRITICALITY SAFETY RESEARCH NEEDS

Agenda

Tuesday, September 22, 2009

7:30 Registration

8:00 Session IV: Decision Making Support for Criticality Safety Assessment

Methods for validation for criticality calculations (bias and the bias uncertainty analysis) via comparison with integral experiments, requirements for integral experiments, and approaches for scenario development.

Tatiana Ivanova (20 minutes)

- Jens-Christian Neuber (10 minutes)
- Bradley Rearden (10 minutes)
- Christophe Venard (10 minutes)

Patrick Cousinou (30 minutes)

Discussion: Requirements and methods for state-of-the-art validation of criticality calculations for current and advanced fuel cycles and integral experiments needs. (40 minutes)

Co-Chairs:
Cecil Parks
Jens-Christian Neuber

10:00 Break

10:30 Session V: Analysis of Criticality Issues Related to Waste Management and Disposal

Direct disposal of SNF, long term storage, HLW, legacy waste, decommissioning, and retrieval. Codes for burnup credit calculations, the need for assay data, realistic modeling of waste matrices, databases for relevant code validation, development of new standards/safe limits for common types of fissile waste streams, development of risk-informed approach to assessment of waste, NDA techniques for fissile waste, etc.

Philip Wheatley (20 minutes)

Robert Kilger (20 minutes)

Jim Gulliford (20 minutes)

John Scaglione (20 minutes)

Discussion: Waste disposal challenges and possible ways to meet those challenges. (40 minutes)

Co-Chairs:
Michaele Brady-Raap
Jim Gulliford

12:30 Lunch: Sponsored by DOE/INL/ISU

Speaker: Jim Gulliford,
NNL

14:00 Session VI: Status and Perspectives of Critical Experiments

Availability and flexibility of experimental facilities for critical experiments and other experimental and measurement needs.

Nichole Ellis (20 minutes)

Anatoli Tsibulya (20 minutes)

Hervé Glandais (20 minutes)

Yuichi Yamane (20 minutes)

Discussion: Main innovations related to the current fuel cycle. (40 minutes)

Co-Chairs:
Blair Briggs
Yoshinori Miyoshi

16:00 Break

16:30 Session VII: Summary and Conclusions

Véronique Rouyer

17:30 Adjourn

September 22, 2009