

Meeting of the WPRS / EGRPANS / Sodium Fast Reactor Task Force (SFR)

Monday 2 May 2011, 9:30 – 13:00

Novotel Nice Centre Acropolis,
8-10 Parvis de l'Europe,
06300 Nice, France

1. Welcome and approval of the Agenda

F. Michel-Sendis greeted the participants and presented apologies for absence on behalf of Jim Gulliford. Apologies were previously received from participants from SCKCEN (Belgium), VTT (Finland) and KFKI (Hungary), who expressed their interest in the benchmark but could not attend the meeting. **T.A. Taiwo** commented that the interest shown for this benchmark by international participants other than CEA/ANL was encouraging. The agenda for the day was approved. The meeting that followed was an informal one where discussion among participants was encouraged.

2. Planning of SFR Benchmark

F. Varaine reminded the participants of the objectives and milestones of the proposed benchmark. A discussion followed on how to define transients in a safety approach. Speaking for ANL, **T.A. Taiwo** anticipated the need to include experts from ANL safety division in the thermal-hydraulics/transient part of the benchmark and observed the initial timeline proposed was too tight to meet. It was agreed the timeline of the benchmark would be modified to a more realistic schedule, keeping the neutronic part as the first stage to finish before the end of the year. It was decided that CEA would provide a spreadsheet template to fill out by benchmark participants to facilitate compilation of results.

2. Presentations

Review of SFR Benchmark Specifications + State-of-the-art of feedback calculations

L. Buiron presented the benchmark in detail and introduced the bibliographic study he has been compiling with the aim to develop a state of the art of feedback calculations. He reported this work is ongoing and could become a contribution for a report of the Expert Group.

An analysis of the interference of the different feed-back coefficients

E. Ivanov presented a proposal for complementary calculations to be included in the benchmark. He reported these calculations would allow for interpretation of the discrepancies that may be observed between the different results obtained by the participants, and commented such an interpretation is essential in any safety analysis presented before decision-makers.

3. Discussion

A discussion followed on the necessity to include the additional calculations proposed by IRSN at such an early state of the benchmark. The proposal was met with interest, and it was decided that it would be discussed again at the next meeting where first neutronic results could be shown and the importance of these calculations demonstrated. **E. Ivanov** agreed to provide more detailed specifications of the tallies requested by the next meeting. It was decided that these complementary calculations could become an optional branch of the benchmark. **F. Varaine** agreed also to prepare and provide an informational note detailing the methodology used at CEA for feedback coefficient calculations. A similar note could then be prepared by ANL on the methodology they use. It was requested that the Task Force should meet again at the next WPRS meeting in 2012, in a parallel

session for a full day. Secretariat agreed to set up a dedicated website working area for the Task Force where documents can be shared.

4. Actions

The Task force agreed on the following actions. All documents/information will be centralized by the Secretariat (F. Michel-Sendis).

1. L. Buiron : Add minor corrections to specifications. *Action Completed 5 May*
2. F. Varaine Provide modified time line for benchmark deadlines (*15 May*)
3. L. Buiron & T.K. Kim Provide template spreadsheet for results compilation (*31 May*)
4. F. Michel-Sendis Provide working area website for the task force (*31 May*)
5. F. Varaine Provide informational note on feedback coefficient calculations methodology at CEA (*September 2011*)
6. F. Michel-Sendis Check for meeting room availability at next WPRS meeting (*before next meeting*)
7. E. Ivanov Prepare specifications for complementary calculations optional phase (*before next meeting*)

5. Any Other Business

With no other business to discuss, the meeting was adjourned.

Participants

Laurent	BUIRON	(CEA, France)	laurent.buiron@cea.fr
Evgeny	IVANOV	(IRSN, France)	evgeny.ivanov@irsn.fr
Franco	MICHEL-SENDIS	(OECD/NEA)	franco.michel-sendis@oecd.org
Konstantin	MIKITYUK	(PSI, Switzerland)	konstantin.mikityuk@psi.ch
Alexander	PONOMAREV	(KIT, Germany)	alexander.ponomarev@kit.edu
Nicolas	STAUFF	(CEA, France)	nicolas.stauff@cea.fr
Taek K.	KIM	(ANL, USA)	tkkim@anl.gov
Temitope	TAIWO	(ANL, USA)	taiwo@anl.gov
Frédéric	VARAINE	(CEA, France)	frederic.varaine@cea.fr

Apologies for absence from :

Andras	KERESZTURI	(KFKI, Hungary)	kere@aeki.kfki.hu
Gert Van den	EYNDE	(SCKCEN, Belgium)	gvdeynde@sckcen.be
Petri	KOTILUOTO	(VTT, Finland)	petri.kotiluoto@vtt.fi
Pauli	JUUTILAINEN	(VTT, Finland)	pauli.juutilainen@vtt.fi
Jaakko	LEPP ANEN	(VTT, Finland)	jaakko.leppanen@vtt.fi
Sandro	PELLONI	(PSI, Switzerland)	sandro.pelloni@psi.ch