Agenda of the 5th meeting of WPEC Subgroup 33
NEA, Issy-les-Moulineaux, France
11 May 2011

9 am – 9:20 am

Welcome, approval of agenda, action items from last meeting. (M. Salvatores)

1. **9:20 am – 9:35 am** **Discussion on Progress of the subgroup actions and release of first deliverable**

   (All. M. Salvatores, G. Palmiotti, and E. Dupont drive discussion)

2. **9:35 am – 9:55 am** **Adjustment methodology**

   Adjustment methodology in use at CIAE (H. Wu)

3. **9:55 am – 10:10 am** **Experiment analysis**

   ZPPR-9 Updated Results (ANL R. McKnight)

10:10 am – 10:20 am Break

4. **10:20 am – 11:00** **Cross section covariance matrix**

   Covariance data at CIAE (W. Wang)

   Release of COMMARA 1.0 to participants (BNL M. Herman)

5. **11:0 am –11:40 am** **Experiment covariance matrix**

   Discussion and feedback to JAEA proposal (All. M Ishikawa and R. McKnight drive discussion)

6. **11:40 am – 12:10 pm** **WPNCS Expert Group on Uncertainty Analyses for Criticality Safety Assessment**

   Overview of the progress made at the WPNCS (IRSN T. Ivanova)

12:10 pm – 1:30 pm Lunch break

7. 1:30 pm – 2:30 pm Uncertainty evaluation

Uncertainty analysis with JEFF, ERALIB-1, and BOLNA data (PSI S. Pelloni)

Uncertainty analysis on target systems (NRG D. Rochman)

8. 2:30 pm – 3:00 pm Adjustment exercise

Adjustment results based on JENDL-4.0 (JAEA M. Ishikawa)

3:00 pm – 3:10 pm Break

3:10 pm – 3:30 pm
CEA Adjustment (C. de Saint Jean)

3:30 – 4:00
Preliminary adjustment results with ENDF/B-VII and COMMARA 1.0 (INL G. Palmiotti))

4:00 pm – 4:20 pm
Simulation of cross-section adjustment (JAEA, M. Ishikawa)

9. 4:20 pm – 5:30 pm Discussion on next steps.

Next steps, schedule, and next meeting (All)

9. Actions

1.	E. Dupont	To include all modifications and circulate among Sg33 members the final report on adjustment methodology. To publish the report on adjustment methodology as a NEA/NSC document.
2.	G. Palmiotti	To check corrective factors for FLATTOP. In general to provide consolidation of procedure to define correction factors and circulate document early 2011. To increase by a factor 2 the uncertainty of as-built MC calculations. To circulate up-to-date description of INL benchmark specifications.
3.	R. McKnight	To check the integral uncertainties (e.g. ZPR6-7) and correlations proposed by JAEA and document any proposal for modification (early 2011, before next meeting).
4.	M. Ishikawa	To provide JOYO MC model and calculation uncertainties associated to as-built MC simulations of JOYO. To circulate up-to-date description of JAEA benchmark specifications
5.	ANL	To provide MC model of ZPPR-9
6.	M. Ishikawa	To further study the analytical modelling error of deterministic calculations and provide an estimation of V_m for ZPPR9 configurations.

7.	All	To provide comments and feedback to JAEA on the method uncertainty approach (by February 2011)
8.	M. Salvatores	To contact IPPE and ask them to peer-review the integral uncertainties and their correlations to be used in the benchmark exercise.
9.	BNL	Release covariance data AFCI 2.0 by next meeting
10.	E. Dupont	To update the subgroup web page with materials from this meeting and other participant contributions.

Goals

- Assess if in a multigroup nuclear data adjustment we end up with the same (similar) set of isotope cross sections when a common shared set of integral experiments is used and different data adjustment methodologies are used.
- Assess the impact of using different starting cross section libraries and/or different covariance matrices.
- Assess if the attained reduced uncertainties on a target design for a set of integral parameters of interest is consistent among the different solutions.

Benchmark exercise

Every participant to the benchmark exercise will use the same integral experiment values (E) and uncertainties, but their own calculated value (C), sensitivity coefficients, and adjustment/assimilation method.

The benchmark will consist of a three-step exercise using:

1. **own initial cross sections, own nuclear data covariances, w/wo integral correlation**
2. **own initial cross sections, same nuclear data covariances, w/wo integral correlation**
3. **same initial cross sections, same nuclear data covariances, w/wo integral correlation**

Benchmark output

The main benchmark results relevant for comparison are,

- Adjusted nuclear data,
- Final nuclear data covariances,
- Initial and final integral C/E values and associated uncertainties,
- Initial and final results of reactor project calculations including uncertainties.

The initial/final nuclear data and covariance matrices will be tested on the ABR (start up) configuration. In order to test the ability to extrapolate the results, it has been suggested to consider also a different target design. As possible candidates: ABR at equilibrium, JAEA FBR

What we have available:

- Deliverable on Adjustment Methods (hopefully will be a reference for future work)

- Set of integral experiments, calculation models and uncertainties

- Preliminary « C » values (JAEA, INL…**All participants should provide at least this output)**

- Several covariance data (**COMMARA 1 to be distributed**)

- Preliminary adjustments (**Step 1 of the Benchmark Exercise**)