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**Organisation for Economic Co-operation and Development  
Nuclear Energy Agency**

**Summary record of the WPEC Subgroup C meeting  
on the High Priority Request List (HPRL).**

**Monday, 23 April 2007, 17.30-19.00  
Acropolis Convention and Exhibition Centre, Nice, France  
Room C, ND-2007 conference area**

By  
H. Henriksson, A. Plompen

**Participants:**

H. Henriksson (NEA secretariat) G. Manturov, R. McKnight, A. Plompen (chair), G. Rimpault, D. Smith, K. Shibata, T. Yoshida

**1. Adoption of the Agenda (annex 1)**

In his welcome A. Plompen summarised the present status of the HPRL. There are now 9 requests available, of which 5 are well justified and of high priority, and 4 of general interest. The excellent work for the website at NEA by H. Henriksson and P. Nagel was highlighted and the user friendliness was stressed. The new webpage layout was appreciated by the subgroup participants. This is now a powerful tool for requesters, reviewers and users.

A. Plompen asserted that the present list is heavily biased towards needs expressed by the European community and that the number of entries is still quite limited. Clearly, if the situation remains on the longer term, the suitability of maintaining such a list at the level of WPEC is questionable. He further commented on the fact that certain parties had expressed that the criteria for formulating new requests implied a considerable effort on behalf of the requester.

No new feedback was deemed necessary for the contribution to ND2007 and the requests currently adopted, so the corresponding points 4 and 5 of the agenda were dropped. It was noted that G. Rimpault would appreciate if in the future the HPRL subgroup discussions could be more technical.

## **2. Proposal for relaxing of the criteria for a general request.**

To accommodate complaints that for the new HPRL too much effort was required on behalf of the requester, it was proposed (G. Rimpault, A. Plompen) that justification documentation and impact fields should not be compulsory for general requests. Both D. Smith and R. McKnight were convinced that the formulation in the guidelines was already such that no substantial barrier was implied. A reasonable justification and impact clarification is a natural preliminary for any well identified request. Since it seems clear that the guidelines are a stumbling block for some it was agreed to put an action on SG-C to review and clarify/simplify these guidelines where possible.

Several isolated points requiring further clarification surfaced:

a) Most current requests ask for measurements whereas an evaluation should be requested. A. Plompen clarified that this concerns requests for evaluations where the requester made clear that no progress could be made without further measurements.

b) Can a request concern a covariance evaluation alone? In principle, the answer is yes. It would be interesting to see a first example.

c) How to handle data for compounds? The point in case is data for scattering kernels. It was pointed out by R. McKnight that in chemical processing, waste storage and certain benchmarks compounds are used for which no scattering kernels exist. The uncertainties concerning those may be as significant as some of the other nuclear data needs for criticality safety. The current format does not allow entry of such a request (review the guidelines: action SG-C).

d) Partial justification/problem identification

A substantial issue is the degree to which a nuclear data problem should be identified before it can be submitted. Several examples were discussed where it was clear to the data user that something is wrong with a particular file (e.g.  $^{52}\text{Cr}$ ,  $^{55}\text{Mn}$  – R. McKnight) from the analysis of a limited number of high quality and selective benchmarks. Often, additional analysis is required to identify reaction channel, energy range and nuclear data target accuracy. However, as a result of project objectives and lack of funding this final step is not often carried through. It was proposed to set up an open ‘blog’-like discussion forum on the HPRL website where such concerns can be posted and used to provoke further discussion and feedback (action NEA).

## **3. Input from WPEC subgroups and file projects**

D. Smith suggested that SG-C recommends WPEC to impose on all running and forthcoming subgroups a deliverable connected to the HPRL. Each subgroup should review its efforts and achievements in terms of new nuclear data needs that have emerged and the existing ones that may or may not have been resolved. He further suggested the

same be asked of IAEA led data development projects, in particular CRPs. These two recommendations are actions for the SG-C chair in conjunction with NEA.

#### Subgroup 26 on nuclear data needs for Gen-IV.

Good contacts are established with SG-26. Four members of SG-C attended the SG-26 meeting on April 22. It was acknowledged at that meeting that SG-26 efforts are exemplary in terms of motivating a nuclear data request from an application need. Although SG-26 requires more time to finalise its conclusions it was agreed to start the process of formulating requests at the time of the NEMEA-4 workshop, 16-18 October 2007 in Prague and to carry this further in the designated meeting at NEA this fall. SG-26 could easily double the number of requests in HPRL and will at the same time make a substantial step towards a list of needs that is more balanced in terms of geographical spread.

No further input from subgroups or file projects was available. A. Plompen mentioned forthcoming discussions with CEA and ideas for requests from the fusion community.

Requesters from Russia and Japan are encouraged to provide their needs. It would be of importance if the Japanese community could decide which of their requests would be of interest to the HPRL. US requests are envisaged within the Generation-IV projects (see below from WPEC subgroup 26).

#### Other nuclear data request lists.

It was noted that other lists exist (e.g. at JAEA and NDAG) for which the maintainers have not come to propose entries for the HPRL. It was proposed to set up links to these other lists through the HPRL website (action NEA). Preliminary discussions were started with Hasegawa (NEA Data Bank), Shibata, Ishikawa (JAEA) and M. Smith (ORNL). Hasegawa proposed to make a link to the Japanese webpage, and to further support our interactions with Ishikawa and Fukahori. Shibata wanted to have further information for clarification, before any decisions.

### **6. Feedback on follow-up projects for current requests**

Currently, the requests for the  $^{16}\text{O}(n,\alpha)$ , the  $\text{Hf}(n,\gamma)$  and the  $\text{D}(n,n)$  reactions are being pursued. Efforts for follow-up are being planned for the study of the prompt fission gammas of  $^{235}\text{U}$  and  $^{239}\text{Pu}$  and for the fission to capture ratio of  $^{233}\text{U}$ . D. Smith suggested that this should be further highlighted on the webpages of the respective requests (Action A. Plompen).

### **7. Any Other Business**

#### Criteria for success for the HPRL project

Smith (and Plompen) wanted to define what is a successful request list. This is of relevance to the evaluation of the HPRL project by WPEC in 2009. It was agreed by the members of SG-C that the current HPRL is what was envisioned. Once again NEA was complimented on the excellent website. It was agreed that a credible list should have the

current level of motivation and documentation. It was further agreed that a typical number of entries should be well below 50. Finally, the degree of follow-up that can be claimed is important.

**List of actions:**

**Action on the NEA** to advertise an open discussion forum (blog-like system) for encouraging the progress towards more and well justified requests.

**Action on all** to revise the guidelines, so that the distinction is clear between the general and the high priority requests. The justification documentation paragraph was especially examined. Mark in red some few things to highlight in the text.

**Action on Plompen** to encourage all new WPEC subgroups to have as deliverables requests for data to the HPRL (where applicable). This could also apply to IAEA coordinated research projects (CRPs).

**Action Plompen** to contact Ishikawa for a request on  $^{235}\text{U}$ .

**Action Plompen** to contact Fukahori for information on the Japanese request list.

## **Annex 1**

### **Organisation for Economic Co-operation and Development Nuclear Energy Agency**

#### **Proposed Agenda of the WPEC Subgroup C meeting on the High Priority Request List (HPRL).**

**Monday, 23 April 2007, 17.30-19.00  
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1. Adoption of the agenda
2. Proposal for relaxing of the criteria for a general request
3. Input from WPEC subgroups and file projects
  - a. Active WPEC Subgroups (23-FPs, 24-Cov-FNR, 25-Decay, 26-ARS, 27-FP-photons, 28-ProcCovData)
  - b. File projects (ENDF, JEFF, JENDL, BROND, CENDL, IAEA)
4. Comments ND-2007 contribution
5. Discussion of the current list
  - a. Identification of points requiring discussion
  - b. Actual discussions
6. Feedback on follow-up projects of existing requests
7. Any other business