Proposed Changes in the HPRL Website

1. Background

The High Priority Request List (HPRL) web pages and database are maintained by the Data Bank on behalf of WPEC Subgroup C. The request list is currently divided in two categories of requests: High Priority (HP) and General (G).

This document describes the changes requested by Subgroup C in order:

- To add a third category of requests for Special Purpose Quantities (SPQ),
- To generally improve the appearance and usage of the HPRL web pages.

The request to add a third category affects both the database and the web interface. In this document, the Subgroup C request is translated into changes to the web interface and further discussion may be necessary if the related changes to the database are not straightforward.

The following HPRL webpages are directly affected by the Subgroup C request:

- Main page (www.oecd-nea.org/dbdata/hprl)
- New request form (www.oecd-nea.org/dbdata/hprl/requestform.html)

A few additional web pages may be affected indirectly via e.g., drop-down lists:

- Request editor (www.oecd-nea.org/dbdata/hprl/editdb.pl?submit=Edit+this+record&id=432)
- …

2. Proposed changes to the HPRL Main Page

Replace the menu bar by six tiles (as indicated in the image below together with additional changes):

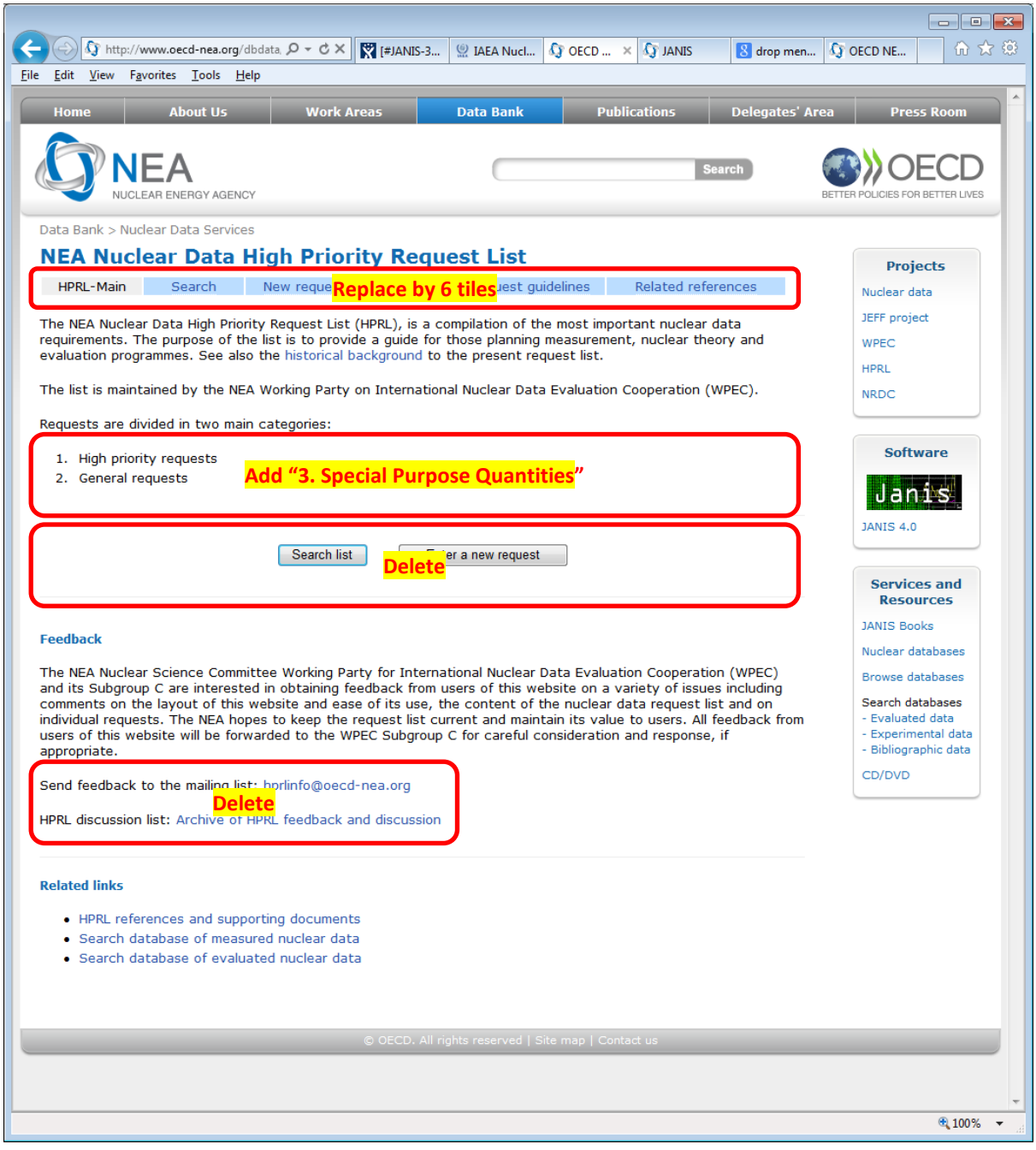
1) HPRL Main
2) High Priority Requests (HPR)
3) General Requests (GR)
4) Special Purpose Quantities (SPQ)
5) New Requests
6) Discussion and Feedback

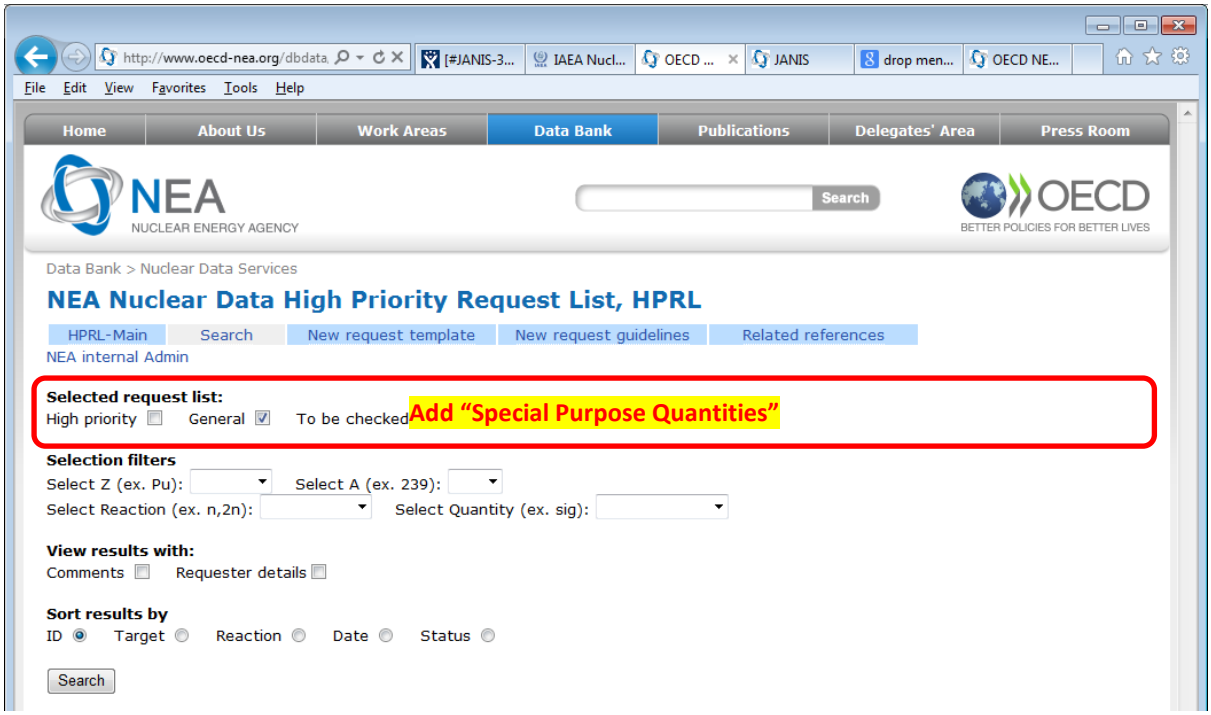
Clicking on “New Requests” should direct to the “New Request Form” (as today) and clicking on “Discussion and Feedback” should direct to the HPRL Mailing List web page, a list of the available feedback documents, and a form allowing new feedback to be entered.

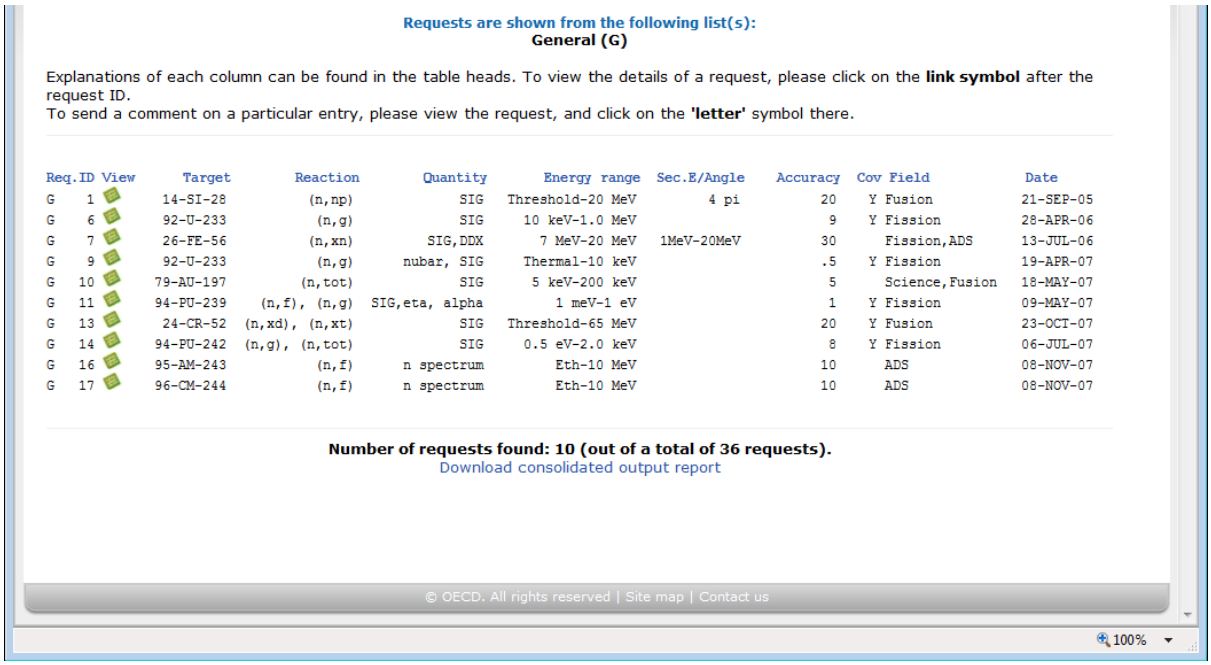
Clicking on the tile of HPR or GR should direct to the corresponding list (as it would come out of the search form without selecting anything, except HPR or GR). Clicking on the tile of SPQ should direct to another page with tiles for the various SPQ (e.g. Spectrum averaged dosimetry cross-sections or

Decay data, to the extent they are established) and after that to the list of requests as for HPR and GR, but then only for one of the SPQ category. On each of these pages the search facility could appear on top of it (ideally in a compact mode, so just a button, that expands the search form only when it is needed and leaving the list visible). See the example below for GR (assembled from two screenshots).

The search function to simultaneously query all lists should remain available (e.g. to find anything Pu-239, or everything fission).



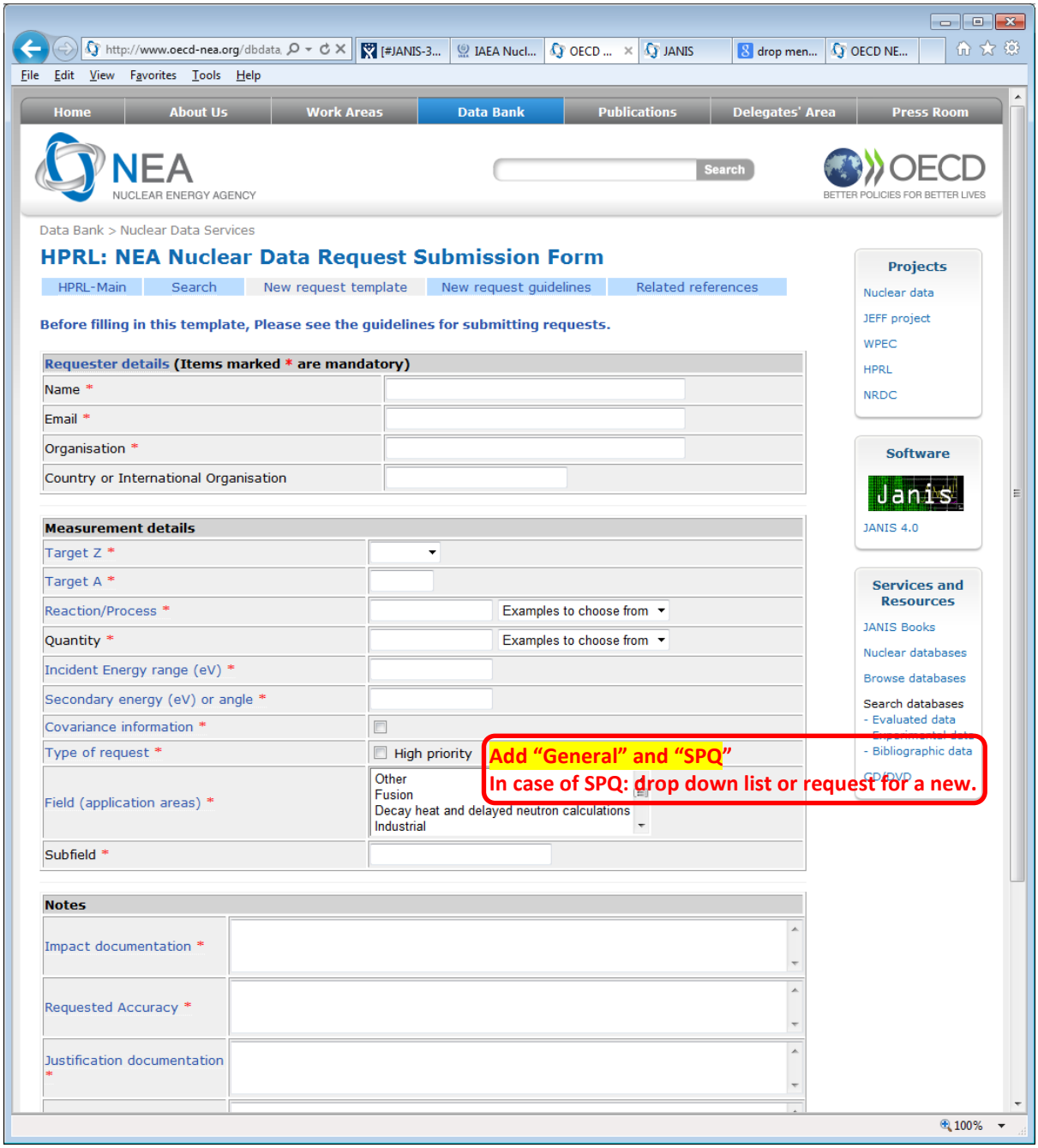




Req.ID	View	Target	Reaction	Quantity	Energy range	Sec.E/Angle	Accuracy	Cov	Field	Date
G 1		14-SI-28	(n,np)	SIG	Threshold-20 MeV	4 pi	20	Y	Fusion	21-SEP-05
G 6		92-U-233	(n,g)	SIG	10 keV-1.0 MeV		9	Y	Fission	28-APR-06
G 7		26-FE-56	(n,xn)	SIG,DDX	7 MeV-20 MeV	1MeV-20MeV	30		Fission,ADS	13-JUL-06
G 9		92-U-233	(n,g)	nubar, SIG	Thermal-10 keV		.5	Y	Fission	19-APR-07
G 10		79-AU-197	(n,tot)	SIG	5 keV-200 keV		5		Science,Fusion	18-MAY-07
G 11		94-PU-239	(n,f), (n,g)	SIG,eta, alpha	1 meV-1 eV		1	Y	Fission	09-MAY-07
G 13		24-CR-52	(n,xd), (n,xt)	SIG	Threshold-65 MeV		20	Y	Fusion	23-OCT-07
G 14		94-PU-242	(n,g), (n,tot)	SIG	0.5 eV-2.0 keV		8	Y	Fission	06-JUL-07
G 16		95-AM-243	(n,f)	n spectrum	Eth-10 MeV		10		ADS	08-NOV-07
G 17		96-CM-244	(n,f)	n spectrum	Eth-10 MeV		10		ADS	08-NOV-07

3. Proposed changes to the New Request Form

The “Type of request” field should be updated with additional categories (“General” and “Special Purpose Quantities”)



3. Proposed changes to drop-down lists

The following drop-down lists are available in various forms:

- Z of the target from www.oecd-nea.org/dbdata/hprl/zsym.htm (and hardcoded in `hprl.pl')
- A of the target from the database table `hprlzaq'
- Reaction (including entrance channel) from www.oecd-nea.org/dbdata/hprl/rlist.htm
- Quantity (cross-section, etc.) from www.oecd-nea.org/dbdata/hprl/qlist.htm
- Field (application areas) from the database table `hprlpurpose'
- Priority (H, G, SP) is hardcoded in the "Request Editor". There are to be several lists of SPQ. NEA should provide a coding system to distinguish.

These lists should be reviewed, made consistent and complemented in order to allow Special Purpose requests, e.g. Thermal Scattering Law data on a compound. One may use EXFOR dictionary for that purpose.

4. Example of Special Purpose Quantities

(For implementation refer to the note of SG-C for this example,).

It is proposed to create a specific request list in the category of Special Purpose Quantities for spectrum averaged dosimetry cross-sections. The new measurements should make effort to reach uncertainty 2-5% (E50% < 15 MeV) or 5-10% (E50% > 15 MeV), as in the best previous experiments.

Cf-252(SF) spectra

Not measured yet (26 reactions):
Sc-45(n,g), Nb-93(n,g), Li-6(n,t)He-4, Fe-58(n,g), Ag-109(n,g), U-235(n,g), B-10(n,a), U-238(n,g), W-186(n,g), Am-241(n,f), P-31(n,p), Zn-67(n,p), Fe-54(n,a), In-115(n,2n), Pr-141(n,2n), As-75(n,2n), Y-89(n,2n) , Ti-47(n,np), Na-23(n,2n), Ti-49(n,np), Ti-48(n,np), Fe-54(n,2n), Bi-209(n,3n) ,Tm-169(n,3n), Co-59(n,3n)

Outliers (4 reactions): Co-59(n,γ), Mo-92(n,p), Ni-60(n,p), Ti-46(n,2n)
Large discrepancies or uncertainties: Th-232(n,f)

U-235(n_{th},f) spectra

Not measured yet (25 reactions):
Sc-45(n,g), Nb-93(n,g), Fe-58(n,g), Ag-109(n,g), U-235(n,g), Ta-181(n,g), Th-232(n,g), U-238(n,g), Cu-63(n,g), In-115(n,g), W-186(n,g), Am-241(n,f), In-115(n,2n), Pr-141(n,2n), Cu-65(n,2n), Cr-52(n,2n), Ti-47(n,np), Na-23(n,2n), Ti-49(n,np), Ti-48(n,np), Ti-46(n,2n), Fe-54(n,2n), Bi-209(n,3n), Tm-169(n,3n), Co-59(n,3n)

Outliers (4 reactions):
Li-6(n,t)He-4, B-10(n,a)Li-7 – outlier (due to 12% contribution of (n,a)ta ?), La-139(n,g), P-31(n,p)

Large discrepancies or uncertainties: Rh-103(n,n'), Tm-169(n2n), Mn-55(n,2n)