## ZAID for Thermal Scattering Law evaluations

Currently in ENDF, the ZAID for thermal scattering law data is calculated from ZA=MAT+100 (see Appendix C). This complicates processing since NJOY requires that each thermal scattering law evaluation be merged onto a neutron sub library evaluation during processing. This would also help clarify TSL tracker #233. More importantly, the association between say H in H2O with 1-H-1 is potentially lost.

We propose revising rule 2 in Appendix C to read:

2) For compounds, the ZA is calculated as follows:

2.1) if the TSL is clearly associated with a particular nuclide (sigma\_free corresponds to a particular evaluation in the neutron sublibrary), it should use the corresponding ZAID.

2.2) if the TSL is associated to an element (sigma\_free is the average for the element), it should use the ZAID of the element,

2.3) if the TSL is associated with a mixed moderator (sigma\_free is the average of the nuclides of the compound with a certain stoichiometry), it should use MAT+100. Mixed moderator evaluations should be avoided in practice as it leads to mistakes in processing.