

Appendix B Nuclear Data

Priority Needs */ Additional Needs			Thermal scattering (BeO, HF, D ₂ O, SiO ₂ , CH ₂ , C ₂ F ₄ , C ₅ O ₂ H ₈ , etc.), ²³⁹ Pu, Cr, ²³⁷ Np, Pb, ⁵⁵ Mn, Ti, ²⁴⁰ Pu / ²³³ U, Th, Be, ⁵¹ V, Zr, F, K, Ca, Mo, Na, La								
Completed Evaluations (FY)			Minor Actinides (13), SiO ₂ (12), ⁵⁵ Mn (12), ^{180,128,183,184,186} W (14)								
	Materials	Pre FY2015	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	Post-FY2021	
Measurements	Calcium (Ca)										
	Cerium (Ce)										
	Copper (Cu)										
	Iron (Fe)										
	Lucite (C ₅ O ₂ H ₈)										
	Tantalum (Ta)										
	Strontium (Sr)										
	Tungsten (W)										
	Vanadium (V)										
	Zirconium (Zr)										
	Polyethylene (CH ₂)	H ₂ O / CH ₂									
		Materials	Pre FY2015	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	Post-FY2021
Complete Evaluations	Calcium (Ca)										
	Cerium (Ce)										
	Cobalt (Co)										
	Copper (Cu)										
	Dysprosium (Dy)										
	Gadolinium (Gd)										
	Iron (Fe)										
	Lead (Pb)										
	Nickel (Ni)										
	Oxygen (O)										
	Rhodium (Rh)										
	Plutonium-239										
	Tantalum (Ta)										
	Strontium (Sr)										
	Tungsten (W)										
	Uranium-235										
	Uranium-238										
	Vanadium (V)										
	Zirconium (Zr)										
	Hydrofluoric Acid										
Lucite (C ₅ O ₂ H ₈)											
Polyethylene (CH ₂)											
		ORNL		RPI		LANL		LLNL/NCSU			

- Requests for additional IE measurements: Ni, Mo, Cr (Fe-Cr alloys), Mn in intermediate energy range (VNIITF, NCERC).
- Request for measurements and evaluation of angular distributions at high energy for Cu.
- Continuing need for thermal scattering data.

*Note: work has been completed for some priority needs (e.g., ⁵⁵Mn, Ti, and Cr), and these isotopes/nuclides are maintained on the list for reference. Furthermore, the table represents the list of materials that can be addressed during the next five years under the current budget target. The additional priority needs will be addressed beyond the next five years.