

Comparison of Decay Calculations of ORIGEN-Jül and ORIGEN 2.2

Content

Abstract	2
1. Introduction	3
2. Decay of burned plutonium / minor actinides fuel	4
2.1 Detailed analysis of radioactive decay for selected actinides	4
2.2 General analysis of decay for heavy metal isotopes (mass number greater 205)	6
2.2.1 Isotope mass differences normalized to isotope mass	6
2.2.2 Isotope mass differences normalized to total heavy metal mass	9
3. Decay of burned low enriched uranium fuel	12
3.1 Detailed analysis of decay for selected actinides	12
3.2 General analysis of decay for heavy metal isotopes (mass number greater 205)	13
3.2.1 Isotope mass differences normalized to isotope mass	13
3.2.2 Isotope mass differences normalized to total heavy metal mass	16
4. Comparison of decay constants for mass numbers higher 205	18
5. Comparison of branching ratios for selected isotopes	20
6. Conclusion	25
References	27
Appendix A	28
Appendix B	30
Appendix C	30