

NOTE: (a) To determine the specific group for radionuclides not shown, a comparison of the effective dose factors, by exposure pathway, listed in Table A.1 of NCRP Report No. 123 for the radionuclides in question and the radionuclides in the general groups above shall be performed and a determination of the proper group made, based on similarity of the factors.

NOTE: (b) The amount of removable radioactive material per 100 cm<sup>2</sup> of surface area should be determined by swiping the area with dry filter or soft absorbent paper, applying moderate pressure, and then assessing the amount of radioactive material on the swipe with an appropriate instrument of known efficiency. (Note - The use of dry material may not be appropriate for tritium). When removable contamination on objects of surface area less than 100 cm<sup>2</sup> is determined, the activity per unit area shall be based on the actual area and the entire surface shall be wiped. It is not necessary to use swiping techniques to measure removable contamination levels if direct scan surveys indicate that the total residual surface contamination levels are within the limits for removable contamination.

NOTE: (c) The levels may be averaged over one square meter provided the maximum surface activity in any area of 100 cm<sup>2</sup> is less than three times the value specified. For purpose of averaging, any square meter of surface shall be considered to be above the surface contamination value if: (1) from measurements of a representative number of sections it is determined that the average contamination exceeds the applicable value; or (2) it is determined that the sum of the activity of all isolated spots or particles in any 100 cm<sup>2</sup> area exceeds three times the applicable value.

NOTE: (d) Volume criteria will only be applied for the purpose of release of materials for disposal in a state, DOE, permitted or approved on-site landfill.

NOTE: (e) For decay chains, the screening levels represent the total activity (i.e., the activity of the parent plus the activity of all progeny) present.

NOTE: (f) Alpha component of activity

NOTE: (g) Tritium contamination may diffuse into the volume or matrix of materials. Evaluation of surface contamination shall consider the extent to which such contamination may migrate to the surface in order to ensure the surface contamination value is not exceeded. Once this contamination migrates to the surface, it may be removable, not fixed; therefore, a "Total" value does not apply.

NOTE: (h) The criterion of 10,000 dpm/100 cm<sup>2</sup> will be used for release of material for unrestricted use (reuse or recycle). The criterion of 100,000 dpm/100 cm<sup>2</sup> will be used for the controlled on-site landfill disposal of material. (Note - DOE Suspension (July 2000) for recycle of metals will apply until rescinded). However, WSRC will only implement this more relaxed tritium surface criterion if a future exemption to 10CFR835 is granted.

**Data Table 6-31 SRS Supplemental Release Criteria**  
**2014 SRS Supplemental Release Criteria**

Radionuclide Groups <sup>(a)</sup>	Removable <sup>(b)</sup> dpm/100 cm <sup>2</sup>	Total (Fixed+Removable) <sup>(c)</sup> dpm/100 cm <sup>2</sup>	Volumetric <sup>(d)</sup> pCi/g
Group 1 Radium, Thorium, and Transuranics: 210Po, 210Pb, 226Ra, 228Ra, 228Th, 230Th, 232Th, 237Np, 239Pu, 240Pu, 241Am, 244Cm, and associated decay chains <sup>(e)</sup> , and others <sup>(a)</sup>	20	500	3
Group 2 U-nat, 234U, 235U, 238U, and associated decay products <sup>(f)</sup> : 14C, 22Na, 24Na, 32P, 35S, 36Cl, 45Ca, 51Cr, 54Mn, 55Fe, 59Fe, 58Co, 60Co, 63Ni, 65Zn, 89Sr, 90Sr, 94Nb, 99Tc, 106Ru, 110mAg, 109Cd, 111In, 124Sb, 125I, 129I, 131I, 134Cs, 137Cs, 144Ce, 147Pm, 152Eu, 154Eu, 192Ir, 198Au, 241Pu, and others <sup>(a)</sup>	1000	5000	30
Tritium and tritiated compounds <sup>(g)</sup>	10,000/100,000 <sup>(h)</sup>	N/A	2000