

**WAC 246-232-140 Schedule D.**

ACCEPTABLE SURFACE CONTAMINATION LEVELS

| NUCLIDES A                                                                                                                           | AVERAGE B C F                 | MAXIMUM B D F                  | REMOVABLE B E F WIPE LIMITS     |
|--------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|--------------------------------|---------------------------------|
| U-nat, U-235, U-238, and associated decay products                                                                                   | 5,000 dpm/100 cm <sup>2</sup> | 15,000 dpm/100 cm <sup>2</sup> | 1,000 dpm α/100 cm <sup>2</sup> |
| Transuranics, Ra-226, Ra-228, Th-230, Th-228, Pa-231, Ac-227, I-125, I-129                                                           | 100 dpm/100 cm <sup>2</sup>   | 300 dpm/100 cm <sup>2</sup>    | 20 dpm/100 cm <sup>2</sup>      |
| Th-nat, Th-232, Sr-90, Ra-223, Ra-224, U-232, I-126, I-131, I-133                                                                    | 1000 dpm/100 cm <sup>2</sup>  | 3000 dpm/100 cm <sup>2</sup>   | 200 dpm/100 cm <sup>2</sup>     |
| Beta-gamma emitters (nuclides with decay modes other than alpha emission or spontaneous fission) except SR-90 and others noted above | 5000 dpm/100 cm <sup>2</sup>  | 15,000 dpm/100 cm <sup>2</sup> | 1000 dpm βγ/100 cm <sup>2</sup> |

- A Where surface contamination by both alpha- and beta-gamma-emitting nuclides exists, the limits established for alpha-and beta-gamma-emitting nuclides should apply independently.
- B As used in this table, dpm (disintegrations per minute) means the rate of emission by radioactive material as determined by correcting the counts per minute observed by an appropriate detector for background, efficiency, and geometric factors associated with the instrumentation.
- C Measurements of average contaminant should not be averaged over more than one square meter. For objects of less surface area, the average should be derived for each such object.
- D The maximum contamination level applies to an area of not more than 100 cm<sup>2</sup>.
- E The amount of removable radioactive material per 100 cm<sup>2</sup> of surface area should be determined by wiping that area with dry filter or soft absorbent paper, applying moderate pressure, and assessing the amount of radioactive material on the wipe with an appropriate instrument of known efficiency. When removable contamination on objects of less surface area is determined, the pertinent levels should be reduced proportionally and the entire surface should be wiped.
- F The average and maximum radiation levels associated with surface contamination resulting from beta-gamma emitters should not exceed 0.2 mrad/hr at one cm and 1.0 mrad/hr at one cm, respectively, measured through not more than seven milligrams per square centimeter of total absorber.

[Statutory Authority: RCW 70A.388.040 and 70A.388.110. WSR 22-19-084, § 246-232-140, filed 9/20/22, effective 10/21/22. Statutory Authority: RCW 70.98.050 and 70.98.080. WSR 09-06-003, § 246-232-140, filed 2/18/09, effective 3/21/09. Statutory Authority: RCW 43.70.040. WSR 91-02-049 (Order 121), recodified as § 246-232-140, filed 12/27/90, effective 1/31/91. Statutory Authority: RCW 70.98.080. WSR 87-01-031 (Order 2450), § 402-19-590, filed 12/11/86; WSR 83-19-050 (Order 2026), § 402-19-590, filed 9/16/83.]