NORTHERN ARIZONA UNIVERSITY

Radiation Area/Article Decommissioning Procedures

1. A series of wipe tests will be performed to measure contamination levels. The method for performing wipe tests will be sufficiently sensitive to detect 20 dpm per 100 cm^2 wiped.

2. F:NAU:RAD:16 Area/Article Decommissioning Log will be kept of all survey results, including negative results. The record will include:

3. Decontamination will occur based on the following action levels in dpm/100 cm^2:

4. Once an area has been decommissioned, approval through the Radiation Safety Committee is required to re-open area for radioisotope use.

Radionuclide [1]	Average [2,3]	Maximum [2,4]	Removable [2,5]
U-nat, U-235, U-238, and associated decay products	5,000 dpm/100 cm^2	15,000 dpm/100cm^2	1,000 dpm/100 cm^2
Transuranics, Ra-226, Ra-228, Th-230, Pa-231, Ac-227, I-125, I-129	100 dpm/100cm^2	300 dpm/100cm^2	20 dpm/100cm^2
Th-nat, Th-232, Sr-90, Ra-223, Ra-224, U-232, I-126, I-131, I-133	1000 dpm/100cm^2	3000 dpm/100cm^2	200 dpm/100cm^2
Beta-gamma (Exceptions noted above)	5,000 dpm/100 cm^2	15,000 dpm/100cm^2	1,000 dpm/100 cm^2

[1] Where surface contamination by both alpha-and beta-gamma- emitting radionuclides exists, the limits established for alpha-and beta-gamma-emitting radionuclides apply independently.
[2] 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 on an instrument calibrated for background, efficiency, and geometric factors associated with the instrumentation, in accordance with R12-1-449.
[3] Measurements of average contamination level shall not be averaged over more than one square meter. For objects of less surface area, the average shall be derived for each object.
[4] The maximum contamination level applies to an area of not more than 100 cm^2 .
[5] The amount of removable radioactive material per 100 cm^2 of surface area shall 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 instrument calibrated in accordance with R12-1-449. When removable contamination on objects of surface area A (where A is less than 100 sq. cm) is determined, the entire surface shall be wiped and the contamination level multiplied by 100/A to convert to a "per 100 sq. cm" basis.