If license authorized any radioisotopes with a half-life greater than 120 days,   
assign a risk factor for each A-F section based on radioactive materials license authorization and use.

A.

|  |  |  |
| --- | --- | --- |
| **Half-Life of Radioisotope** | **Risk Multiplier** |  |
| Greater than 6 years | 30 |  |
| 6 months to 6 years | 10 |  |
| 120 days to 6 months | 5 |  |
| Less than or equal to 120 days | 0 |  |
|  | Multiplier Used |  | |

B.

|  |  |  |
| --- | --- | --- |
| **Radioisotope** | **Risk Multiplier** |  |
| Transuranic isotopes, Ra-226, Ra-228, Th-230, Th-228, Pa-231, Ac-227, Ac-225, I-129 | 50 |  |
| Th-natural, Th-232, Sr-90, Ra-223, Ra-224, U-232, I-126, I-131, I-133, I-125, H-3, C-14 | 5 |  |
| U-natural, U-235, U-238 and associated decay products | 1 |  |
| Any isotope not listed above | 1 |  |
|  | Multiplier Used |  |

C.

|  |  |  |
| --- | --- | --- |
| **Activity** | **Risk Multiplier** |  |
| Greater than 100,000 curies | 2000 |  |
| 10,000 to 100,000 curies | 1000 |  |
| 100 to 10,000 curies | 500 |  |
| 10 to 100 curies | 30 |  |
| 1 to 10 curies | 2 |  |
| Less than 1 curie | 1 |  |
|  | Multiplier Used |  | |

D.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Facility - Radioactive Materials Use and Storage Area** | | **Risk Multiplier** | |  |
| Greater than 5,000 Ft2   High Risk  Low Risk | | 30 10 | |  |
| 500 to 5,000 Ft2   High Risk  Low Risk | | 10 5 | |  |
| Less than 500 Ft2   High Risk  Low Risk | | 5 1 | |  |
|  | Multiplier Used | |  | | |

E.

|  |  |  |
| --- | --- | --- |
| **Procedures - Radioactive Materials Use or Storage** | **Risk Multiplier** |  |
| License issued for manufacturing, benefaction or processing non-encapsulated radioactive materials | 3 |  |
| Licensed issued for storage only | 3 |  |
| Sealed sources not contained in a device with integral solid shielding | 3 |  |
| Sealed sources contained in a device with integral solid shielding | 1 |  |
|  | Multiplier Used |  | |

F.

|  |  |  |
| --- | --- | --- |
| **Physical Form of Radioactive Materials** | **Risk Multiplier** |  |
| Non- encapsulated forms such as solid, powders, liquids, colloids, plasmas, gases (not to include noble gases). | 20 |  |
| Single encapsulated source or source plated | 3 |  |
| Double encapsulated source or noble gases | 1 |  |
|  | Multiplier Used |  | |

**Calculate using Assigned Risk Multipliers**

A. Half-Life

B. Radioisotope x

C. Activity x

D. Facility x

E. Procedures x

F. Physical Form x

Product Total

If Product Total is greater than 30,000 then a bond is required. The dollar value of the required bond is the product of risk factors.

See Rule 64E-5.217, F.A. C., for additional options.