**10 CFR Part 71: Compatibility with the International Atomic Energy Agency**

**(60 FR 50248 & 61 FR 28724) RATS ID 1996‑1 Effective 4/1/96**

| **Change to**  **NRC**  **Section** | **Title** | **State**  **Section** | **Compatibility**  **Category** | **Summary of Change** | **Difference**  **Yes/No** | **Significant**  **Yes/No** | **If Difference, Why or Why Not Was a Comment Generated** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **NEW PART 71--PACKAGING AND TRANSPORTATION OF RADIOACTIVE MATERIAL**  Subpart A--General Provisions Sec.  71.0 Purpose and scope.  71.1 Communications and records.  71.2 Interpretations.  71.3 Requirement for license.  71.4 Definitions.  71.5 Transportation of licensed material.  Subpart B--Exemptions  71.6 Information collection requirements: OMB approval.  71.7 Completeness and accuracy of information.  71.8 Specific exemptions.  71.9 Exemption of physicians.  71.10 Exemption for low-level materials.  71.11 [Reserved]  Subpart C--General Licenses  71.12 General license: NRC-approved package.  71.13 Previously approved package.  71.14 General license: DOT specification container.  71.16 General license: Use of foreign approved package.  71.18 General license: Fissile material, limited quantity per package.  71.20 General license: Fissile material, limited moderator per package.  71.22 General license: Fissile material, limited quantity, controlled shipment.  71.24 General license: Fissile material, limited moderator, controlled shipment.  Subpart D--Application for Package Approval  71.31 Contents of application.  71.33 Package description.  71.35 Package evaluation.  71.37 Quality assurance.  71.38 Renewal of a certificate of compliance or quality assurance program approval. 71.39 Requirement for additional information.  Subpart E--Package Approval Standards  71.41 Demonstration of compliance.  71.43 General standards for all packages.  71.45 Lifting and tie-down standards for all packages.  71.47 External radiation standards for all packages.  71.51 Additional requirements for Type B packages.  71.52 Exemption for low-specific-activity (LSA) packages.  71.53 Fissile material exemptions.  71.55 General requirements for fissile material packages.  71.57 [Reserved]  71.59 Standards for arrays of fissile material packages.  71.61 Special requirement for irradiated nuclear fuel shipments.  71.63 Special requirements for plutonium shipments.  71.64 Special requirements for plutonium air shipments.  71.65 Additional requirements.  Subpart F--Package, Special Form, and LSA-III Tests  71.71 Normal conditions of transport.  71.73 Hypothetical accident conditions.  71.74 Accident conditions for air transport of plutonium.  71.75 Qualification of special form radioactive material.  71.77 Qualification of LSA-III Material Subpart G--Operating Controls and Procedures  71.81 Applicability of operating controls and procedures.  71.83 Assumptions as to unknown properties.  71.85 Preliminary determinations.  71.87 Routine determinations.  71.88 Air transport of plutonium.  71.89 Opening instructions.  71.91 Records.  71.93 Inspection and tests.  71.95 Reports.  71.97 Advance notification of shipment of irradiated reactor fuel and nuclear waste.  71.99 Violations. 71.100 Criminal penalties.  Subpart H--Quality Assurance  71.101 Quality assurance requirements.  71.103 Quality assurance organization.  71.105 Quality assurance program.  71.107 Package design control.  71.109 Procurement document control.  71.111 Instructions, procedures, and drawings.  71.113 Document control.  71.115 Control of purchased material, equipment, and services.  71.117 Identification and control of materials, parts, and components.  71.119 Control of special processes.  71.121 Internal inspection.  71.123 Test control.  71.125 Control of measuring and test equipment.  71.127 Handling, storage, and shipping control.  71.129 Inspection, test, and operating status.  71.131 Nonconforming materials, parts, or components.  71.133 Corrective action.  71.135 Quality assurance records.  71.137 Audits.  Appendix A to Part 71--Determination of A1 and A2 | | | | | | | |
| **Changes contained in 61 FR 28724 follow below** | | | | | | | |
| 71.4 | Definitions |  | B | **Amended Definition:**  Low Specific Activity (LSA) material:  (2) \*\*\*(ii) Material in which the radioactive material is distributed throughout, and the average specific activity does not exceed 10-4 A2/g for solids and gases, and 10-5 A2/g for liquids.  (3) \* \* \*(i) The radioactive material is distributed throughout a solid or a collection of solid objects, or is essentially uniformly distributed in a solid compact binding agent (such as concrete, bitumen, ceramic, etc.); and  \* \* \* \* \* |  |  |  |
| **Table A-1 of Appendix A to Part 71 is amended as follows:**  a. For the entry ``Ag-110m,'' Column (TBq/g) is revised to read ``1.8 x 102.''  b. For the entry ``Am-242m,'' Column (Ci/g) is revised to read ``1.0 x 101.''  c. For the entry ``Ar-39,'' Column (TBq/g) is revised to read ``1.3.''  d. For the entry ``Br-82,'' Column A1 (Ci) is revised to read ``10.8.''  e. For the entry ``C-11,'' Column A1 (Ci) is revised to read ``27.''  f. For the entry ``Cd-113m,'' Column (TBq/g) is revised to read ``8.3.''  g. For the entry ``Cm-244,'' Column A1 (Ci) is revised to read ``108'' and Column (Ci/g) is revised to read ``8.1 x 101.''  h. For the entry ``Es-253,'' Column A1 (TBq) is revised to read ``200,'' Column A1 (Ci) is revised to read ``5400,'' Column A2 (TBq) is revised to read ``2 x 10-2,'' and Column A2 (Ci) is revised to read ``5.41 x 10<SUP>-1.''  i. For the entry ``Eu-150,'' Column (Ci/g) is revised to read ``1.6 x 106 .''  j. For the entry ``Eu-155,'' Column (Ci/g) is revised to read ``4.9 x 102.''  k. For the entry ``F-18,'' Column (TBq/g) is revised to read ``3.5 x 1 106.''  l. For the entry ``Fe-59,'' Column (Ci/g) is revised to read ``5.0 x 104.''  m. For the entry ``Fm-257,'' Column A1 (TBq) is revised to read ``10,'' Column A1 (Ci) is revised to read ``270,'' Column A2 (TBq) is revised to read ``8 x 10-3,'' and Column A2 (Ci) is revised to read ``2.16 x 10-1.''  n. For the entry ``Gd-148,'' Column (TBq/g) is revised to read ``1.2'' and Column (Ci/g) is revised to read ``3.2 x 10-1.''  o. The entry for MFP is corrected to read ``For mixed fission products, use formula for mixtures or table A-2.''  p. For the entry ``Pt-197m,'' Column (TBq/g) is revised to read ``3.7 x 105.''  **In Appendix A to Part 71, Tables A-2 and A-3 are revised to read as follows:**  Appendix A to Part 71--Determination of A1 and A2  \* \* \* \* \*  Table A-2.--General Values for A1 and A2  -------------------------------------------------------------------------------------------------------------------------------------------------------------------------------  A<INF>1 A<INF>2  Contents ------------- (Ci) ----------------  (Tbq) (Tbq) (Ci)  --------------------------------------------------------------- ------------------------------------------------------------- -------------------------------------------------  Only beta- or gamma-emitting nuclides are known to be present. 0.2 5 0.02 0.5  Alpha-emitting nuclides are known to be present, or no relevant data are available 0.10 2.70 2x10-5 5.41x10-4  \* \* \* \* \*  ---------------------------------------------------------------------------------------------------------------- Table A-3.--Activity-mass Relationships for Uranium ------------------------------------------------------------------------ Specific Activity Uranium Enrichment<SUP>1 wt % U-235 present --------------------------------- TBq/g Ci/g ------------------------------------------------------------------------ 0.45................................. 1.8 x 10<SUP>-8 5.0 x 10<SUP>-7 0.72................................. 2.6 x 10<SUP>-8 7.1 x 10<SUP>-7 1.0.................................. 2.8 x 10<SUP>-8 7.6 x 10<SUP>-7 1.5.................................. 3.7 x 10<SUP>-8 1.0 x 10<SUP>-6 5.0.................................. 1.0 x 10<SUP>-7 2.7 x 10<SUP>-6 10.0................................. 1.8 x 10<SUP>-7 4.8 x 10<SUP>-6 20.0................................. 3.7 x 10<SUP>-7 1.0 x 10<SUP>-5 35.0................................. 7.4 x 10<SUP>-7 2.0 x 10<SUP>-5 50.0................................. 9.3 x 10<SUP>-7 2.5 x 10<SUP>-5 90.0................................. 2.2 x 10<SUP>-6 5.8 x 10<SUP>-5 93.0................................. 2.6 x 10<SUP>-6 7.0 x 10<SUP>-5 95.0................................. 3.4 x 10<SUP>-6 9.1 x 10<SUP>-5 ------------------------------------------------------------------------ \1\The figures for uranium include representative values for the activity of the uranium-234 that is concentrated during the enrichment process. | | | | | | | |
| **Table A-3.--Activity-mass Relationships for Uranium**  ----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------  Specific Activity  Uranium Enrichment<SUP>1 wt % U-235 present --------------------------------  TBq/g Ci/g  0.45.................................................................................. 1.8 x 10-8  5.0 x 10-7  0.72................................................................................... 2.6 x 10-8  7.1 x 10-7  1.0..................................................................................... 2.8 x 10-8  7.6 x 10-7  1.5..................................................................................... 3.7 x 10-8  1.0 x 10-6  5.0..................................................................................... 1.0 x 10-7  2.7 x 10-6  10.0................................................................................... 1.8 x 10-7  4.8 x 10-6  20.0................................................................................... 3.7 x 10-7  1.0 x 10-5  35.0................................................................................... 7.4 x 10-7  2.0 x 10-5  50.0................................................................................... 9.3 x 10-7  2.5 x 10-5  90.0................................................................................... 2.2 x 10-6  5.8 x 10-5  93.0................................................................................... 2.6 x 10-6  7.0 x 10-5  95.0................................................................................... 3.4 x 10-6  9.1 x 10-5  -----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------  \1\The figures for uranium include representative values for the activity of the uranium-234 that is concentrated during the enrichment process. | | | | | | | |