

**REQUEST FOR ADDITIONAL INFORMATION
WESTINGHOUSE ELECTRIC COMPANY LLC
LICENSE RENEWAL
(COST ACTIVITY CODE L33317, DOCKET 70-1151)**

Section 12.2.5 of the license application dated December 17, 2015, is an exemption from criticality monitoring system requirements under the following conditions:

- Remote areas
- Low concentration storage areas
- Storage areas in which the only special nuclear material (SNM) present is contained in authorized packages as defined in Title 10 of the *Code of Federal Regulations* (10 CFR) Part 173.

1. Remote Areas. The term 'remote' is subjective. Describe and justify in precise terms the criteria used to determine "remote" in requiring that each office, conference room, laboratory, counting room, or machine shop must be distant from operations with SNM.

Section 12.2.5 of the license application dated December 17, 2015, states an exemption from criticality monitoring system requirements. The individual container area limit of 1000 g ²³⁵U (for uranium enriched to no more than 5 wt% ²³⁵U) is sufficient to ensure subcriticality. However, neutron interaction between neighboring areas, as well as the potential for exceeding administrative mass limits in an individual area, should be addressed. This information is needed to ensure that nuclear processes will be subcritical under normal and credible abnormal conditions with use of an acceptable margin.

Regulatory Requirement. Paragraph 70.61(d) of 10 CFR states that the risk of nuclear criticality accidents must be limited by assuring that under normal and credible abnormal conditions, all nuclear processes are subcritical, including use of an approved margin of subcriticality for safety. Preventive controls and measures must be the primary means of protection against nuclear criticality accidents.

2. Low concentration storage areas. Provide the technical basis for the limit for low-concentration storage areas, including 350 g ²³⁵U per package and no more than 5 g ²³⁵U in any 10 liters of package, or no more than 50 g ²³⁵U per container and no more than an average of 5 g ²³⁵U per 10 liters of package.

Section 12.2.5 of the license application dated December 17, 2015, states an exemption from criticality monitoring system requirements. If the effective average concentration is based on the "infinite sea" limit of 11.6 g U/l, describe how conditions of homogeneity will be ensured valid. Justify the neutron isolation criterion in the bullet below this paragraph, given that it is stated as applying to isolation between areas and not individual packages. This information is needed to ensure that nuclear processes will be subcritical under normal and credible abnormal conditions with use of an acceptable margin

Regulatory Requirement. Paragraph 70.61(d) of 10 CFR states that the risk of nuclear criticality accidents must be limited by assuring that under normal and credible abnormal conditions, all nuclear processes are subcritical, including use of an approved margin of subcriticality for safety. Preventive controls and measures must be the primary means of protection against nuclear criticality accidents.

3. Part 173 of 10 CFR storage packages. Provide the specific regulatory citation referring to storage in authorized packages as defined in 10 CFR Part 173, and the technical basis for the conditions in the two bullets following this paragraph. Demonstrate that all assumptions and limitations upon which the stated limits are based are met by complying with the two stated criteria.

The criterion in Section 12.2.5 states that criticality monitoring is unnecessary, provided that:

- The maximum number of containers permitted in each such area shall be unlimited for low specific activity packages.
- The maximum number of packages bearing FISSILE labels stored in any one storage area must be limited so that the total sum of the criticality safety indices in any individual group of such packages does not exceed 100. Groups of such packages must be stored so as to maintain a spacing of at least 6m (20 feet) from all other groups of such packages.

This information is needed to ensure that nuclear processes will be subcritical under normal and credible abnormal conditions with use of an acceptable margin.

Regulatory Requirement. Paragraph 70.61(d) of 10 CFR states that the risk of nuclear criticality accidents must be limited by assuring that under normal and credible abnormal conditions, all nuclear processes are subcritical, including use of an approved margin of subcriticality for safety. Preventive controls and measures must be the primary means of protection against nuclear criticality accidents.

Reference

Letter from N. Parr, Westinghouse Electric Company, "SNM-1107 License Renewal Supplement", December 17, 2014. ADAMS Accession Number ML14352A111.