

Enclosure – Changes to License Chapter 5 Nuclear Criticality Safety

5.4 Emergency Notification, Planning, and Response

5.4.1 Criticality Accident Alarm System (CAAS)

Last two paragraphs of section:

~~In accordance with 10 CFR 70.24, The need for CAAS coverage shall be evaluated~~ is required for all activities in which the inventory of fissile materials in individual unrelated areas exceeds 700 g ²³⁵U or more than 350 g ²³⁵U if moderators/reflectors more effective than water are present~~[ANSI/ANS-8.3-1997 (R2017)]~~ with the exception of the exemption provided in Chapter 1. CAAS coverage ~~of requirements for an SNM operation is~~ are documented during the process for NCS evaluation. ~~In addition, any exceptions to CAAS coverage are also documented in NCS evaluations and are based on a conclusion in the NCSE that a criticality accident is non-credible specific to the area in which conduct of the operation is approved. Conclusions regarding non-credibility based entirely on fissile material present require at a minimum that the inventory of fissile material in the area is less than 700 g ²³⁵U.~~

~~In addition, CAAS coverage is provided for SNM operations, except as specified in Chapter 1. In addition to the exemptions included in Chapter 1, CAAS coverage is not required for 1) areas where an evaluation has determined the risk of criticality is very low due to the amount or configuration of fissile material present, 2) materials and/or containers that satisfy the fissile material exceptions in 49 CFR 173 and/or 10 CFR 71, or 3) areas that contain less than 700 g ²³⁵U, areas that involve less than 350 g ²³⁵U, natural uranium, or that meet the exemption in Chapter 1 do not require an NCSE and do not require CAAS coverage. Areas that do not contain SNM operations do not require an NCSE and do not require CAAS coverage.~~

5.5.2 Methods of Control

10. Enrichment – Enrichment control utilizes the inherent differences in critical attributes (critical dimensions, mass, etc.) of uranium at different enrichments of ²³⁵U. ~~A method of segregating enrichments is used to ensure differing enrichments will not be interchanged, or else~~ The most limiting enrichment is applied to all SNM or enrichment segregation is provided with physical barriers and other administrative requirements to prevent inadvertent migration of higher enriched material to designated lower enriched processing containers or areas. When the enrichment needs to be measured, the measurement is obtained by using appropriate instrumentation (e.g., lab analysis, non-destructive assay equipment).