SNM-1097 License Application Change Table 10/31/19		
Section	**Description of Change**	**Reason for Change**
Chapter 1 -GENERAL INFORMATION		
Section 1.1 – Facility and Process Description	Second sentence changed enrichment limit value from 5.0 to 8.0 weight percent U-235.	Enrichment limit change
Section 1.1.4 – Process Description	First sentence changed enrichment limit value from 5.0 to 8.0 weight percent U-235.	Enrichment limit change
Section 1.2.2 – Type, Quantity, and Form of Licensed Material	Sub-bullets 1) and 2) change enrichment limit value from 5.0% to 8.0%	Enrichment limit change
Section 1.2.2 – Type, Quality, and Form of Licensed Material	Sub-bullet 2) change enrichment value from <10% to <20%	Enrichment limit change
Section 1.3.3.1 – Transfer of Hydrofluoric Acid (HF) for Testing	Second paragraph changed enrichment limit value from 5.0% to 8.0% U-235.	Enrichment limit change
Section 1.3.3.2 – Transfer of Hydrofluoric Acid (HF) as Product	First paragraph changed enrichment limit value from 5.0 to 8.0 weight percent U-235.	Enrichment limit change
Section 1.3.3.3 – Transfer of Nitrate- Bearing Liquids	First paragraph, changed enrichment limit value from 5.0 weight percent U-235 to 8.0 weight percent U-235.	Enrichment limit change
Chapter 5 -NUCLEAR CRITICALITY SAFETY		
Section 5.1.1 – Criticality Safety Design Philosophy	NCS program commitments statement a) remove the words “an inadvertent” from sentence.	Text clarification; words unnecessary
Section 5.1.2.2 Role of the Criticality Safety Function	Second sentence changed “… commensurate with the risk involved” to “…. commensurate with risk”.	Text clarification; words unnecessary

Section 5.4.2.3 – Administrative Controls	First paragraph describing augmented administrative controls and administrative controls are split into two separate bullets.	Text reformatting
Section 5.4.3 – Specific Parameter Limits	First paragraph, last sentence removes percentage basis statement for Table 5.1 favorable geometry values and replaces with new basis statement Acceptable safety margins for units listed in this table are documented in accord with Section 5.4.5 analysis methods (keff + 3σ ≤ USL).	Historical percentages of published literature critical diameter, slab thickness, and sphere volume are now derived explicitly.
	Second paragraph, last sentence changed to acknowledge explicit subcritical limits in accord with Section 5.4.5.	Text clarification.
	Third paragraph, last sentence changed to acknowledge mass limits are based on enrichment (not U235 mass limits).	Text clarification; uranium enrichment is basis of mass limits.
	First bullet in section; second sentence changed to removed “over the range of 1.1% to 5%” as this enrichment range is no longer valid.	Text clarification; words unnecessary
	Table 5.1 Favorable Geometry Values – reported values have been replaced with calculated results for homogeneous UO2 and water, homogeneous aqueous uranyl nitrate and water, and heterogeneous UO_2 and water mixtures over the enrichment range from 5.0 to 8.0 weight percent U-235 as noted above. Theoretical densities used are specified and based on SCALE6.1 standard composition library.	Historical percentages of published literature critical diameter, slab thickness, and sphere volume are now derived explicitly from SCALE/KENO-VI calculated minimum critical masses.
5.4.5.2 – Analytic Methods	Table 5.2 Safe Batch Values for UO2 and Water – reported values have been replaced with calculated safe batch results for homogeneous UO_2 powder and water and heterogeneous UO_2 pellets and water mixtures over the enrichment range from 5.0 to 8.0 weight percent U-235.	Table 5.2 list safe batch limits as a function of enrichment from 5.0 to 8.0 weight percent U-235. Text update.

	First paragraph, first sentence; removed reference to Solid Angle methods (SAC code) and Monte Carlo code GEKENO, added MCNP. Removed previous third paragraph GEKENO summary description paragraph.	Historical methods using Solid Angle methods or GEKENO 16-energy group Knight Modified Hansen Roach cross section data set are no longer used in production applications. MCNP is added as it may also be used in support of production applications.
	Second paragraph (new) added to more fully describe the SCALE/KENO-VI Monte Carlo code used solve eigenvalue solution to the neutron transport equation in 3-dimensional space.	Provide summary description of SCALE/KENO-VI transport code now used in support of production applications.
	Fourth paragraph (new) added to more fully describe the MCNP Monte Carlo neutron particle transport code used solve eigenvalues for fissile medium systems.	Provide summary description of MCNP transport code now used in support of production applications.
5.4.4.6 – Spacing (or Unit Interaction)	Remove second paragraph, first sentence as Solid Angle interaction analysis is no longer used.	Text clarification; words unnecessary
5.4.5.3- Validation Techniques	First and sixth paragraphs; replace ANSI/ANS-8.1-1998 reference with current ANSI/ANS-8.1-2014.	Text update.
	Replace last bullet with clarified and corrected statement: “Statistical methods may be used to ensure that the extrapolation is not large. The SCALE/TSUNAMI code may be used to compare the application system to the benchmark experiments for similarity and USL penalty determination.	Text clarification; and acknowledgement of TSUNAMI code to quantify AOA_m.

5.4.5.5- Criticality Safety Analysis	Sixth bullet; removed out of place / incomplete sentence containing “interface considerations….”	Text correction; interface considerations for the process being analyzed is previously addressed in the general process description section of the documented nuclear criticality safety evaluation.