5.0 Documentation of Inputs and Assumptions

5.1 Information and inputs derived from present Sequoyah Nuclear Plant documents are assumed to be current and correct.

5.2 For plant areas not within the original scope of ABB Impell Combustible Loading Walkdowns/Calculations, (reference 3.23), room area (sq.ft.) and combustible types and quantities were taken directly from the Fire Hazards Analysis Table (reference 3.6). Combustible loading due to future modifications are added directly into the values in Appendix B, and shall be documented in the Revision Log of the calculation.

5.3 All plant floors indicated as "fire rated barriers" on the Fire Protection - Compartmentation - Fire Cells drawings (reference 3.7) are 3-hour fire rated barriers, unless noted otherwise.

5.4 Transient combustibles are controlled in accordance with SSP-12.15 (Ref. 3.13a).

5.5 Combustible loading for oils and grease contained in manufactured equipment housings for overhead cranes and hoists are considered negligible due to the structural integrity of the equipment and remote location from other concentrated combustible loads.

5.6 For plant rooms/fire areas which are not identified on the Fire Compartmentation Drawings (reference 3.7) and which also were not accessible during plant combustible loading walkdowns, it is assumed that there are no new significant concentrations of combustibles in the area for the purposes of determining fire severity.

5.7 Equipment required for safe shutdown is available.
Basis: Maintenance activities on this equipment are governed by technical specifications or administrative controls.

5.8 Off-site power is not available for fire in any area requiring alternate shutdown or any area/compartment in which off-site power cables/components are located.
Basis: 10CFR50 Appendix R, Section III.L, GL 86-10, SQN-DC-V-24.0.

5.9 Design basis fires are not assumed to occur concurrently with non-fire related failures in safety systems, plant accidents or the most severe natural phenomena.
Basis: NUREG-0800, Section C.1.b

5.10 An exposure fire involving either transient or in-situ combustibles is assumed to occur in only one plant fire area or fire zone(s) (enclosed in barriers with construction commensurate with the hazard) at a time.
Basis: 10CFR50 Appendix R, Introduction and Scope.

5.11 The Reactor is assumed to be tripped from the Main Control Room (MCR), unless specifically addressed in the Fire Area Summary. The Reactor Coolant Pumps (RCP) will be tripped off from the MCR for each fire area. Also, since it is unknown which

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components or trains of normal operating equipment will be in service at the time of the event (e.g., CCPs), actions to start or operate these components are only addressed in the fire area summaries if they are potentially impacted by a fire in that specific area.

5.12 For three-phase AC circuits, it is assumed that the probability of getting a hot short on all three phases in the proper sequence to cause spurious operation of a motor is considered sufficiently low to not require evaluation, except for any cases involving high/low pressure interface components.
Basis: Generic Letter 86-10 Question 5.3.1

5.13 For ungrounded DC circuits, if it can be shown that only two hot shorts of the proper polarity without grounding could cause spurious operation, no further evaluation is necessary, except for any cases involving High/Low pressure interfaces.
Basis: Generic Letter 86-10 Question 5.3.1

5.14 Unrelated fires in two or more units are not assumed to occur simultaneously.
Basis: NUREG 0800, Section C.1.b

5.15 Lube oil, grease and other combustible material associated with permanent plant equipment which amounts to an equivalent hazard equal to or less than one gallon of lube oil are considered negligible and therefore excluded from this calculation.

5.16 Damage to mechanical equipment such as piping, valves, handwheels, etc., which could render the mechanical device inoperable after the fire is extinguished is considered incredible.