

change, if known. Trace through causes and solution states to arrive at a means of distinguishing those measures that quantitatively (or only qualitatively) support declarations of severity by the SRM panel. In the early stages of SRM for alternative concepts, there are occasionally solution fragments and less than fully defined systems, making it difficult to assign specific severity and likelihood ratings. Document assumptions and justifications for how severity and likelihood for each hazard condition were determined. Describe whether the alternatives are detailed enough at this stage in development to draw meaningful conclusions about their differences with regard to safety. If additional information is required, describe when and how any deferred analysis reaches a definitive answer, if possible. Describe any new data collection methods required, and identify future decision points at which important measures are likely to be available.

4.2.7 Assess Each Alternative from a Safety Perspective

Assess the acceptability of the safety risk associated with implementation of each alternative under consideration. Document the assessments using Table D.2. (*Note:* Each alternative assessed has its own table.) Summarize any similarities and note any significant differences. Explain the level of confidence with the outcome by determining a rudimentary level of precision with regard to the possible breadth of range of values that the SRM panel expressed.

Table D.2: CSA Worksheet Categories

Hazard ID	Hazard Description	Cause	System State
Alpha-numeric identifier (under 10 characters)	Any real or potential condition that can cause injury, illness, or death to people; damage to or loss of a system, equipment, or property; or damage to the environment	The origin of a hazard	An expression of the various conditions, characterized by quantities or qualities, in which a system can exist

Controls:

Control	Control Justification
Any means currently reducing a hazard's causes or effects	A justification for each control, indicating its effect on the identified hazard's causes or effects

Initial Risk:

Effect	Severity	Severity Rationale	Likelihood	Likelihood Rationale	Initial Risk
The real or credible harmful outcome that has occurred or can be expected if the hazard occurs in the defined system state	The consequences or impact of a hazard's effect or outcome in terms of degree of loss or harm	Explanation of how severity was determined	The estimated probability or frequency, in quantitative or qualitative terms, of a hazard's effect or outcome	Explanation of how likelihood was determined	The composite of the severity and likelihood of a hazard, considering only controls and documented assumptions for a given system state