

GLOSSARY

The following terms are defined here by the staff for the purposes of this SRP. Many of the terms are taken from 10 CFR 70.4. The definitions from this CFR section have not been changed in the list below, but are repeated for convenience. Terms listed in this glossary represent the definition of the word in any chapter of this SRP. Words for which the definitions change between chapters are listed in the individual chapters.

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| <i>Active-engineered controls</i> | <i>Controls that use active sensors to determine values of Controlled Parameters and automatically provide a response. Operation of these controls require no human intervention.</i> |
| <i>Accident sequence</i> | <i>In general, an unintended sequence of events or process failures that would result in adverse consequences. In the context of this SRP, an unintended sequence of events which results in environmental contamination, a radiation exposure, a release of radioactive material, an inadvertent nuclear criticality, or an exposure to hazardous chemicals, provided the chemicals are produced from licensed radioactive material; or if the accident has the potential to jeopardize the safety of regulated activities. The term "accident" may be used interchangeably with accident sequence.</i> |
| <i>Acute</i> | <i>As used in 10 CFR 70.61, a single radiation dose or chemical exposure event or multiple radiation dose or chemical exposure events occurring within a short time (24 hours or less).</i> |
| <i>Augmented-administrative controls</i> | <i>Controls that use warning device(s) to notify humans that intervention is necessary to implement the controls. Operation of these controls require human intervention for implementation</i> |
| <i>Available and reliable to perform their function when needed</i> | <i>As used in Subpart H of 10 CFR 70 that, based upon the analyzed, credible conditions in the integrated safety analysis, items relied on for safety will perform their intended safety function when needed and management measures will be implemented that ensure continuous compliance with the performance requirements of 10 CFR 70.61, considering factors such as necessary maintenance, operating limits, common cause failures, and the likelihood and consequences of failure or degradation of the items and measures.</i> |
| <i>Baseline Design Criteria</i> | <i>A set of criteria specifying design features and assurance measures that are required and acceptable under certain</i> |

conditions for new processes or facilities specified in 10 CFR 70.64. These criteria are, in general, the acceptance criteria applicable to safety design described in the chapters of this SRP.

Configuration management (CM)

Ensuring, as part of the safety program, oversight and control of design information, safety information, and modifications (both temporary and permanent) that might impact the ability of items relied on for safety to perform their function when needed.

Control

A system or device intended to regulate a device or process.

Controlled Parameter

A measurable parameter for which the value is maintained within a specified range by specific controls to ensure the safety of an operation.

Consequence

Any result of interest caused by an event or sequence of events. In this context, adverse consequences refers to the adverse health or safety effects on workers or the public, and to adverse environmental impacts of accidents.

Consequence of concern

Adverse radiological, chemical, or environmental effects exceeding any of the levels specified in 10 CFR 70.61.

Credible event

An initiating (or secondary) event that is not an incredible event (e.g., an event with a likelihood of occurrence greater than one in a million in any year). Any accident sequence identified in the ISA as initiated by a credible event must have its consequences assessed, and controls applied so as to comply with 10 CFR 70.61.

Critical mass of special nuclear material (SNM)

Special nuclear material in a quantity exceeding 700 grams of contained uranium-235; 520 grams of uranium-233; 450 grams of plutonium; 1500 grams of contained uranium-235, if no uranium enriched to more than 4 percent by weight of uranium-235; 450 grams of any combination thereof; or one-half such quantities if massive moderators or reflectors made of graphite, heavy water, or beryllium may be present.

Deviation from safe operating conditions

A parameter that is controlled to ensure adequate protection is outside its established safety limits, or that an item relied on for safety has been lost or has been degraded so that it cannot perform its intended function.

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| <i>Double contingency</i> | <i>A process design that incorporates sufficient factors of safety to require at least two unlikely, independent, and concurrent changes in process conditions before a criticality accident is possible.</i> |
| <i>Double contingency principle</i> | <i>A <u>licensed process</u> should, in general, incorporate sufficient factors of safety to require at least two unlikely, independent, and concurrent changes in process conditions before a criticality accident is possible.</i> |
| <i>Double contingency protection</i> | <i>A <u>licensed process</u> possesses double contingency protection if it has incorporated the double contingency principle. Double contingency protection is the standard; exceptions should be made only when it is not practicable and then redundancy and diversity of controls is expected to be present in the process.</i> |
| <i>Event</i> | <i>An occurrence; a change of conditions from a prior state.</i> |
| <i>External event</i> | <i>An event for which the likelihood cannot be altered by changes to the regulated facility or its operation. This would include all natural phenomena events plus airplane crashes, explosions, toxic releases, fires, etc. occurring near or on the plant site that cannot be controlled by actions of plant personnel.</i> |
| <i>Hazardous chemicals produced from licensed materials</i> | <i>Substances having licensed material as precursor compound(s) or substances that physically or chemically interact with licensed materials; that are toxic, explosive, flammable, corrosive, or reactive to the extent that they can endanger life or health if not adequately controlled. These include substances commingled with licensed material, and include substances such as hydrogen fluoride that is produced by the reaction of uranium hexafluoride and water, but do not include substances prior to process addition to licensed material or after process separation from licensed material.</i> |
| <i>Integrated safety analysis (ISA)</i> | <i>A systematic analysis to identify plant and external hazards and their potential for initiating accident sequences, the potential accident sequences, their likelihood and</i> |

consequences, and the items relied on for safety. As used here, integrated means joint consideration of, and protection from, all relevant hazards, including radiological, nuclear criticality, fire, and chemical. However, with respect to compliance with the regulations of 10 CFR 70, the NRC requirement is limited to consideration of the effects of all relevant hazards on radiological safety, prevention of nuclear criticality accidents, or chemical hazards directly associated with NRC licensed radioactive material.

The results of an ISA are all the ISA information that the applicant submits to the NRC. This includes the programmatic functions and commitments reviewed under SRP Section 5.3.1(A) plus any additional supporting information that the applicant keeps at the site.

Integrated safety analysis summary

Integrated safety analysis results

The document submitted with the license application, license amendment application, or license renewal application that provides a synopsis of the results of the integrated safety analysis and contains the information specified in 10 CFR 70.65(b)

Items relied on for safety

Structures, systems, equipment, components, and activities of personnel that are relied on to prevent potential accidents at a facility that could exceed the performance requirements in 10 CFR 70.61 or to mitigate their potential consequences. This does not limit the licensee from identifying additional structures, systems, equipment, components, and activities

of personnel (i.e, beyond those in the minimum set necessary for compliance with the performance requirements) as items relied on for safety.

Management measures

The functions performed by the licensee, generally on a continuing basis, that are applied to items relied upon for safety to ensure the items are available and reliable to perform their functions when needed. Management measures include configuration management, maintenance, training and qualifications, procedures, audits and assessments, incident investigations, records management, and other quality assurance elements.

Mitigative control

A control intended to reduce the consequences of an accident sequence, not to prevent it entirely. When a mitigative control works as intended, the results of the sequence are called the mitigated consequences.

Natural phenomena event

Earthquakes, floods, tornadoes, tsunamis, hurricanes, and other events that occur in the natural environment and could adversely affect safety. Natural phenomena events, depending on their likelihood of occurrence, may be credible or incredible.

New processes at existing facilities

Systems-level or facility-level design changes to process equipment, process technology, facility layout, or types of licensed material possessed or used. This definition does not, generally, include component-level design changes or equipment replacement.

Passive-engineered Controls

Controls that use only fixed design features to control a Controlled Parameter. Operation of these controls require no human intervention.

Preliminary process hazards analysis (PHA)

An analysis undertaken during the early design or development phases of a process to identify the principal hazards and to enable them to be eliminated, minimized or controlled with minimal cost or disruption. The analysis also assists in identification and optimization of potential corrective, mitigative or preventive safety controls and management measures.

Preventive control

A control intended to prevent an accident entirely, i.e., to prevent any of the types of radiological or chemical consequences in 10 CFR 70.61 of any magnitude.

Process safety information

Information pertaining to the hazards of the material used or produced in the process, pertaining to the technology of the process, and pertaining to the equipment in the process.

Safety control

A system, device, or procedure intended to regulate a device, process, or human activity, so as to maintain a safe state. Effectively synonymous with “item relied on for safety”. In the context of this SRP, use of the unmodified term “control” normally means safety control. Other controls will be referred to as “process controls”. The function of safety controls is the avoidance of consequences of concern defined in 10 CFR 70.61. Controls may be active or passive engineered controls or administrative (procedural) controls. Controls may be preventive or mitigative. A process control may or may not be an item relied on for safety depending on whether the control of the process is required to assure safety.

Simple-administrative controls

Controls that requires only human intervention for implementation

Unacceptable performance deficiencies

Deficiencies in the items relied on for safety or the management measures that need to be corrected to ensure an adequate level of protection as defined in 10 CFR 70.61(b), (c), or (d).

Uncontrolled outcome

The sequence of events and consequences that result if no controls or barriers are available to prevent or mitigate an accident sequence. Thus the consequences of an uncontrolled outcome are, by definition, unmitigated. These consequences may also be referred to as uncontrolled consequences.

Unmitigated consequences

The consequences that result from an accident sequence when mitigative control fails or does not exist.

Worker

An individual whose assigned duties in the course of employment involve exposure to radiation and/or radioactive material from licensed and unlicensed sources of radiation (i.e., an individual who is subject to an occupational dose as in 20 CFR 20.1003).