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Regulatory Background of VSS with respect to the USQ Process

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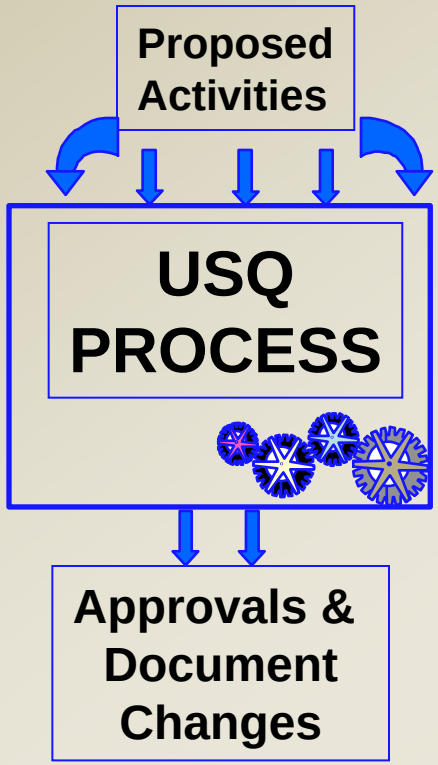

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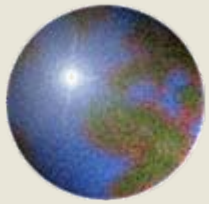
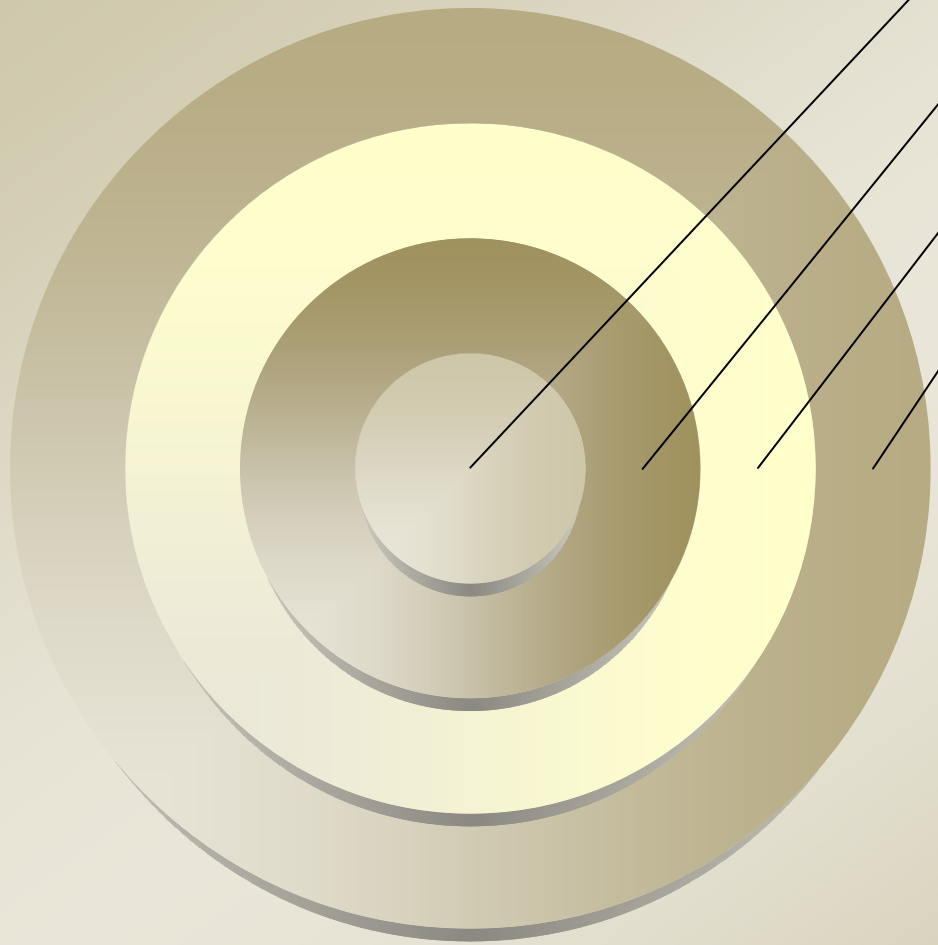
Relationship of SSCs





Definitions

Safety-class structures, systems, and components (SC-SSC):

SSCs whose preventative or mitigative function is necessary to limit radioactive hazardous material exposure to the public, as determined from safety analyses. [10 CFR 830.3(a)]

Safety-significant structures, systems, and components (SS-SSC):

SSCs that are not designated safety class SSCs, but whose preventative or mitigative function is a major contributor to defense in depth and/or worker safety as determined from safety analyses. [10 CFR 830.3(a)]

Definitions

EITS:

For the purposes of this Guide, equipment important to safety should be understood to include any equipment whose function, malfunction, or failure can affect safety either directly or indirectly. This includes safety class and safety significant structures, systems, and components (SSCs), and other systems that perform an important defense-in-depth function, equipment relied on for safe shutdown, and in some cases, process equipment. Support systems to safety systems that are required for the safety function are also safety systems, and should be included. [DOE G 424.1-1A]

DOE G 424.1-1A and DOE O 420.1A

DOE G 424.1-1A (EITS):

For the purposes of this Guide, equipment important to safety .. includes safety class and safety significant structures, systems, and components (SSCs), and other systems that perform an important defense-in-depth function …

DOE O 420.1A (VSS):

This Program shall be applied to **active** safety class and safety significant structures, systems and components (SSCs), as defined in the nuclear facility's DOE-approved safety basis and other **active** systems that perform an important defense-in-depth function …

DOE O 420.1A and DOE O 433.1

DOE O 420.1A:

4.5 System Engineer Program,
4.5.1.1 Scope and Identification of Systems
This Program shall be applied to **active** safety class and safety significant structures, systems and components (SSCs), as defined in the nuclear facility's DOE-approved safety basis and other active systems that perform an important defense-in-depth function for the protection of the public, workers, or the environment within the context of the safety basis, as designated by the facility line management (hereafter collectively referred to as systems).

DOE O 433.1:

(9) The systems engineer program established for the management of vital safety systems that is consistent with DOE O 420.1A and designates a "system engineer“

Regulatory Drivers & Processes
Related yet Different

DOE-STD-3009, DOE G 424.1-1A

DSA & EITS list

USQ process

DOE O 420.1A

Configuration Management Program

SSCs under System Engineer Program

DOE O 433.1

Maintenance Program*

Vital Safety Systems (VSS)

Passive SC/SS SSCs*

Active SC/SS SSCs

(*Note: Maintenance applies to all SSCs including passive SC/SS SSCs, however, VSS only applies to active SC/SS SSCs)

Conceptual Alignment of Integrating Designations and Priorities across Programs