

Standardization of Seismic Design Categorization

2026 BIENNIAL NATURAL PHENOMENA
HAZARDS (NPH) WORKSHOP

ROCKVILLE, MD

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ANS 2.26 – Categorization of
Nuclear Facility Structures, Systems,
and Components for Seismic
Design (Preview)

Doug Clark, Y-12, ANS 2.26 Co-Chair
Hanh Phan, NRC, ANS 2.26 Co-Chair

Goals of ANS 2.26 Update

- ♦ Align with DOE-STD-1020-2016 and ANSI/ANS 58.16 (vice 2004 versions)
- ♦ Align with License Modernization Program (LMP) Progress



Scope and Application of ANS 2.26

- ♦ ANS 2.26 is applicable to the design of SSCs of nuclear facilities.
 - For the purpose of this standard, a nuclear facility is a facility that stores, processes, tests, or fabricates radioactive materials in such form and quantity that a nuclear risk to the collocated workers, to the offsite public, or to the environment may exist.
 - These include but are not limited to nuclear fuel manufacturing facilities; nuclear material waste-processing, storage, fabrication, and re-processing facilities; uranium enrichment facilities; tritium production and handling facilities; radioactive materials laboratories; and nuclear reactors.
- ♦ *ANS 2.26 had been Risk-informed and Performance-based since 2004*

ANS 2.26 Interfaces

ANS 2.26 Interfaces with Other Standards:

American National Standards Institute
(ANSI)

American Society of Civil Engineers
(ASCE)

Structural Engineering Institute
(SEI)

ANSI/ANS-2.26 provides criteria for selecting a SDC for the SSCs in a nuclear facility and provides guidance for setting the limit states for the SSC.

ANSI/ANS-2.27 provides guidance for the geological, seismological and geotechnical investigations necessary to provide information to support development of site-specific seismic hazard curves and uniform hazard response spectra. Also provides information to support fault displacement and tectonic deformation hazard curves.

ANSI/ANS 2.29 specifies how to develop the site-specific seismic hazard curves and the uniform hazard response spectra for use with ASCE/SEI 43-19

ASCE/SEI 43 specifies seismic design criteria and analysis methods

International Building Code® and **ASCE/SEI 7**.

ANSI/ANS-2.30 provides criteria and guidelines for assessing permanent ground deformation hazard due to tectonic surface fault rupture and deformation.

SITE SELECTION

DESIGN SSC

SDC-3/-4/-5

SDC-1/-2

ANS 2.26 Addresses **Limit States**

Limit State	Expected Deformation	Expected Damage
A	Large permanent distortion, short of collapse	Significant
B	Moderate permanent distortion	Generally repairable
C	Limited permanent distortion	Minimal
D	Essentially elastic behavior	Negligible

Appendix Gives Examples by SSC Type

SSC Type	Limit State A	Limit State B	Limit State C	Limit State D
Mechanical or electrical SSCs	The SSC must maintain its structural integrity. It may undergo large permanent distortion and yet perform its safety functions; no assurance that the SSC will retain its normal function or will remain repairable.	The SSC must remain anchored, and if designed as a pressure retaining SSC, it must maintain its leak-tightness and structural integrity. It may undergo moderate permanent distortion and yet perform its safety functions; there is some assurance that the SSC will retain its normal function and will remain repairable.	The SSC must remain anchored, and if designed as a pressure retaining SSC, it must maintain its leak-tightness and structural integrity. It may undergo very limited permanent distortion and yet perform its normal functions (with little or no repair) and safety functions after exposure to its specified seismic loads.	The SSC remains essentially elastic and may perform its normal and safety functions during and after exposure to its specified seismic loads.

*What
designers
need
most*

ANS 2.26 – Safety Design Principles and Concepts

1. Defense-in-depth

- a) Safety consideration in site selection
- b) Minimization of material at risk
- c) Conservative design margins and a formal quality assurance program
- d) Successive physical barriers and/or administrative controls
- e) Provision of multiple means to ensure safety functions
- f) Equipment & administrative controls restricting deviation from normal operations
- g) Means to monitor accidental releases (effluent) and environmental monitors
- h) Emergency plans

2. Redundancy

3. Common-cause failure

4. System interaction - effects may be addressed in one of the following four ways:

- a) by upgrading the non-safety or lower SDC or Limit State SSC (i.e., the source SSC) to the extent necessary to preclude its adverse interaction with the affected or target SSC;
- b) by placing the source SSC in the same SDC or higher and by modifying its Limit State, if necessary, so that no interaction with the target SSC occurs;
- c) by configuring the facility layout or SSC design to preclude adverse interaction between the source SSC and the target SSC. Examples of such modifications are the following: creating sufficient physical separation, installing barriers, adding automatic control systems, etc., or
- d) by designing the target SSC to withstand the imposed interaction load.

5. Robustness

Alignment Goal #1: DOE-STD-1020-2016 & ANS 58.16

DOE-STD-1020-2016
Table 2-1 (Quantitative)

	Unmitigated Consequence Thresholds ¹	
Category	Co-located Worker ²	Public
NDC-1	< 5 rem TED Or $\geq$ PAC-1 ³	Not applicable ⁴
NDC-2	5 - 100 rem TED Or $\geq$ PAC-2	5 - 25 rem TED Or $\geq$ PAC-1
NDC-3	> 100 rem TED Or > PAC-3	> 25 rem TED Or > PAC-2

Per Section 2.1 of DOE-STD-1020-2016:
NDCs are established for each applicable NPH type: seismic, wind, flood, precipitation, and volcanic. (e.g., seismic is SDC)

ANSI/ANS 58.16 (2014)
Table A.2 (Quantitative)

Category	Unmitigated Consequence of SSC Failure	
	Worker	Public
SC-1	Lesser radiological or chemical exposures to workers than those in SC-2 but above regulatory limits.	Lesser radiological or chemical exposures to public than those in SC-2 but above regulatory limits.
SC-2	Dose >1.0 Sv (100 rem). Toxic material concentration greater than AEGL-3/ERPG-3 or TEEL-3 levels.	0.05 Sv (5 rem) < Dose < 0.25 Sv (25 rem). Toxic material concentration greater than AEGL-1, ERPG-1, or TEEL-1, but less than AEGL-2, ERPG-2, or TEEL-2 levels.
SC-3	NOTE: If unmitigated consequences to workers exceed the SC-2 criteria by an order of magnitude or greater, more than one control should be provided at the SC-2 categorization level, or a control at the SC-3 categorization level should be considered.	Dose >0.25 Sv (25 rem) Toxic material concentration > AEGL-2, ERPG-2, or TEEL-2 levels.

Seismic Design Categories (SDCs): Regulatory Anchors

DOE	58.16
STD-1020 Category	ANSI/ANS Category
NDC-1	SC-1
NDC-2	SC-2
NDC-3	SC-3
NDC-4	SC-3
NDC-5	SC-3

Table 1

Category	Unmitigated Consequence of SSC Failure	
	Co-located Worker ^a	Public
SDC-1	Lesser radiological or chemical exposures to workers than those in SDC-2 below in this column.	Lesser radiological and chemical exposures to the public than those in SDC-2 below in this column.
SDC-2	Dose: 0.25 - 1 Sv (25 - 100 rem) - or Concentration > AEGL-2/ERPG-2 Irreversible or other serious, long-lasting health effects	Dose: 0.05 - 0.25 Sv (5 - 25 rem TED) - or Concentration > AEGL-1/ERPG-1 - or Mild, transient health effects Intake: 2 mg - 30 mg sol U Source: 10 CFR 70.22(i)(1)(i)
SDC-3	Dose: 1 - 5 Sv (100 - 500 rem TED) - or Concentration > AEGL-3/ERPG-3 Life endangerment	Dose: 0.25 - 1 Sv (25 - 100 rem TED) - or Concentration > AEGL-2/ERPG-2 - or Irreversible/serious health effects Intake: 30 - 500 mg sol U
SDC-4	Dose > 5 Sv (>500 rem TED)	Dose: 1 - 5 Sv (100 - 500 rem TED) - or Intake: 500 - 1400 mg sol U
SDC-5	This level reserved for public consequences only.	Dose > 5 Sv (>500 rem TED) - or Intake > 1400 mg sol U

IBC



10 CFR 70.61(c)
Intermediate-Consequence Event

10 CFR 70.61(b)
High-Consequence Event

Anchoring to the International Building Code



RISK CATEGORY	NATURE OF OCCUPANCY
I	Buildings and other structures that represent a low hazard to human life in the event of failure, including but not limited to: agricultural facilities; certain temporary facilities; minor storage facilities.
II	Buildings and other structures except those listed in Risk Categories I, III, and IV
III	Buildings and other structures that represent a substantial hazard to human life in the event of failure, including but not limited to: ... Buildings or other structures not included in Risk Category IV containing quantities of TOXIC or explosive materials that: ... are sufficient to pose a threat to the public if released.
IV	Buildings and other structures designated as essential facilities, including but not limited to: ... Buildings and other structures containing quantities of HIGHLY TOXIC materials that: ... are sufficient to pose a threat to the public if released.

AEGL	NATURE OF OCCUPANCY
1	Notable discomfort, irritation, or certain asymptomatic non-sensory effects. However, the effects are not disabling and are transient and reversible upon cessation of exposure.
2	Irreversible or other serious, long-lasting adverse health effects or an impaired ability to escape.
3	Life-threatening health effects or death.
< 1	Airborne concentrations below the AEGL-1 represent exposure levels that could produce mild and progressively increasing but transient and non-disabling odor, taste, and sensory irritation or certain asymptomatic, non-sensory effects.



Seismic Design Categories (SDCs): Non-Regulatory Anchors

DOE	58.16
STD-1020 Category	ANSI/ANS Category
NDC-1	SC-1
NDC-2	SC-2
NDC-3	SC-3
NDC-4	SC-3
NDC-5	SC-3

Table 1

Category	Unmitigated Consequence of SSC Failure	
	Co-located Worker ^a	Public
SDC-1	Lesser radiological or chemical exposures to workers than those in SDC-2 below in this column.	Lesser radiological and chemical exposures to the public than those in SDC-2 below in this column.
SDC-2	Dose: 0.25 - 1 Sv (25 - 100 rem) - or Concentration > AEGL-2/ERPG-2	Dose: 0.05 - 0.25 Sv (5 - 25 rem TED) - or Concentration > AEGL-1/ERPG-1 - or Intake: 2 mg - 30 mg sol U
SDC-3	Dose: 1 - 5 Sv (100 - 500 rem TED) - or Concentration > AEGL-3/ERPG-3	Dose: 0.25 - 1 Sv (25 - 100 rem TED) - or Concentration > AEGL-2/ERPG-2 - or Intake: 30 - 500 mg sol U
SDC-4	This level reserved for public consequences only.	Dose: 1 - 5 Sv (100 - 500 rem TED) - or Intake: 500 - 1400 mg sol U Life endangerment
SDC-5	This level reserved for public consequences only.	Dose > 5 Sv (>500 rem TED) - or Intake > 1400 mg sol U LD₅₀ renal failure

New Appendix D lays out technical basis for the Table 1 values.

Nearly all members of the public could be exposed for up to one hour without experiencing or developing irreversible or other serious health effects or symptoms that could impair an individual's ability to take protective action.



500 mg soluble Uranium taken from Kathren and Burklin *Proposed standards for acute exposure to low enrichment uranium for compliance with 10 CFR 70.61 (Health Physics, Vol. 95, No. 2, pp. 122-127, 2008)*
ARS data from CDC website: Information for Clinicians

Acute Radiation Syndrome (ARS)
❖ LD₅₀ for bone marrow syndrome
❖ Onset of gastrointestinal ARS

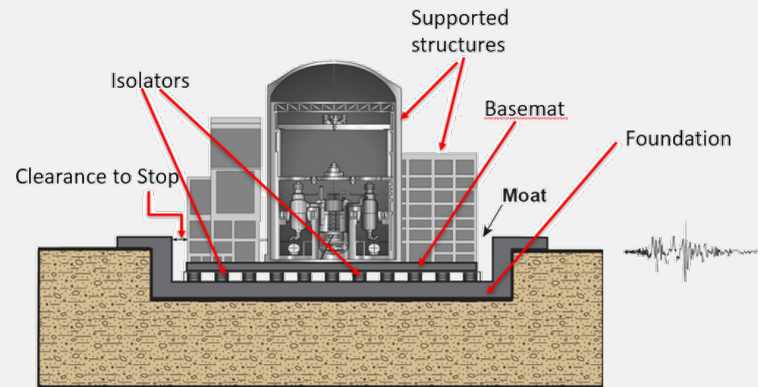
1400 mg soluble Uranium taken from Kathren and Burklin *Acute Chemical Toxicity of Uranium (Health physics, Vol. 94, No. 2, pp. 170-179, 2008)*

Alignment Goal #2: License Modernization Program (LMP)

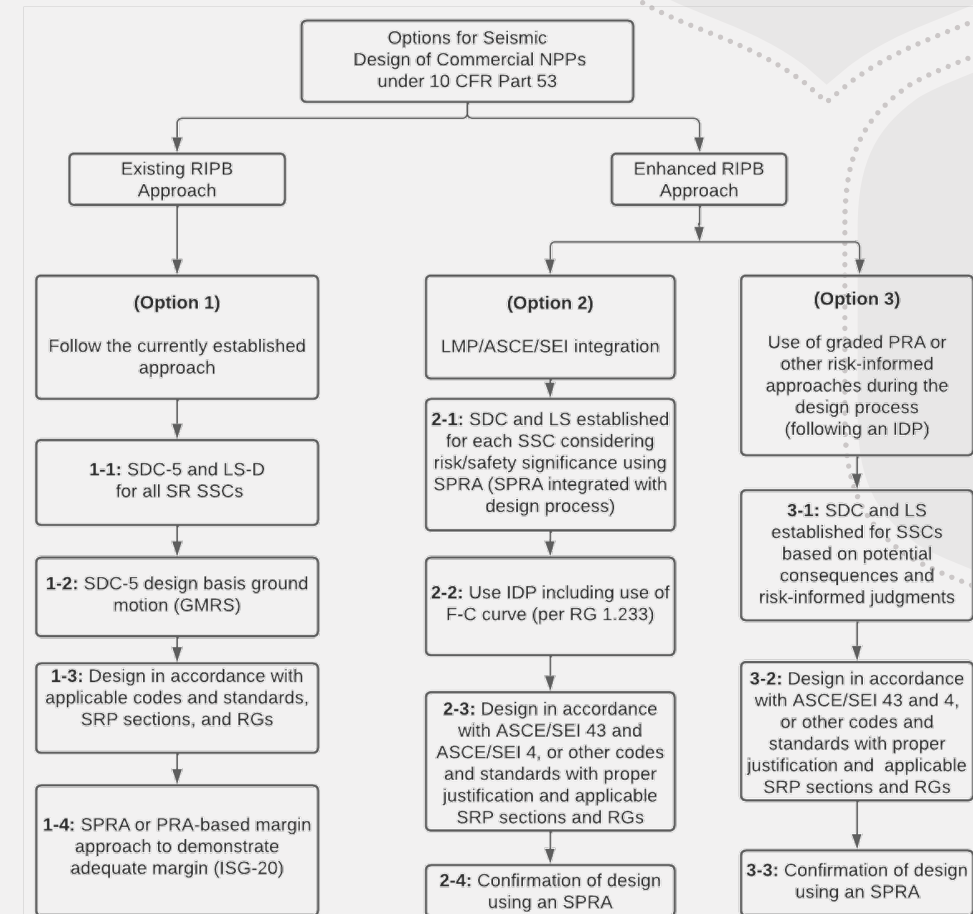
DG-1307 (RG 1.252) “Seismically Isolated Nuclear Power Plants”

— Technical considerations:

- Use the same technical approach as described in DG1410 (3 options)
- Focus on addressing SI specific criteria for each of the 3 options
- Guidance relies on ASCE 43-19 and ASCE 4-16 as well as available literature

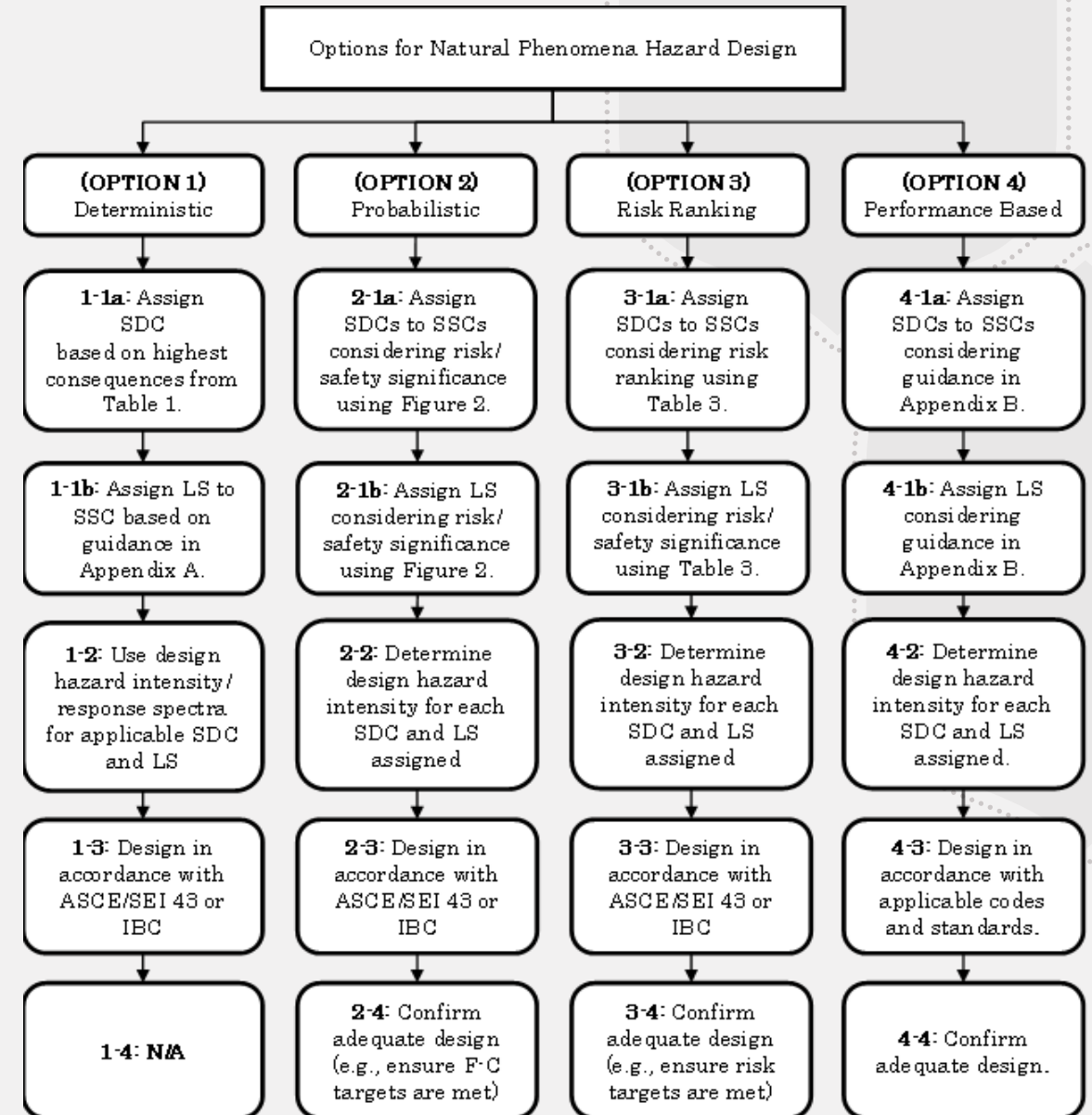
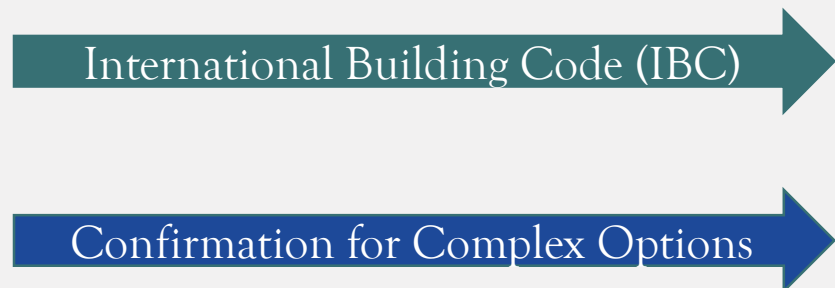


DG-1410 (RG 1.251) “Technology Inclusive, Risk Informed, and Performance Based Methodology for Seismic Design of Commercial Nuclear Power Plants”



Technology Inclusive, Risk Informed, and Performance Based Options for Seismic Design

- Multiple options meant to interface directly with LMP efforts (PRA-informed)
- Risk-ranking based on redundancy (No PRA required)
- Performance-based only design called out explicitly



Integrating Safety into Design through iteration of ANS 2.26

Options 2 – 4 necessitate an integrated decision-making process to confirm adequate design margins.

- Examples:

NRC RG 1.174 “An Approach for Using Probabilistic Risk Assessment in Risk-informed Decisions on Plant-specific Changes to the Licensing Basis”

NRC RG 1.200 “An Approach for Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk-informed Activities”

NUREG/CR-2150 “A Proposed Risk Management Regulatory Framework”

NUREG/CR-4334 “An Approach to the Quantification of Seismic Margins in Nuclear Power Plants”

Consistent with the Nuclear Energy Innovation and Modernization Act (NEIMA), the last step in Options 2- 4 “Confirm adequate design margins” is flexible and practicable for application to a variety of technologies, processes, and techniques.

DG-1307 & 1410 Options

Options for Natural Phenomena Hazard Design

Historical Approach from ANS 2.26 (2004)

- Structured Guidance from the Appendices not applied
- Simplest approach

Biggest Change in 2026 version is the allowance to use the International Building Code (ASCE 7-22) instead of ASCE 4 for SDC-1 and SDC-2

(OPTION 1) Deterministic

1-1a: Assign SDC based on highest consequences from Table 1.

1-1b: Assign LS to SSC based on guidance in Appendix A.

1-2: Use design hazard intensity/response spectra for applicable SDC and LS

1-3: Design in accordance with ASCE/SEI 43 or IBC

1-4: N/A

(OPTION 2) Probabilistic

2-1a: Assign SDCs to SSCs considering risk/safety significance using Figure 2.

2-1b: Assign LS considering risk/safety significance using Figure 2.

2-2: Determine design hazard intensity for each SDC and LS assigned

2-3: Design in accordance with ASCE/SEI 43 or IBC

2-4: Confirm adequate design (e.g., ensure F-C targets are met)

(OPTION 3) Risk Ranking

3-1a: Assign SDCs to SSCs considering risk ranking using Table 3.

3-1b: Assign LS considering risk/safety significance using Table 3.

3-2: Determine design hazard intensity for each SDC and LS assigned

3-3: Design in accordance with ASCE/SEI 43 or IBC

3-4: Confirm adequate design (e.g., ensure risk targets are met)

(OPTION 4) Performance Based

4-1a: Assign SDCs to SSCs considering guidance in Appendix B.

4-1b: Assign LS considering guidance in Appendix B.

4-2: Determine design hazard intensity for each SDC and LS assigned.

4-3: Design in accordance with applicable codes and standards.

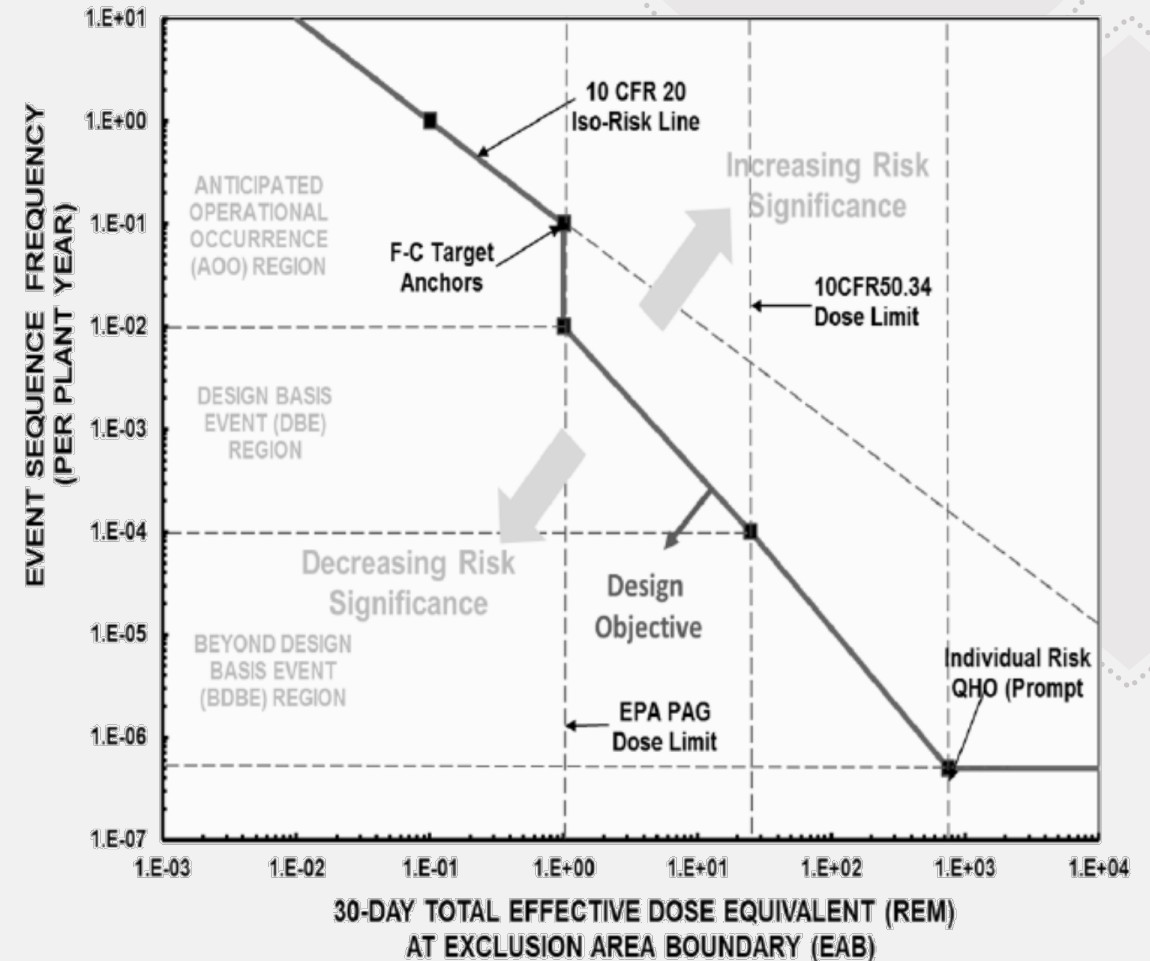
4-4: Confirm adequate design.

Structured Guidance from the Appendix C in ANS 2.26 (2004)

- Brought forward as an explicit option. Now guidance for this option is in Appendix B of 2026 version (Appendix A was moved into main text).
- Uses Objectives Hierarchy (OH) and design margins to meet requirements.

ANS 2.26 Option 2 (Probabilistic)

- NRC RG 1.233 “Guidance for a Technology-Inclusive, Risk-Informed, and Performance-Based Methodology to Inform the Licensing Basis and Content of Applications for Licenses, Certifications, and Approvals for Non-Light-Water Reactors”
- NRC RG 1.251 “Technology Inclusive, Risk Informed, and Performance Based Methodology for Seismic Design of Commercial Nuclear Plants”
- NRC RG 1.252 “Seismically Isolated Nuclear Power Plants”
- NEI 18-04 “Risk-Informed Performance-Based Technology Inclusive Guidance for Non-Light Water Reactor Licensing Basis Development”



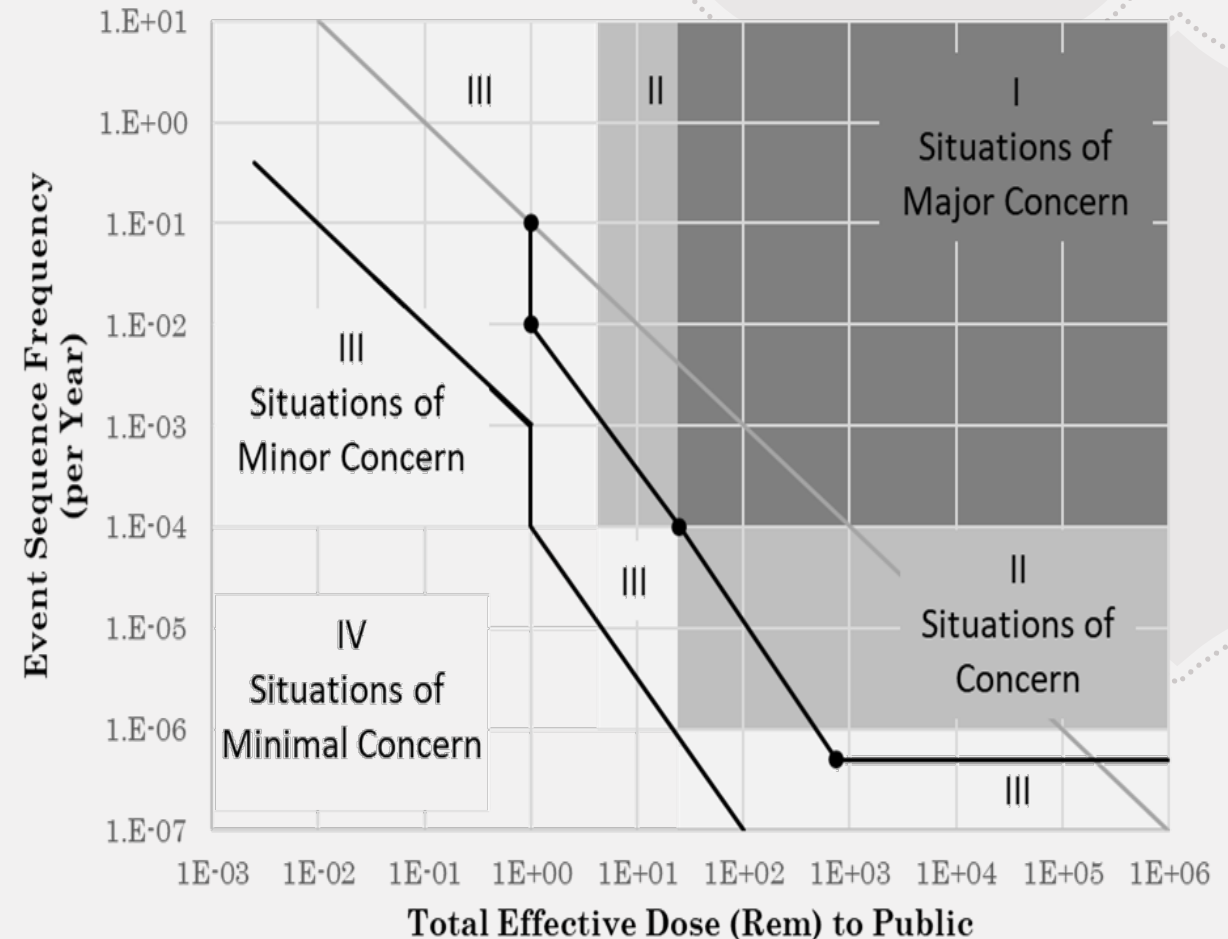
ANS 2.26 Option 3 (Risk-ranking)

The risk categories I, II, III, and IV from DOE-STD-3009-2014 are used as a basis for risk-ranking targets.

The risk category descriptions are a combination of risk analysis identify situations of varying degrees of concern:

- I. Major concern
- II. Concern
- III. Minor concern
- IV. Minimal concern

These risk categories result in normalization of the SDC's at a 10,000 yr recurrence period.



ANS 2.26 Option 3 (Risk-ranking)

ANS 2.26 requires consideration of system interaction, common-cause failures, and redundancy.

Consistent with ANS 58.16 (2014)

- If unmitigated consequences to workers exceed the SC-2 criteria by an order of magnitude or greater, more than one control should be provided at the SC-2 categorization level, or a control at the SC-3 categorization level should be considered.

Consistent with ISA 84.00.01

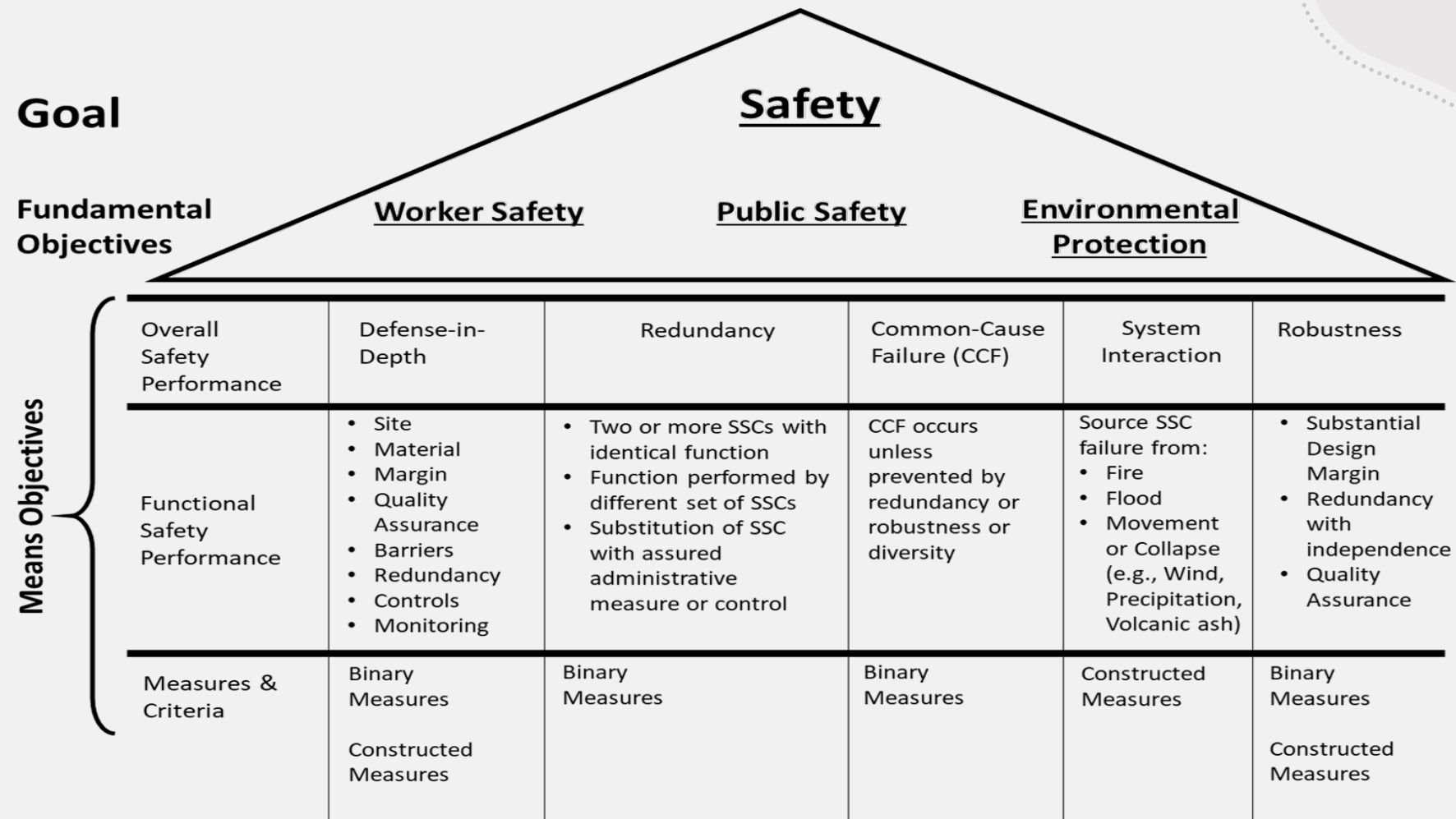
Risk ranking does not constitute a PRA.

A simple methodology for likelihood assignment is to assign

- a probability of “1” to non-independent events;
- “0.1” to human errors, and
- “0.01” to genuinely independent SSC failures to establish the initiating event likelihood.

Ergo 2 or 3 genuinely independent controls mitigate risk to acceptable levels.

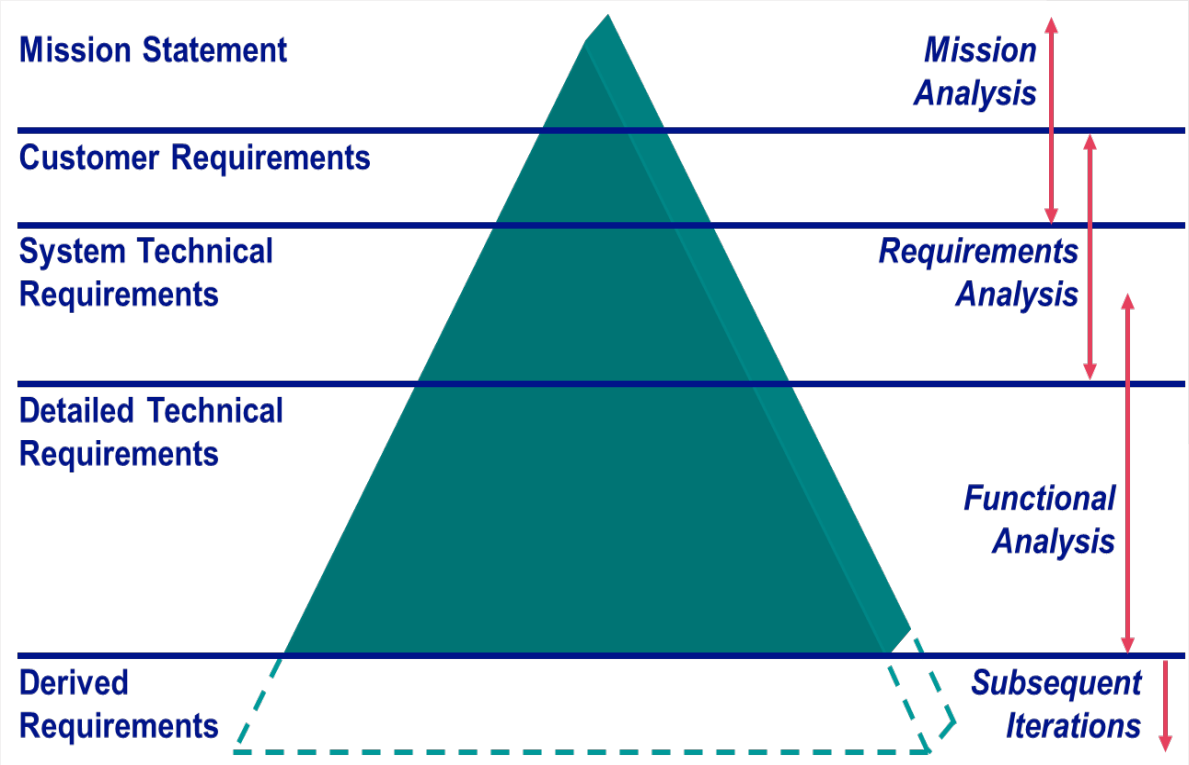
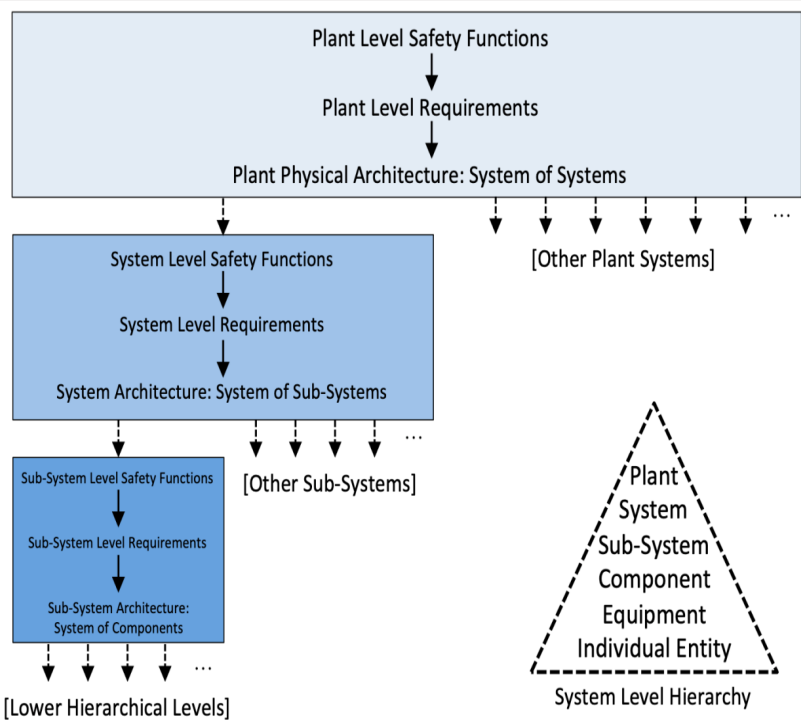
ANS 2.26 – Appendix B – Objectives Hierarchy



Requirements Management Using an Objectives Hierarchy

Requirements management is the process of documenting, analyzing, tracking, and verifying requirements throughout the system development lifecycle.

The purpose of an **objectives driven structure** for a reactor product is to specify one set of requirements for every objective within a structured set of objectives.



Appendix B.3 – Performance Requirements

Allocation

- **Allocation** is deciding what levels of SSC performance are needed in order to address the target performance objectives associated with higher levels of the hierarchy.
- One example considered in the main body relates to the case of nested barriers, where different allocations over the two barriers can achieve nominally equivalent overall performance (prevention of release of material outside the outer barrier) but with substantially different costs and operational implications.
- This standard allows for relaxing performance of the inner barrier, provided that performance of the outer barrier is assured.

Implementation

- **Implementation** refers to the measures taken in order to make sure that the allocated levels of performance “come true.”
- These measures may occur during design, construction, or operation.
- This means that even in a fairly simple facility, characterizing all feasible allocations that satisfy the fundamental objectives could be a complicated task.
- SSCs are assigned to SDCs based on the most significant negative consequences potentially associated with the SSC failure.

Appendix B.4 – SDC as a Constructed Attribute

Design Alternatives

- Natural measures, which directly quantify fundamental or other objectives;
- Constructed measures, which reflect fundamental and/or means objectives but do so on scales of performance that must be developed through application of value judgments. Constructed measures are generally characterized by descriptive statements of specific attributes that are presented in a graded manner. A special case of a constructed measure is a binary measure that represents a “true” or “false” judgment on a hypothesis;
- Proxy attributes, which support the fundamental objectives but typically in some partial or indirect way. For example, they may correspond directly to means objectives and thereby reflect some, but typically not all, of the considerations reflected in the fundamental objectives.

Fundamental Objectives

- Failure would cause loss of life of workers in the facility other than structural collapse;
- Failure would possibly cause loss of life to an individual at the exclusion area boundary for 2 hours;
- Failure would require potentially permanent exclusion from contaminated areas.

Appendix B.5 – Analyses to Support Selection

Binary Measures (e.g., Yes or No)

- 6.2.1 Are the physical or chemical characteristics of the hazardous material and the energy sources for dispersing the material of sufficient intensity to warrant consideration in the consequence analysis
- 6.2.2. The SSC . . . shall have one or more safety functions . . . related to preventing accidents
- 6.2.5 complexity of assigning an SSC to the SDC for coincident failures ... robustness
- 6.2.7 Airborne Release Fractions from ANSI/ANS-5.10-1998
- 6.2.10 level of documentation (e.g., simple at SDC-1, complex at SDC-5)

Judgement Required

- 6.2.3 Acceptability of potential release of materials
- 6.2.4 ... common cause failures of SSCs...
- 6.2.6 ... Redundancy as a mitigating feature
- 6.2.8 . . . the consequence analysis shall strive to use mean values for the parameters related to material release, dispersal in the environment, and health consequences. In many instances the data available to support these analyses are not prototypic of the situation being analyzed, or there is large and poorly characterized uncertainty
- 6.2.9 ... use of natural measures for public dose consequence estimates

What does Performance-based mean?

What are the “Official (NRC)” attributes of a performance based-approach?

- (1) Measurable (or calculable) parameters (i.e., direct measurement of the physical parameter of interest or of related parameters that can be used to calculate the parameter of interest) exist to monitor system, including facility and licensee, performance...
- (2) Objective criteria to assess performance are established based on risk insights, deterministic analyses and/or performance history...
- (3) Licensees have flexibility to determine how to meet the established performance criteria in ways that will encourage and reward improved outcomes...
- (4) A framework exists in which the failure to meet a performance criterion, while undesirable, will not in and of itself constitute or result in an immediate safety concern.

Why is performance-based critically important?

- Achieves high levels of safety performance without undue regulatory burden

Practical Implementation of a Performance-based Approach

1. **Observable** parameters (quantitative, qualitative, or combination) directly related to outcome are developed
2. **Objective** acceptance criteria for each of the parameters is developed.
3. A decision-making **framework** is developed for evaluating and assessing physical and temporal **margins**.
4. **Flexibility** is afforded to the designer, applicant or licensee to show that the margins are being employed to **improve** safety outcomes.
5. **Improved** safety designs and outcomes are incentivized and rewarded.

Appendix C Worked Examples

Worked examples focus on a red oil explosion that occurred in 1993 at the Tomsk-7 site at Seversk, Russia, postulating a seismic initiation thereof.

Simplified PRA for Option 2

Table C.1 – Simplified SPRA for Red Oil Event							
System No.	1	2	3	4	Spill, Fire, Explosion or No Release	ID	
System ID:	PB	PV&S	SHR	PR			
Seismic Event	Process Building	Process Vessel & Supports	System for Heat Removal	Pressure Relief			
Seismic-IE	PB-PASS (LS-B/C/D)	PV&S-PASS (LS-C/D)	SHR-PASS (LS-D)		No Release	-	
			SHR-FAIL	PR-PASS (LS-C/D)	Fire	SI-FR-1	
		PV&S-FAIL		PR-FAIL	Explosion	SI-EX-1	
		PV&S-FAIL			Spill	SI-SP-1	
		SHR-PASS (LS-D)		No Release	-		
	PB-FAIL	PV&S-PASS (LS-A/B/C/D)	SHR-FAIL	PR-PASS (LS-C/D)	Fire	SI-FR-2	
				PR-FAIL	Explosion	SI-EX-2	
		PV&S-FAIL			Spill	SI-SP-2	

Risk Ranking Control Table for Option 3

Table C.2 – Crosswalk of Risk Ranking for Controls in the Red Oil event					
SSCs:	Spill	Fire-1	Fire-2	Explosion-1	Explosion-2
	0.6 rem	180 rem	0.2 rem	6,000 rem	420 rem
• PV&S	0.01	1	1	1	0.01
• SHR	1	0.01	0.01	0.01	0.01
• PR	1	0.01	1	0.01	0.01
Administrative					
• Process Limits	1	1	1	0.01	1
• Worker Evacuation	1	1	1	1	1
• Emergency Response	1	1	1	1	1
PRODUCT	1E-2	1E-4	1E-2	1E-6	1E-6
Risk (mrem/yr)	6	18	2	6	42
Option 3 Categorization	SDC-2	SDC-3	SDC-1	SDC-2	SDC-3
Option 1 Categorization	SDC-2	SDC-3	SDC-1	SDC-5	SDC-3

Objectives Hierarchy for Option 4

Plant: Building 201 of Radiochemical Works at Tomsk-7									
Physical Feature Process Vessel (PV) and Supports (PV&S)					Physical Feature System for Heat Removal				
Functional Objective Mass		Functional Objective Concentration			Functional Objective Pressure		Functional Objective Temperature		
System PV	System Dissolver	System Mixer	System Settler	System PR	System Vents	System Heater	System Chiller		
Piece Tank	Piece Tank	Piece Recycle	Piece Air	Piece Baffles	Piece RD	Piece PRV	Piece Duct	Piece Steam	Piece Water

Figure C.3 – Option 4 – Performance-Based Approach Considerations

Summary

- ♦ *ANS 2.26 had been Risk-informed and Performance-based since 2004*
- ♦ ANS 2.26 Scope has been expanded to include nuclear fuel manufacturing facilities; nuclear material waste-processing, storage, fabrication, and re-processing facilities; uranium enrichment facilities; tritium production and handling facilities; radioactive materials laboratories; and nuclear reactors.
- ♦ ANS 2.26 has been aligned with DOE-STD-1020-2016 and ANS 58.16, which allows use of the International Building Code at SDC-1 and SDC-2 levels.
- ♦ Radiological and Toxicological Thresholds remain aligned with regulatory values, with some values updated accordingly.
- ♦ ANS 2.26 includes options that align with NRC RG 1.233, 1.251, and 1.252 methods for Technology Inclusive, Risk Informed, and Performance Based Options for Seismic Design