PROPOSED RULE

10 CFR Part 53
"RISK-INFORMED, TECHNOLOGY-INCLUSIVE REGULATORY FRAMEWORK FOR COMMERCIAL NUCLEAR PLANTS"

November 19, 2024

Meeting Logistics

- Sound/Audio/Video
- Slides
- Raise Hand Functionality
- Teams Chat
- Meeting Transcription

Agenda – Tuesday, November 19

Time	Topic	Speaker
9:00 a.m. – 9:10 a.m.	Welcome / Introductions / Logistics	NRC
9:10 a.m. – 10:15 a.m.	• Need for Alternatives to the Existing Regulatory Framework • The 10 CFR Part 53 Framework • Subpart A	NRC / Public
10:15 a.m. – 10:30 a.m.	Break	
10:30 a.m. – 11:45 a.m.	Subpart B, Sections 53.210 – 53.220	NRC / Public
11:45 a.m. – 12:45 p.m.	Lunch	
12:45 p.m. – 2:00 p.m.	Subpart B, Sections 53.230 – 53.270	NRC / Public
2:00 p.m. – 2:15 p.m.	Break	
2:15 p.m. – 4:00 p.m.	Subpart C	NRC / Public
4:00 p.m. – 4:15 p.m.	Break	
4:15 p.m. – 5:00 p.m.	Subpart D	NRC / Public
5:00 p.m.	Adjourn	

Agenda – Wednesday, November 20

Time	Topic	Speaker
9:00 a.m. – 9:10 a.m.	Welcome / Introductions / Logistics	NRC
9:10 a.m. – 10:15 a.m.	Subpart E	NRC / Public
10:15 a.m. – 10:30 a.m.	Break	
10:30 a.m. – 11:30 a.m.	Subpart F, SSCs and Programs	NRC / Public
11:30 a.m. – 12:30 p.m.	Lunch	
12:30 p.m. – 1:45 p.m.	Subpart F, Operator Licensing	NRC / Public
1:45 p.m. – 2:00 p.m.	Break	
2:00 p.m. – 3:30 p.m.	Subparts H / I / G / J / M	NRC / Public
3:30 p.m. – 3:45 p.m.	Break	
3:45 p.m. – 5:00 p.m.	10 CFR Part 26	NRC / Public
5:00 p.m.	Adjourn	

Agenda – Thursday, November 21

Time	Topic	Speaker
9:00 a.m. – 9:10 a.m.	Welcome / Introductions / Logistics	NRC
9:10 a.m. – 10:20 a.m.	10 CFR Part 73	NRC / Public
10:20 a.m. – 10:30 a.m.	Break	
10:30 a.m. – 11:15 a.m.	10 CFR Part 73 (continued)	NRC / Public
11:15 a.m. – 12:00 p.m.	Wrap up discussion and questions	NRC / Public
12:00 p.m.	Adjourn	

Proposed Rule

- 89 FR 86918
- https://www.regulations.gov/document/NRC-2019-0062-0310
- ML24095A161

28 Associated Documents

- 89 FR 86918, Section XIX. Availability of Documents
- https://www.regulations.gov/docket/NRC-2019-0062/document?postedDateFrom=2024-10-31&postedDateTo=2024-10-31

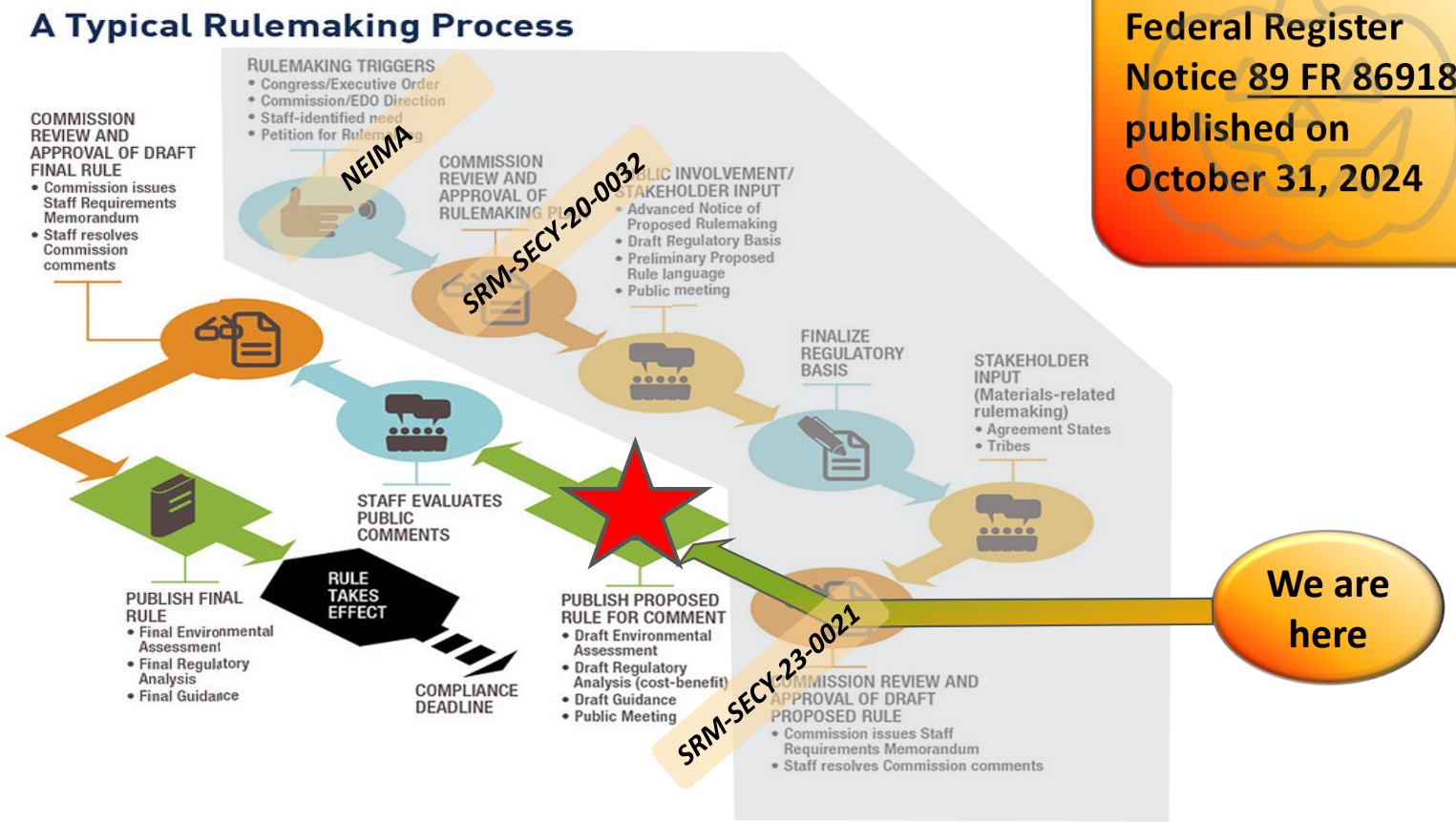
Comments on the Proposed Rule

- Go to https://www.regulations.gov/document/NRC-2019-0062-0310 to submit comments (Click on the blue comment button)
- The comment period closes February 28, 2025
  - In response to multiple requests, the NRC extended the comment period by 60 days
  - A *Federal Register* notice announcing the new comment period closure date will be published
- We are not accepting comments on the proposed rule during this meeting
- There will be no formal responses to discussions during this meeting, but the staff may post additional information on regulations.gov
- No regulatory decisions will be made during this meeting

Part 53 NRC Staff

- Nicole Fields, NMSS – Meeting Facilitator and Rulemaking Project Manager
- Bob Beall, NMSS - Senior Rulemaking Project Manager
- Anders Gilbertson, Bill Reckley, and Nan Valliere, NRR - Technical Leads
- Jesse Seymour, NRR – Operator Licensing & Human Factors
- Brian Zaleski, NSIR - Part 26 Fitness for Duty
- Chuck Teal, NSIR – Part 73 Physical Security
- Brad Baxter, NSIR - Part 73 Access Authorization
- Tammie Rivera, NSIR – Part 73 Cybersecurity

Rulemaking Process



Federal Register Notice 89 FR 86918 published on October 31, 2024

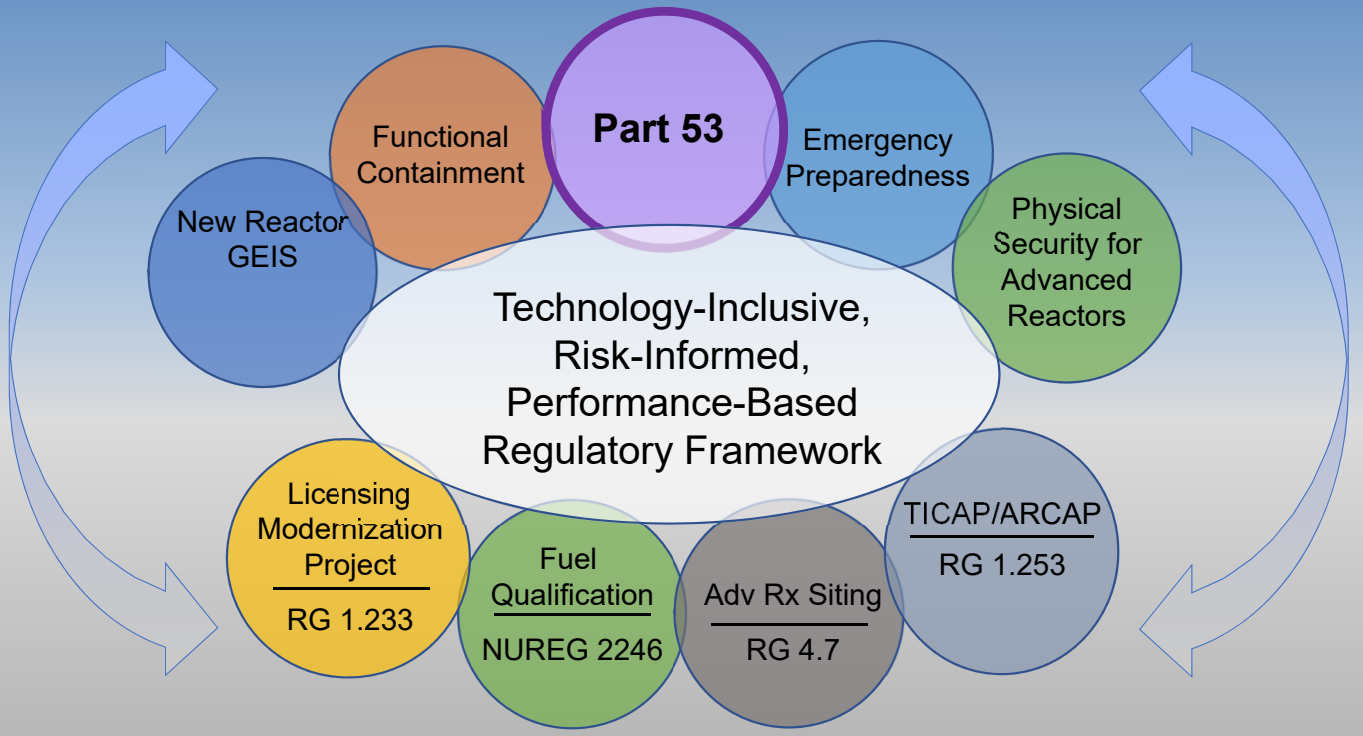
Key Rulemaking Documents

- SECY-20-0032, “Rulemaking Plan on Risk-Informed, Technology-Inclusive Regulatory Framework for Advanced Reactors,” dated April 13, 2020 (ADAMS ML19340A056)
- In SRM-SECY-20-0032, dated October 2, 2020 (ADAMS ML20276A293), the Commission provided direction to the staff.
- SECY-23-0021, “Proposed Rule: Risk-Informed, Technology-Inclusive Regulatory Framework for Advanced Reactors,” dated March 1, 2023 (ADAMS ML21162A093)
- In SRM-SECY-23-0021, dated March 4, 2024 (ADAMS ML24064A047), the Commission approved, in part, the NRC staff’s draft proposed rule with exceptions and clarifications.

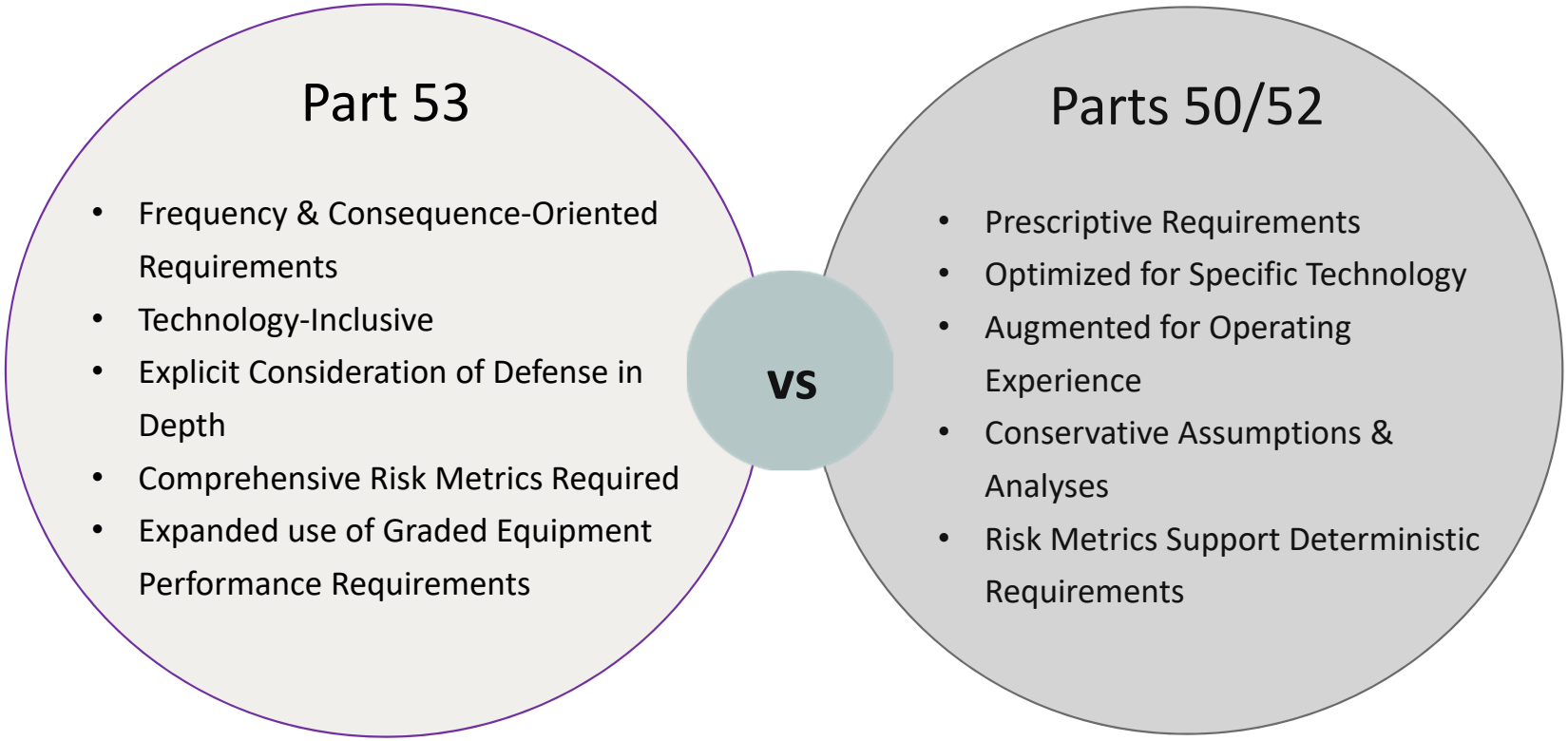
Part 53 Final Rule Milestones

- Final Rule to the Commission
- Final Rule Published
  - NEIMA Deadline – December 2027
- Final Rule Effective

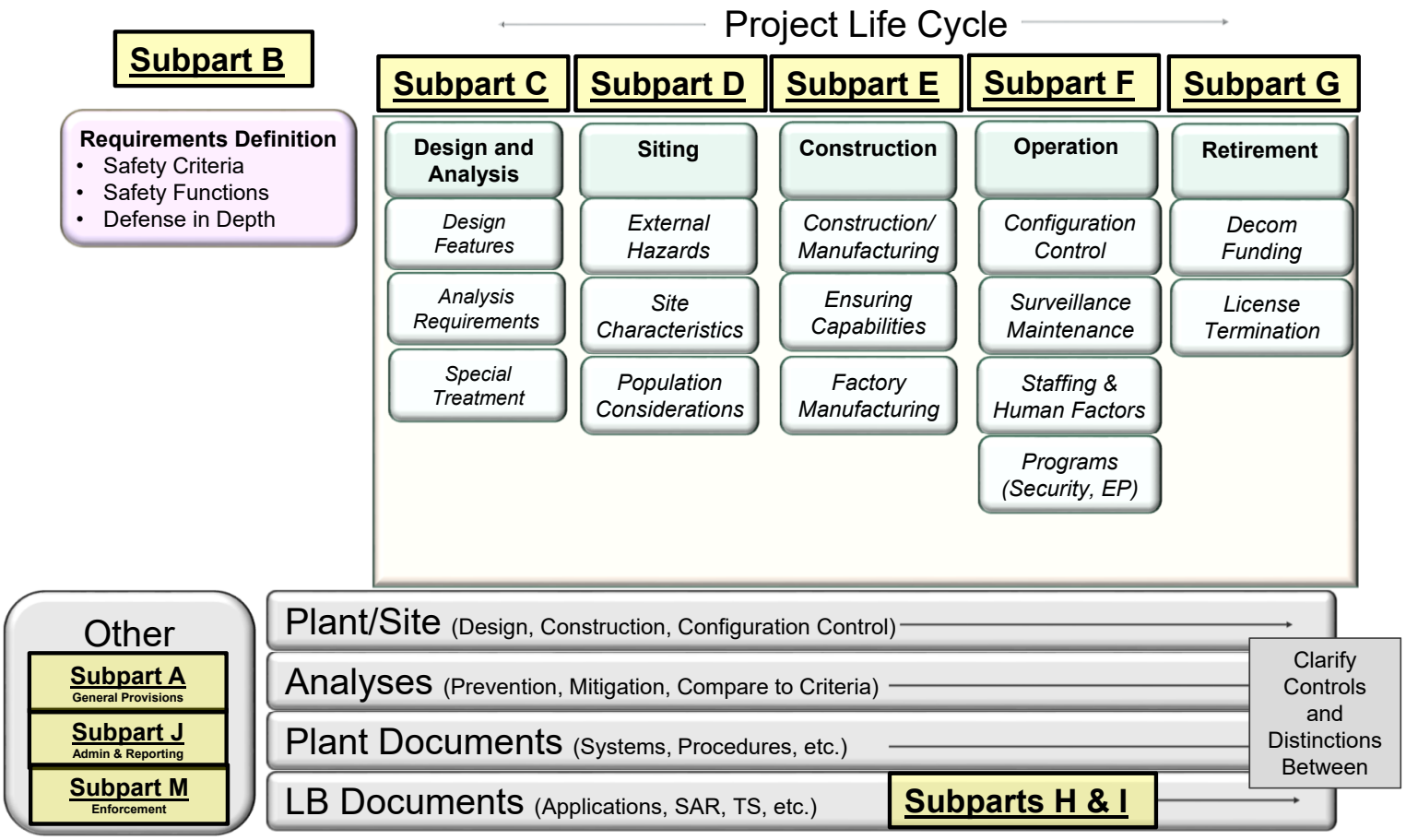
Modernizing the Regulatory Framework



Part 53 would provide flexibility in a modern, risk-informed, performance-based approach



Part 53 Structure - Project Life Cycle



Part 53 Licensing Framework

Section VI - Requests for Comments
- Overall Organization
- References/Pointers

Part 53 Organization	
Subpart A	General Provisions
Subpart B	Technology-Inclusive Safety Requirements
Subpart C	Design and Analysis Requirements
Subpart D	Siting Requirements
Subpart E	Construction and Manufacturing Requirements
Subpart F	Requirements for Operation
Subpart G	Decommissioning Requirements
Subpart H	Licenses, Certifications, and Approvals
Subpart I	Maintaining and Revising Licensing-Basis Information
Subpart J	Reporting and Other Administrative Requirements
Subpart M	Enforcement

Subpart A
General provisions

§ 53.015	Scope.
§ 53.020	Definitions.
§ 53.040	Written communications.
§ 53.050	Deliberate misconduct.
§ 53.060	Employee protection.
§ 53.070	Completeness and accuracy of information.
§ 53.080	Specific exemptions.
§ 53.090	Standards for review.
§ 53.100	Jurisdictional limits.
§ 53.110	Attacks and destructive acts.
§ 53.115	Rights related to special nuclear material.
§ 53.117	License suspension and rights of recapture.
§ 53.120	Information collection requirements: OMB approval.

Subpart A
General provisions

New or Revised Terminology (§ 53.020)

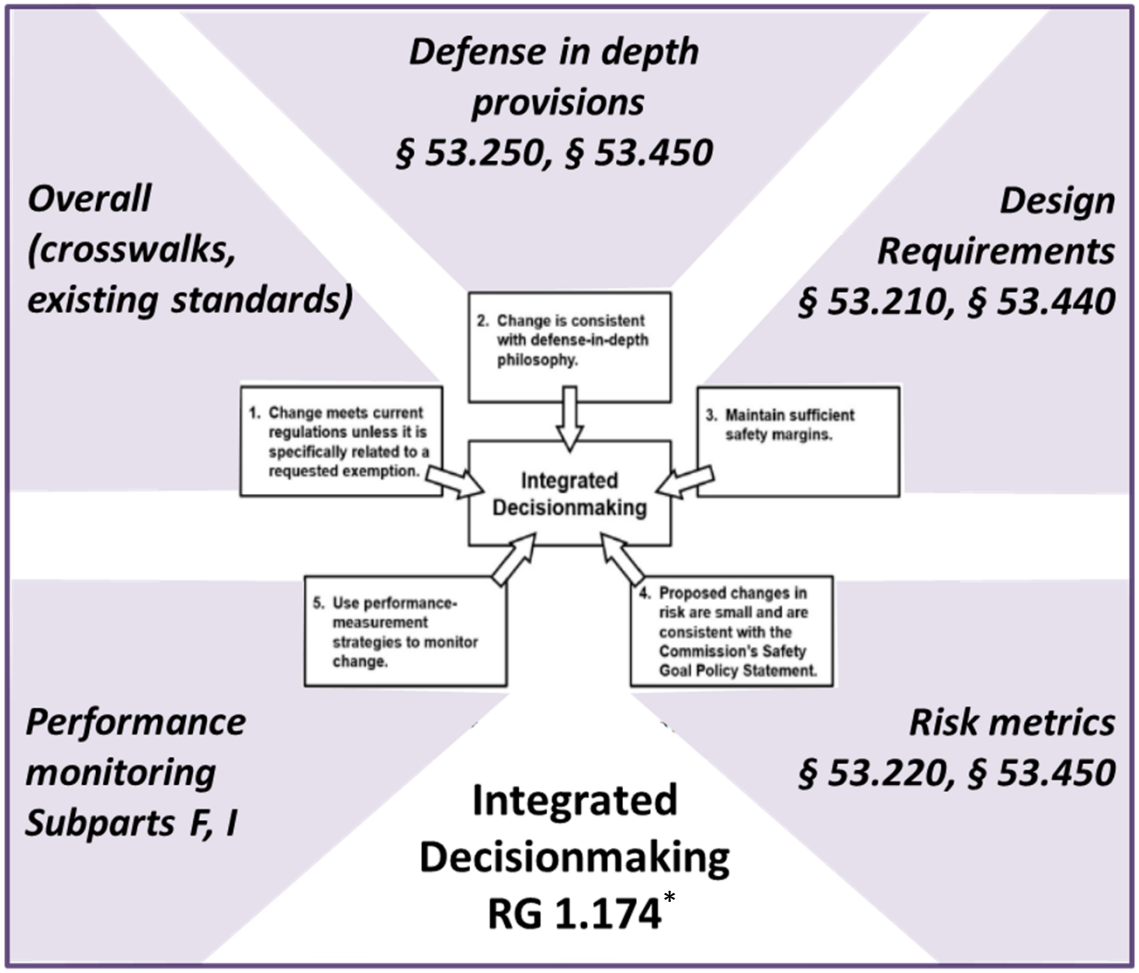
- Event categories & related terms
- Commercial nuclear plant/reactor
- Consensus code or standard
- Construction
- Defense in depth
- Functional design criteria
- Licensing basis information
- Safety classification categories
- Probabilistic risk assessment
- Programmatic controls
- Special treatment

BREAK

Subpart B
Technology-inclusive safety requirements

§ 53.210	Safety criteria for design-basis accidents.
§ 53.220	Safety criteria for licensing-basis events other than design-basis accidents.
§ 53.230	Safety functions.
§ 53.240	Licensing basis events.
§ 53.250	Defense-in-depth.
§ 53.260	Normal operations.
§ 53.270	Protection of plant workers.

Subpart B
Technology-inclusive safety requirements



*Regulatory Guide (RG) 1.174, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis"

Subpart B
Technology-inclusive safety requirements

§ 53.210 Safety criteria for design-basis accidents.

- Design features and programmatic controls provided such that the identification and analyses of design-basis accidents (DBAs) demonstrate that the calculated offsite doses are below established reference values

§ 53.450(f) Analysis of design-basis accidents.

- DBAs address possible challenges to the safety functions required to be identified by § 53.230 and include events that, if not terminated, have the potential for exceeding the safety criteria in § 53.210.
- DBAs analyzed using deterministic methods that address event sequences from initiation to a safe stable end state and assume only the SR SSCs and human actions addressed by the requirements of Subpart F to perform the safety functions
- The analysis must conservatively demonstrate compliance with the safety criteria in § 53.210.

Subpart B
Technology-inclusive safety requirements

§ 53.220 Safety criteria for licensing-basis events other than design-basis accidents.

- Design features and programmatic controls provided such that the identification and analysis of licensing-basis events (LBEs) other than DBAs demonstrate the following:

  a) Plant SSCs, personnel, and programs provide the necessary capabilities and maintain the necessary reliability to address LBEs other than DBAs and provide measures for defense in depth, and

  b) The analysis of risks to public health and safety resulting from LBEs other than DBAs under § 53.450(e) includes comprehensive risk metrics that satisfy associated risk performance objectives that are acceptable to the NRC and provide an appropriate level of safety.

Subpart B
Technology-inclusive safety requirements

§ 53.450(e) Analysis of licensing-basis events other than design-basis accidents.

- The analyses must use insights from a PRA in combination with other generally accepted approaches for systematically evaluating engineered systems to identify and analyze equipment failures and human errors.
- The analysis of LBEs other than DBAs must include definition of evaluation criteria for each event or specific categories of LBEs to determine the acceptability of the plant response to the challenges posed by internal and external hazards to provide an appropriate level of safety.
- The analyses of LBEs other than DBAs must address event sequences from initiation to a defined end state and be used in combination with other engineering analyses to demonstrate that the functional design criteria required by § 53.420 provide sufficient barriers to the unplanned release of radionuclides to satisfy the evaluation criteria defined for each LBE other than DBAs, to satisfy the safety criteria specified in accordance with § 53.220 and provide defense in depth as required by § 53.250.
- The methodology used to identify, categorize, and analyze LBEs must include a means to identify event sequences deemed significant for controlling the risks posed to public health and safety.

Subpart B
Technology-inclusive safety requirements

Comprehensive risk metrics and associated risk performance objectives

- Consist of proposed plant risk metric or set of proposed risk metrics that approximate the total, overall risk from the facility and that address the range of possible plant configurations and associated internal and external hazards to the extent practicable.

- The associated risk performance objectives are preestablished, indicative values of the comprehensive risk metrics that are used as part of risk-informed decision-making.

- The methodology for developing and using proposed comprehensive risk metrics and associated risk performance objectives is defined by the proposed requirements for analyses in § 53.450.

Subpart B
Technology-inclusive safety requirements

Section VI - Requests for Comments
- Comprehensive Risk Metrics

Comprehensive risk metrics and associated risk performance objectives

§ 53.710 Maintaining capabilities and availability of structures, systems, and components. (footnote)

- The comprehensive risk metrics and related risk performance objectives established under § 53.220 involve assessing and averaging the risks over a defined period (e.g., plant year) and do not constitute a real-time requirement that must be continuously demonstrated by the licensee.

§ 53.1550 Evaluating changes to facility as described in Final Safety Analysis Reports.

- (a)(2)(iii) Does not involve either of the following: (A) a change to the NRC-approved comprehensive risk metric(s) or associated risk performance objective under § 53.220(b), or …

BREAK - LUNCH

Subpart B
Technology-inclusive safety requirements

§ 53.210 Safety criteria for design-basis accidents.
§ 53.220 Safety criteria for licensing-basis events other than design-basis accidents.
§ 53.230 Safety functions.
§ 53.240 Licensing basis events.
§ 53.250 Defense-in-depth.
§ 53.260 Normal operations.
§ 53.270 Protection of plant workers.

Subpart B
Technology-inclusive safety requirements

§ 53.230 Safety functions.

(a) The primary safety function is limiting the release of radioactive materials from the facility and must be maintained during normal operation and for LBEs over the life of the plant.

(b) Additional safety functions needed to support the retention of radioactive materials during LBEs—such as controlling reactivity, heat generation, heat removal, and chemical interactions—must be identified for each commercial nuclear plant.

(c) The primary and additional safety functions are required to satisfy the safety criteria defined in §§ 53.210 and 53.220, or more restrictive alternative criteria adopted under § 53.470, and must be fulfilled by the design features, human actions, and programmatic controls specified throughout this part.

Subpart B
Technology-inclusive safety requirements

§ 53.240 Licensing-basis events.

(a) Licensing-basis events must be identified for each commercial nuclear plant and analyzed under § 53.450 to demonstrate that the safety requirements in this subpart have been satisfied.

(b) The identified LBEs, ranging from anticipated event sequences to very unlikely event sequences, must collectively address combinations of malfunctions of plant SSCs, human errors, facility hazards, and the effects of external hazards.

(c) The analysis of LBEs must—

(1) Include analysis of one or more DBAs under § 53.450(f);

(2) Confirm the adequacy of design features and programmatic controls needed to satisfy the safety criteria defined in §§ 53.210 and 53.220, or more restrictive alternative criteria adopted under § 53.470, and

(3) Establish related functional requirements for plant SSCs, personnel, and programs.

§ 53.020 Definitions.

- *Licensing-basis events means a collection of event sequences considered in the design and licensing of the commercial nuclear plant. Licensing-basis events are unplanned events and include anticipated event sequences, unlikely event sequences, very unlikely event sequences, and DBAs.*

Subpart B
Technology-inclusive safety requirements

Section VI - Requests for Comments
- Defense in depth

§ 53.250 Defense in depth.

(a) Measures must be taken for each commercial nuclear plant to ensure appropriate defense in depth is provided to compensate for uncertainties in the analysis of the safety criteria such that there is reasonable assurance that the safety criteria in this subpart are met over the life of the plant.

(b) The uncertainties that must be addressed under paragraph (a) of this section include those related to the state of knowledge and modeling capabilities, the ability of barriers to limit the release of radioactive materials from the facility during LBEs other than DBAs, the reliability and performance of plant SSCs and personnel, and the effectiveness of programmatic controls.

(c) The safety analysis may not rely upon a single engineered design feature, human action, or programmatic control, no matter how robust, to address the range of LBEs other than DBAs.

Subpart B
Technology-inclusive safety requirements

§ 53.260 Normal operations.

Holders of licenses to operate commercial nuclear plants under this part must control public doses and dose rates in unrestricted areas from normal plant operations to meet the requirements in 10 CFR part 20.

§ 53.270 Protection of plant workers.

Holders of licenses to operate commercial nuclear plants under this part must control occupational doses to meet the requirements in 10 CFR part 20.

Subpart B
Technology-inclusive safety requirements

Requirements related to radiation protection programs	
53.260	OL/COL holders meet 10 CFR part 20 (public doses)
53.270	OL/COL holders meet 10 CFR part 20 (plant workers)
53.425	• Define design features and functional design criteria • ALARA design objective of 10 mrem TEDE annual dose
53.430	Define design features and functional design criteria
53.450(g)(3)	Analysis of expected releases and doses to the public
53.850	Radiation protection program
53.1645	Reports of radiation exposure to the public
53.1239(a) (DC) 53.1209(b) (SDA) 53.1279(a) (ML) 53.1309(a) (CP)	• Design features supporting normal operations • How programmatic controls support meeting requirements • Design features supporting the protection of plant workers • How programmatic controls support meeting requirements
53.1369 (OL) 53.1416(a) (COL)	• Design features supporting normal operations • Radiation protection program • Design features supporting the protection of plant workers • Radiation protection program

Subpart B
Technology-inclusive safety requirements

§ 53.1239(a) - Contents of applications for standard design certifications; technical information.

(4) Design Features Supporting Normal Operations. A description of the design features required by § 53.425 to support the holder of an operating license or combined license complying with § 53.260 during normal operations.

(8) Programmatic Controls for Normal Operations. A description of how programmatic controls, including monitoring programs, would provide assurance that design features and procedures will enable the holder of an operating license or combined license to comply with§ 53.260 .

(9) Design Features Supporting the Protection of Plant Workers. A description of the design features required by § 53.430 to support the holder of an operating license or combined license complying with § 53.270.

(10) Programmatic Controls for Protection of Plant Workers. A description of how programmatic controls, including monitoring programs, would provide assurance that design features and procedures will enable the holder of an operating license or combined license to comply with § 53.270.

Subpart B
Technology-inclusive safety requirements

§§ 53.1369 and 53.1416 - Contents of applications for operating licenses (and combined licenses); technical information.

§ 53.1369 (Operating Licenses)

(b) *Design information.* Except as specified in this paragraph, an FSAR for an OL for a commercial nuclear plant must include the final design information equivalent to that required for a standard design certification as defined in § 53.1239(a)(2) through (7), (a)(9), and (a)(11) through (a)(27).

(m) *Radiation protection program.* A radiation protection program description under § 53.850.

§ 53.1416(a) (Combined Licenses, Final Safety Analysis Report)

(2) *Design information*. An application for a COL for a commercial nuclear plant must include the design information equivalent to that required for a standard design certification as defined in § 53.1239(a)(2) through (7), (a)(9), and (a)(11) through (27).

(13) *Radiation protection program*. A radiation protection program description under § 53.850.

BREAK

Subpart C

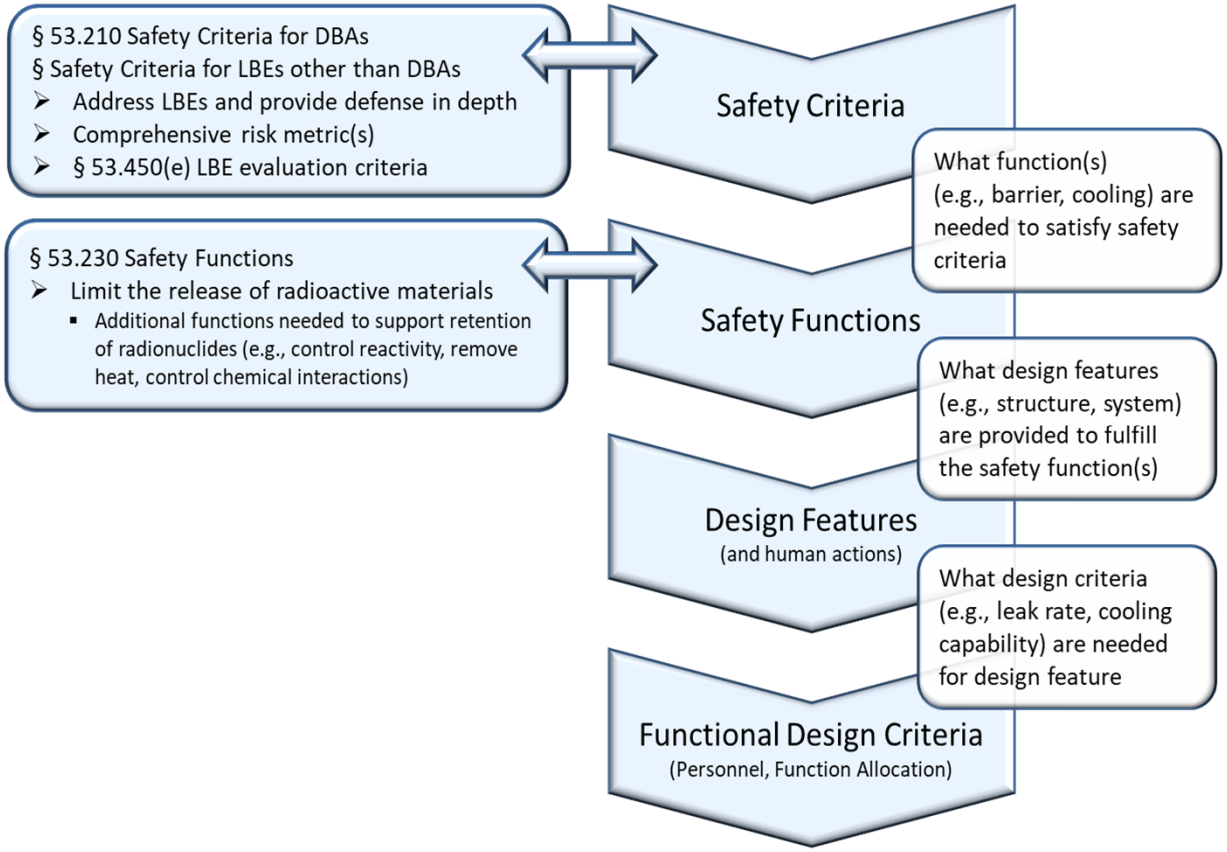
Design and analysis requirements

§ 53.400	Design features for licensing-basis events.
§ 53.410	Functional design criteria for design-basis accidents.
§ 53.415	Protection against external hazards.
§ 53.420	Functional design criteria for licensing-basis events other than design-basis accidents.
§ 53.425	Design features and functional design criteria for normal operations.
§ 53.430	Design features and functional design criteria for protection of plant workers.
§ 53.440	Design requirements.
§ 53.450	Analysis requirements.
§ 53.460	Safety categorization and special treatments.
§ 53.470	Maintaining analytical safety margins used to justify operational flexibilities.
§ 53.480	Earthquake engineering.

Subpart C

Design and analysis requirements

Part 53 Hierarchy



Subpart C

Design and analysis requirements

§ 53.400 Design features for licensing-basis events.

- Design features must be provided such that, when combined with corresponding human actions and programmatic controls, the plant will satisfy the safety criteria and ensure that safety functions are fulfilled during LBEs.

§ 53.410 Functional design criteria for design-basis accidents.

§ 53.415 Protection against external hazards.

- Safety-related (SR) SSCs must be protected against or must be designed to withstand the effects of external hazards up to the design-basis external hazard levels

§ 53.420 Functional design criteria for licensing-basis events other than design-basis accidents.

Subpart C

Design and analysis requirements

§ 53.425 Design features and functional design criteria for normal operations.

§ 53.430 Design features and functional design criteria for protection of plant workers.

Subpart C

Design and analysis requirements

§ 53.440 Design requirements.	
(a)	• Demonstrate functional design criteria via analysis, test, etc.; • Evaluate operating, design and construction experience
(b)	Consensus codes and standards acceptable to NRC
(c)	Materials qualified for conditions
(d)	Evaluate possible degradation mechanisms
(e)	Design and locate to minimize probability and effects of fires and explosions
(f)	Consider safety and security together during design process
(g)	Subcritical condition during normal operations and after LBE
(h)	Long-term cooling during normal operations and after LBE
(i)	Design, analysis, staffing and programs cover all units, inventories
(j)	Physical barrier(s) maintained assuming aircraft impact
(k)	Control risk from chemical hazards of licensed material
(l)	Minimize contamination to facilitate eventual decommissioning
(m)	Criticality monitoring (alternative to § 70.24)
(n)	Consider human factors, functional analysis and function allocation

Subpart C

Design and analysis requirements

§ 53.450 Analysis requirements.	
(a)	Requirement to have a probabilistic risk assessment (PRA)
(b)	Specific uses of analyses (LBEs, classification, defense in depth)
(c)	Maintenance and upgrade of analyses
(d)	Qualification of analytical codes.
(e)	Analyses of licensing-basis events other than design-basis accidents. • Evaluation criteria for each event or specific categories of LBEs • Means to identify event sequences significant for controlling risks
(f)	Analysis of design-basis accidents. • deterministic methods from initiation to a safe stable end state
(g)	Other required analyses. • Fire protection • Aircraft impact • Doses to members of the public

Subpart C

Design and analysis requirements

Section VI - Requests for Comments
- Probabilistic Risk Assessment

PRA Acceptability

- Development, use, and maintenance of a PRA would be a key component in the proposed analysis requirements
- The PRA, together with other techniques, would have required uses such as –
  - identify and categorize LBEs,
  - classify SSCs, and
  - evaluate defense in depth
- Consistent with the current state of practice, acceptability of a PRA would be assessed based on the required uses of the PRA and the needs and scope of the application
  - Consensus PRA standards would not be applied as a strict checklist of requirements for PRA acceptability determinations under the Part 53 proposed rule
- NRC guidance on non-LWR PRA acceptability is currently available, which includes NRC-endorsed processes on the use of consensus PRA standards and PRA peer review

Subpart C

Design and analysis requirements

§ 53.460 Safety categorization and special treatments.

(a) SSCs must be classified according to their safety significance using the categories:

- Safety-Related (SR)
- Non-Safety-Related but Safety-Significant (NSRSS)
- Non-Safety-Significant

(b) Special treatments must be established for SR and NSRSS SSCs to provide confidence that the SSCs will perform under the service conditions and with reliability consistent with the analysis performed under § 53.450

- SR SSCs must meet applicable requirements from Part 50, Appendix B
- NSRSS SSCs may use criteria from Part 50, Appendix B

(c) Consider needed human actions and associated programmatic controls

Subpart C

Design and analysis requirements

§ 53.470 Maintaining analytical safety margins used to justify operational flexibilities.

Where an applicant or licensee so chooses, alternative criteria more restrictive than those defined in §§ 53.220 and 53.450(e) may be adopted to support operational flexibilities. In such cases, applicants and licensees must ensure that the functional design criteria of § 53.420, the analysis requirements of § 53.450(e), and identification of special treatment of SSCs and human actions under § 53.460 reflect and support the use of alternative criteria to justify operational flexibilities. Licensees must ensure that measures taken to provide the analytical margins supporting operational flexibilities are incorporated into design features and programmatic controls and are maintained within programs required in other subparts.

Subpart C

Design and analysis requirements

Section VI - Requests for Comments
- Earthquake Engineering

§ 53.480 Earthquake engineering.

- SR SSCs and NSRSS SSCs must be able to withstand the effects of earthquakes, commensurate with the safety significance of the SSC, without loss of capability to perform their role in fulfilling the safety functions required by § 53.230
- Flexibility is provided in how seismic events are addressed in analyses and design (see previously issued pre-decisional draft regulatory guides)

BREAK

Subpart D
Siting requirements

§ 53.500	General siting and siting assessment.
§ 53.510	External hazards.
§ 53.520	Site characteristics.
§ 53.530	Population-related considerations.
§ 53.540	Siting interfaces.

Subpart D
Siting requirements

§ 53.500 General siting and siting assessment.

The reason for establishing siting requirements would remain the same as it has been historically, which is to ensure that licensees and applicants assess what impact the site environs may have on a commercial nuclear plant (e.g., external hazards) and, conversely, what potential adverse health and safety impacts a commercial nuclear plant may have on nearby populations in view of the site characteristics.

Subpart D
Siting requirements

§ 53.510 External hazards.

(a) General external hazard requirements. The design-basis external hazard level for the relevant external hazards for a site must be identified and characterized based on site-specific assessments of natural and constructed hazards with the potential to adversely affect plant functions. The external hazard frequencies and magnitudes determined from the site-specific assessments must take into account uncertainties and variabilities in data, models, and methods relied on to characterize the external hazards. (§ 53.415)

- Note that § 53.450(a) would require that a PRA be performed to identify potential failures, susceptibility to internal and external hazards, and other contributing factors to event sequences that might challenge the safety functions identified in § 53.230 and to support demonstrating that each commercial nuclear plant meets the safety criteria of § 53.220 (including comprehensive risk metric)

Subpart D
Siting requirements

§ 53.520 Site characteristics.

- Site characteristics that might contribute to the initiation, progression, or consequences of LBEs must be identified, assessed, and considered in the design and analyses

§ 53.530 Population-related considerations.

- Consistent with requirements in § 100.21 and guidance in Revision 4 to RG 4.7 on population density

§ 53.540 Siting interfaces.

- Site characteristics must be addressed by the design features, programmatic controls, and supporting analyses and must be such that adequate emergency plans and security plans can be developed and maintained.

END DAY 1

PROPOSED RULE

10 CFR Part 53
"RISK-INFORMED, TECHNOLOGY-INCLUSIVE REGULATORY FRAMEWORK FOR COMMERCIAL NUCLEAR PLANTS"

November 20, 2024

Agenda – Wednesday, November 20

Time	Topic	Speaker
9:00 a.m. – 9:10 a.m.	Welcome / Introductions / Logistics	NRC
9:10 a.m. – 10:15 a.m.	Subpart E	NRC / Public
10:15 a.m. – 10:30 a.m.	Break	
10:30 a.m. – 11:30 a.m.	Subpart F, SSCs and Programs	NRC / Public
11:30 a.m. – 12:30 p.m.	Lunch	
12:30 p.m. – 1:45 p.m.	Subpart F, Operator Licensing	NRC / Public
1:45 p.m. – 2:00 p.m.	Break	
2:00 p.m. – 3:30 p.m.	Subparts H / I / G / J / M	NRC / Public
3:30 p.m. – 3:45 p.m.	Break	
3:45 p.m. – 5:00 p.m.	10 CFR Part 26	NRC / Public
5:00 p.m.	Adjourn	

Subpart E
Construction and manufacturing requirements

Section VI - Requests for Comments
- Construction & Manufacturing
- References/Pointers

§ 53.600	Construction and manufacturing – scope and purpose.
§ 53.605	Reporting of defects and noncompliance.
§ 53.610	Construction.
§ 53.620	Manufacturing.

Subpart E
Construction and manufacturing requirements

§ 53.610 Construction.

- Management and control
  - Provides programmatic and organizational requirements
  - Supports compliance with the design and analysis requirements in Subpart C
- Construction activities
  - Required licenses
  - Controls for radioactive materials
    - Training, security, fire protection
  - Managerial and administrative controls
    - Procedures must be in place prior to the start of construction activities that describe how construction will be controlled so as not to impact other features important to the design, such as dewatering, slope stability, backfill, compaction, and seepage.
    - Limited work authorizations
- Inspection and acceptance

Subpart E
Construction and manufacturing requirements

Section VI - Requests for Comments
- Manufacturing Licenses (1-4)

§ 53.620 Manufacturing.

- Management and control
  - Provides programmatic and organizational requirements
  - Supports compliance with the design and analysis requirements in subpart C
- Manufacturing activities
  - ML holder has the authority to establish controls at facility(s)
  - Manufacturing processes must be performed in accordance with the ML and the referenced codes and standards
  - A post-manufacturing inspection and acceptance process
- Control of radioactive materials
- *Fuel loading*
- Transportation
- Acceptance and installation at final place of operation

Subpart E

Fuel loading for manufactured reactor modules

Section VI - Requests for Comments
- Manufacturing Licenses
- Factory Testing

§ 53.620(d) *Fuel loading.*

- A manufacturing license may include authorizing the loading of fresh (unirradiated) fuel into a manufactured reactor under Part 70

- Specifies required protections to prevent criticality
  - At least two independent physical mechanisms in place, each of which is sufficient to prevent criticality assuming optimum neutron moderation and neutron reflection conditions.

- Commission finding that a manufactured reactor module in required configuration is not in operation

Subpart E

Fuel loading for manufactured reactor modules

§ 53.620(d) *Fuel loading.*

- Holders of these Part 70 licenses must comply with the requirements of Subpart H to Part 70
- Procedures, equipment, and personnel required by the 10 CFR part 70 license, must be in place before the receipt of SNM at the manufacturing facility.
- The loading or unloading of fresh fuel into or from a manufactured reactor and any changes to the configuration of reactivity control and prevention systems for the fueled manufactured reactor must be performed by a certified fuel handler meeting the requirements in subpart F of this part.
- For a manufactured reactor that is to be loaded with fresh fuel before transport to the place of operation, the ML must specify that transportation will be in accordance with parts 71 and 73 of this chapter.

Subpart E

Fuel loading for manufactured reactor modules

§ 53.620(d) *Fuel loading.* (Security)

- Before receipt of SNM, the licensee must have security programs in place meeting the performance objectives of 10 CFR 73.67, with the following additions and exceptions:
  - A physical security plan and cybersecurity plan
  - Cybersecurity program for digital assets used for security, radiation monitoring, and criticality requirements
  - Physical security designed to prevent criticality events
  - Screening of individuals for unescorted access to SNM

BREAK

Subpart F
Requirements for operation

§ 53.700 Operational objectives.

- *Each holder of an operating license (OL) or combined license (COL) under this part must develop, implement, and maintain controls for plant structures, systems, and components (SSCs), responsibilities of plant personnel, and plant programs during the operating life of each commercial nuclear plant such that the requirements defined in subpart B are satisfied.*

Subpart F
Requirements for operation

§ 53.710 Maintaining capabilities and availability of structures, systems, and components.

- Technical specifications
  - Controls for SR SSCs (§ 53.210)
  - Adapted (with revisions) from existing requirement

- Plant controls (availability)
  - Controls for SR* and NSRSS SSCs (§ 53.220**)
  - Licensee controlled

* SR SSCs also contribute to defense in depth and risk-significant functions and may warrant special treatments beyond those defined for their SR functions to reflect their role in meeting the safety criteria in § 53.220 and the evaluation criteria in § 53.450(e).

** The comprehensive risk metrics and related risk performance objectives established under § 53.220 involve assessing and averaging the risks over a defined period (e.g., plant year) and do not constitute a real-time requirement that must be continuously demonstrated by the licensee.

Subpart F
Requirements for operation

§ 53.715 Maintenance, repair, and inspection programs.

- A program to control maintenance activities and monitor the performance or condition of SR and NSRSS SSCs.
- Corrective action if the performance or condition of an SR or NSRSS SSC does not meet established special treatments or performance goals
- Periodic evaluations
- Assess and manage the increase in risk that may result from the proposed maintenance activities.

Subpart F
Requirements for operation

Section VI - Requests for Comments
- Integrity Assessment Program

§ 53.845	Programs.
§ 53.850	Radiation protection.
§ 53.855	Emergency preparedness.
§ 53.860	Security programs.
§ 53.865	Quality assurance.
§ 53.870	Integrity assessment programs.
§ 53.875	Fire protection.
§ 53.880	Inservice inspection and inservice testing.
§ 53.910	Procedures and guidelines.

Subpart F
Requirements for operation

Section VI - Requests for Comments
- Emergency Preparedness and Security

§ 53.855 Emergency Preparedness.

Requires applicants and licensees to have an emergency response plan

- Must demonstrate compliance with either the requirements in § 50.160 or the requirements in appendix E to part 50 and the planning standards of § 50.47(b)
- No OL, COL, or ESP that includes complete and integrated emergency plans will be issued unless a finding is made by the NRC of reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency

Subpart F
Requirements for operation

§ 53.860 Security Programs.

- Physical Protection Program
- Fitness for Duty
- Access Authorization
- Cybersecurity
- Information Security

**Will be discussed on November 21st*

Subpart F
Requirements for operation

Section VI - Requests for Comments
- Emergency Preparedness and Security

Section VI Requests for Comments

- The NRC is seeking comment on the sufficiency and clarity of proposed Part 53 requirements related to treatment of security-related events in emergency planning for inclusion in determination of EPZ size.

BREAK

Subpart F
Requirements for operation

Sections 53.725 – 53.830 include the following key areas:

- Content of application requirements (§ 53.730)
  - Human factors engineering (HFE) has safety function focus
  - Facility-specific staffing plans and “engineering expertise”
- Conditions of license for facility licensees (§ 53.740)
  - Allows for automatic load following
  - Addresses online refueling oversight
- Operator licensing requirements for specifically-licensed Senior Reactor Operators (SRO) and Reactor Operators (ROs) (§§ 53.760-53.795)
  - Addresses use of customized operator licensing programs
  - Allows facility licensees to administer license exams
- Requirements for Generally Licensed Reactor Operators (GLROs) (§§ 53.800-53.820)
  - Establishes criteria for “self-reliant-mitigation” facilities
  - Contains the general license for GLROs
- Plant staff training requirements (§ 53.830)

Subpart F
Requirements for operation

Sections 53.725 – 53.745, General Requirements

- § 53.725 – Applicability & definitions
  - Load following is a plant automatically changing its output in response to externally originated instructions or signals
  - A simulator's reference plant need not yet be constructed
- § 53.726 – Communications
- § 53.728 – Completeness & accuracy of information
- § 53.730 – Defining, fulfilling, and maintaining the role of personnel in ensuring safe operations
  - Requirements for HFE, human-system interface inventory, functional requirements analysis & function allocation, concept of operations, operating experience, staffing & engineering expertise, and training & exam programs
  - GLRO ability to immediately shutdown from their location
- § 53.735 – General exemptions
- § 53.740 – Facility licensee requirements
  - Requirements for staffing complements, control manipulations, load following operations, oversight of core alterations, and departures from license conditions
- § 53.745 – Operator license requirements

Subpart F
Requirements for operation

Operator Licensing - Specific Licenses (ROs & SROs)

- § 53.760 – Applicability
- § 53.765 - Medical requirements
  - SROs & ROs require medical exams (GLROs do not)
- § 53.770 – Incapacitation (disability or illness)
- § 53.775 – Applications
  - No specific number of reactivity manipulations mandated
  - No waiting periods for reapplications after exam failure
  - Certain application information was moved to guidance
- § 53.780 – Training, exam, & proficiency programs
  - Systems Approach to Training (SAT) usage is required
  - Uses customized, Commission-approved exam programs
  - Facilities administer exams with NRC inspector(s) present
  - 24-month requal exam cycle; no separate annual op test
  - All simulation facilities are treated as “Commission-approved” with alternatives to full scope simulator use
  - Simulator can model intended core load for cold licensing
- § 53.785 – Conditions of RO & SRO licenses
- § 53.790 – Issuing, modifying & revoking licenses
- § 53.795 – Expiration & renewal of licenses

Subpart F
Requirements for operation

Facility licensees for self-reliant-mitigation facilities

- § 53.800 – Criteria for self-reliant-mitigation facilities
  - No human actions to meet radiological consequence criteria, address LBEs, or provide for adequate DID
  - Safety functions not allocated to human action
  - Reliance upon robust and highly reliable safety features
- § 53.805 – Facility licensee requirements for GLROs
  - Facilities must continue to meet the criteria of 53.800 (failure would represent reportable unanalyzed condition)
- § 53.810 – General license for GLROs
  - Grants similar level of administrative authority as an SRO
  - No application needs to be submitted for GLRO licensing
  - Individuals operating under license subject to conditions
  - License can still be suspended on an individual basis
- § 53.815 – GLRO Training, exams, & proficiency
  - SAT-based training program is required
  - Uses customized, Commission-approved exam programs
  - After approval, GLRO programs are facility administered
  - Facilities determine requalification exam periodicity
  - Simulation facilities do not require Commission-approval
- § 53.820 – Cessation of individual applicability

Subpart F
Requirements for operation

§ 53.830 Training and qualification of commercial nuclear plant personnel.

- SAT-based training programs are required
- Required timing for training program establishment is based on having trained personnel to support initial fuel load (for a fueled manufactured reactor, this is removal of criticality prevention mechanisms)
- Addresses higher-level categories of personnel for compatibility with variations on plant staff roles:
  - **Supervisors** (e.g., shift supervisors)
  - **Technicians** (e.g., maintenance, chemistry, & radiological)
  - **Other appropriate operating personnel** (e.g., auxiliary operators, individuals who provide engineering expertise to on-shift operating personnel, and certified fuel handlers)

Subpart F
Requirements for operation

Specific Requests for Comments on §§ 53.725 - 53.830

1. Perspectives on addition of GLRO license category
2. Feedback on whether the proposed criteria for self-reliant-mitigation facilities are appropriate
3. Feedback regarding whether GLROs should be subject to medical fitness and/or medical examination requirements like ROs & SROs
4. Perspectives regarding appropriateness of engineering expertise being accounted for within facility staffing plans in lieu of traditional Shift Technical Advisor position
5. Feedback regarding whether simulation facility requirements should also address use of simulation facilities as HFE testbeds

Subpart F
Requirements for operation

DRO-ISG-2023-01, “Operator Licensing Programs”

- Provides guidance for review of tailored operator licensing programs submitted under § 53.730(g)
- Primarily addresses the review of operator licensing examination processes
  - Facilitates determinations of whether a proposed approach to the testing of licensed operators and trainees reflects sound assessment testing practices that are suitable for screening competent licensed operators
- Also provides further review guidance in other areas such as licensed operator continuing training, proficiency programs, and change control processes
- Methods currently approved in NUREG-1021 can be used without needing further justification from the facility or additional NRC review

Subpart F
Requirements for operation

DRO-ISG-2023-02, “Interim Staff Guidance Augmenting NUREG-1791”

- Provides guidance for the review of customized facility operator staffing plans that are submitted for under § 53.730(f)
- Applicant proposes minimum staffing level by submitting a staffing plan with application
- Guidance is structured as a companion document to the existing NUREG-1791
  - Adapts existing HFE-based methodologies of NUREG-1791 document for use in the evaluation of staffing plans
- Also provides guidance to address other staffing-related considerations, such as provisions for engineering expertise
- Approved staffing plans must be followed under § 53.740 with changes being subject to controls

Subpart F
Requirements for operation

DRO-ISG-2023-03, “Development of Scalable Human Factors Engineering Review Plans”

- Provides guidance for HFE reviews of facility license applications to evaluate compliance with § 53.730(a)
- Facilitates development of application-specific review plans to achieve effective & efficient reviews
- Conducted in 5 steps:
  - **Characterization** – establishing an understanding of the design and its operation from an HFE perspective
  - **Targeting** – identifying aspects of the design and operation for HFE review
  - **Screening** – selecting HFE program elements & activities for review in conjunction with each target
  - **Grading** – selecting specific standards and guidance documents to be applied to the review
  - **Assembling the review plan** – integrating results of prior steps to produce a plan that supports an efficient, risk-informed review

BREAK

Subparts H, I, G, J, and M

- Subpart H – Licenses, Certifications, and Approvals
- Subpart I — Maintaining and Revising Licensing-Basis Information
- Subpart G — Decommissioning Requirements
- Subpart J — Reporting and Other Administrative Requirements
- Subpart M — Enforcement

Subpart H
Licenses, certifications, and approvals

- § 53.1100 - 53.1121 General/common requirements.
- § 53.1124 Relationship between sections.
- § 53.1130 Limited work authorizations.
- § 53.1140 Early site permits.
- § 53.1200 Standard design approvals.
- § 53.1230 Standard design certifications.
- § 53.1270 Manufacturing licenses
- § 53.1300 Construction permits.
- § 53.1360 Operating licenses.
- § 53.1410 Combined licenses.
- § 53.1470 Standardization of commercial nuclear power plant designs: licenses to construct and operate nuclear power reactors of identical design at multiple sites.

Subpart H Licenses, certifications, and approvals

- Subpart H largely reflects the current versions of 10 CFR Parts 50 and 52
- Application requirements tailored to match Part 53 technical requirements
- § 53.1124(c) and (d) are new provisions that would allow an SDA or DC applicant to reference applicable licensing-basis information that supported issuance of a previous OL or COL
- § 53.1130 Limited work authorizations (LWAs)
  - Provides the equivalent of requirements in 10 CFR 50.10 for applicants seeking an LWA
  - In Part 53, the definition of construction from 10 CFR 50.10(a) is contained in the Subpart A definitions and modified to reflect Part 53 structure and terminology

Subpart H
Licenses, certifications, and approvals

§§ 53.1140 – 53.1188 Early site permits (ESPs)

- An application for an ESP requests approval of a site for a commercial nuclear plant separate from an application for a CP or COL for the facility.

§§ 53.1146 Contents of applications for early site permits; technical information.

- This section forms the basis for required site information for CP and COL applications

§§ 53.1200 – 53.1221 Standard design approvals (SDAs)

- Any person may submit a proposed standard design for a commercial nuclear plant to the NRC staff for its review. The submittal may consist of either the final design for the entire facility or the final design for major portions thereof
- § 53.1209(a) Contents of applications; technical information-major portion
  - Need only contain information to the extent the requirements are applicable to the major portion for which approval is sought.
  - Must include all functional design criteria necessary to demonstrate compliance with the safety criteria, as applicable, for the major portion for which approval is sought
  - Must identify conditions related to interfaces with systems outside the scope of the major portion and functional or physical boundary conditions between the major portion and the remainder of the standard design

Subpart H Licenses, certifications, and approvals

§§ 53.1230 - 53.1263 Standard design certifications (DCs)

- A standard design certification is a Commission approval of a final standard design for a nuclear power facility.
- § 53.1239 Contents of applications; technical information - FSAR

(1) Site Parameters	(8) Programmatic Controls for Normal Operations	(15) Criticality	(22) Quality Assurance
(2) Plant Description and Safety Functions	(9) Design Features Supporting the Protection of Plant Workers	(16) Multi-unit Plants	(23) Design Features and Controls to Address the Minimization of Contamination
(3) Design Features and functional design criteria – licensing-basis events	(10) Programmatic Controls for Protection of Plant Workers	(17) SSC Classification	(24) Interface Requirements
(4) Design Features Supporting Normal Operations	(11) Codes and Standards	(18) Probabilistic Risk Assessment	(25) Technical Qualifications
(5) Design Features and Functional Design Criteria – aircraft impact	(12) Materials	(19) Analyses	(26) Technical Specifications
(6) Earthquake Engineering	(13) Integrity Assessment Program	(20) Special Treatments	(27) Role of Personnel
(7) Programmatic Controls and Interfaces	(14) Safety and Security	(21) Analytical Margins	

- This section would form the basis for required design information for SDA, ML, CP, OL, and COL applications.

Subpart H Licenses, certifications, and approvals

§§ 53.1270 - 53.1295 Manufacturing licenses (MLs)

- A license authorizing manufacture of reactors to be installed at sites not identified in the ML application
- § 53.1279 Contents of Applications; Technical Information in Final Safety Analysis Report
  - References DC requirements as baseline for content of application related to design
  - Requires information on the deployment of the completed manufactured reactor
  - Requires information on interfaces between the holder of the ML and the holder of the COL for the commercial nuclear plant at which the manufactured reactor is to be installed
- § 53.1295 Renewal of manufacturing licenses
  - (a)(3) Prohibits beginning manufacture of a reactor module less than 6 months before the expiration of the license (revised from 3 years in Part 52)

Subpart H
Licenses, certifications, and approvals

§ 53.1279 Contents of Applications; Technical Information

(d) Special considerations for factory fueling

(1) Describe procedures used during fueling that ensure the configuration of fuel within the reactor is consistent with the design and analyses supporting operation under the COL at the place of operation, including:

(i) Describe measures taken for in-factory inspections and non-nuclear testing

(ii) Describe design features included to prevent criticality; associated functional design criteria; and physical and programmatic controls implemented during manufacturing, storage, and transport credited to assure features function as designed when subject to potential hazards and human errors

(2) Describe procedures governing the transfer of responsibilities from the holder of the ML to the holder of the COL for the installation site

(3) Describe programs needed to demonstrate compliance with the requirements of § 53.620(d) and 10 CFR Parts 70, 71, and 73 for the receipt, storage, and loading of SNM into a manufactured reactor and the transport to a site for which the Commission has issued a COL, including a physical security program and a cybersecurity program.

Subpart H Licenses, certifications, and approvals

§§ 53.1300 - 53.1348 Construction permits (CPs)

- A permit for the construction of a commercial nuclear plant to be issued before the issuance of an OL if the application is otherwise acceptable and will be converted upon completion of the facility and Commission action into an OL
- § 53.1309 Contents of applications for construction permits; technical information.
  - PSAR must include the following information, at a level of detail sufficient to enable the Commission to reach a conclusion on safety matters that must be resolved by the Commission before issuance of a CP
    - (a)(1) Site information—equivalent to that required for an ESP

Subpart H
Licenses, certifications, and approvals

§ 53.1309 Contents of applications for construction permits; technical information.

- (a)(2) Design information—equivalent to that required for a DC
  - May include aspects of the design that are not fully developed—completed design described in FSAR that supports the OL application
  - This would include the requirement for a description of the PRA required by § 53.450(a) and its results, based on the design and other information available at the time

Subpart H Licenses, certifications, and approvals

§§ 53.1360 – 53.1405 Operating licenses (OLs)

- § 53.1369 Contents of applications; technical information in final safety analysis report
  - References ESPs and DCs as baseline with supplements for content of application.
  - The FSAR will include and as needed, update information provided in the PSAR which was submitted and reviewed to support the CP.

Subpart H
Licenses, certifications, and approvals

§§ 53.1410 – 53.1461 Combined licenses (COLs)

- § 53.1416 Contents of applications for combined licenses; technical information in final safety analysis report
  - (a)(1) and (a)(2) reference DC for design information and ESP for site information, respectively, as baseline
- § 53.1452 Operation under a combined license.
  - Licensees must notify the NRC of the scheduled date for initial loading of fuel no later than 270 days before that date
    - Licensees installing fueled manufactured reactors must instead notify the NRC of the scheduled date for initiating the physical removal of any one of the independent physical mechanisms to prevent criticality
  - Not less than 180 days before the date scheduled for initial loading of fuel, the Commission must publish notice of intended operation in the *Federal Register*
    - For licensees installing fueled manufactured reactors, the Commission must instead publish notice of intended operation not less than 180 days before the date scheduled for initiating the physical removal of any one of the independent physical mechanisms to prevent criticality

Subpart H
Licenses, certifications, and approvals

Section VI - Requests for Comments
- Licenses to Construct/Operate Identical Plants at Multiple Sites

§ 53.1470 Standardization of nuclear power plant designs: licenses to construct and operate nuclear power reactors of identical design at multiple sites.

- Equivalent of Appendix N to Part 50 and Part 52

Subpart I
Maintaining and revising licensing basis information

§ 53.1500	Licensing-basis information.
§ 53.1502	Specific terms and conditions of licenses.
§ 53.1505	Changes to licensing-basis information requiring prior NRC approval.
§ 53.1510	Application for amendment of license.
§ 53.1515	Public notices; State consultation.
§ 53.1520	Issuance of amendment.
§ 53.1525	Revising certification information within a design certification rule.
§ 53.1530	Revising design information within a manufacturing license.
§ 53.1535	Amendments during construction.
§ 53.1540	Updating licensing-basis information and determining the need for NRC approval.
§ 53.1545	Updating Final Safety Analysis Reports.
§ 53.1550	Evaluating changes to facility as described in Final Safety Analysis Reports.
§ 53.1560	Updating program documents included in licensing-basis information.
§ 53.1565	Evaluating changes to programs included in licensing-basis information.
§ 53.1570	Transfer of licenses.
§ 53.1575	Termination of licenses.
§ 53.1580	Information requests.
§ 53.1585	Revocation, suspension, modification of licenses and approvals for cause.
§ 53.1590	Backfitting.
§ 53.1595	Renewal.

Subpart I
Maintaining and revising licensing basis information

Section VI - Requests for Comments
- Changes to MLs

§ 53.1530 Revising design information within a manufacturing license.

- The holder of an ML may not make changes to the design of the manufactured reactor ithout obtaining an amendment
- The holder of a COL referencing an ML must request approval for any proposed departure

§ 53.1535 Amendments during construction.

- Provides requirements for amending the permit or license for the holder of a CP or COL
- Paragraph (a) reflects the same requirements in §50.35(b) for CPs
- Paragraph (b) reflects the process for changes during construction for COLs currently used under Part 52 (RG 1.237) with acknowledgement of proceeding at risk

Subpart I
Maintaining and revising licensing basis information

Section VI - Requests for Comments
- PRA Information

§ 53.1545 Updating Final Safety Analysis Reports.

- Update the FSAR every 24 months or more frequently, including effects of:
  - Updates to the PRA under § 53.450;
  - Cumulative effects of the changes to the facility or procedures on the margins to the safety criteria in §§ 53.210, 53.220, 53.450(e)

§ 53.1550 Evaluating changes to facility as described in Final Safety Analysis Reports.

- Change evaluation criteria
  - LBE Risk significance
  - LBE evaluation criteria (§ 53.450(e))
  - NRC-approved comprehensive risk metric(s) or associated risk performance objective (§ 53.220(b))
  - Method of evaluation for LBEs
  - SSC safety classification
  - Defense in depth
  - Alternative evaluation criteria (§ 53.470)
  - Design basis accidents (new or reduction in margins)
  - Aircraft impact

Similarities/differences with industry's Technology-Inclusive, Risk-Informed Change Evaluation (TIRICE) (NEI 22-07)

Subpart I
Maintaining and revising licensing basis information

§ 53.1560 Updating program documents included in licensing-basis information.

- Biennially or more frequently update the program documents

§ 53.1565 Evaluating changes to programs included in licensing-basis information.

- Licensee may make changes to the program documents without obtaining prior NRC approval only if:
  - Change to technical specifications not required;
  - An exemption from an NRC regulation is not required; and
  - Change conforms to program-specific requirements included in regulations, technical specifications, or the NRC-approved program document
  - Specific criteria provided for:
    - Quality assurance programs
    - Emergency preparedness programs
    - Security programs

Subparts G, J, and M

- Subpart G — Decommissioning Requirements
- Subpart J — Reporting and Other Administrative Requirements
- Subpart M — Enforcement

Subpart G
Decommissioning requirements

- § 53.1000 Scope and purpose.
- § 53.1010 Financial assurance for decommissioning.
- § 53.1020 Cost estimates for decommissioning.
- § 53.1030 Annual adjustments to cost estimates for decommissioning.
- § 53.1040 Methods for providing financial assurance for decommissioning.
- § 53.1045 Limitations on the use of decommissioning trust funds.
- § 53.1050 NRC oversight.
- § 53.1060 Reporting and recordkeeping requirements.
- § 53.1070 Termination of license.
- § 53.1075 Program requirements during decommissioning.
- § 53.1080 Release of part of a commercial nuclear plant or site for unrestricted use.

Subpart G
Decommissioning requirements

Section VI - Requests for Comments
- Decommissioning

- Most sections in this subpart were developed based on the existing decommissioning requirements (e.g., 10 CFR 50.75, 50.82, and 50.83)
- Changes made to make proposed requirements more technology inclusive by adding alternatives because some existing decommissioning requirements were developed specifically for LWRs
  - For example, 10 CFR 53.1020 requires that site-specific cost estimates for decommissioning be developed in lieu of including specific estimates for LWRs currently provided in 10 CFR 50.75(c)
- The NRC is currently pursuing another rulemaking, "Regulatory Improvements for Production and Utilization Facilities Transitioning to Decommissioning,"
  - NRC staff sent Commission draft final rule in January 2024*
  - The NRC will harmonize these two rules at the final rule stage

*SECY-24-0011, "Final Rule: Regulatory Improvements for Production and Utilization Facilities Transitioning to Decommissioning (3150-AJ59; NRC-2015-0070)," January 31, 2024.

Subpart J

Reporting and other administrative requirements

Section - VI Requests for Comments
- Financial Qualifications

- Most sections in this subpart were developed based on requirements in existing sections of NRC regulations.
- § 53.1600 General information
- § 53.1610 Unfettered access for inspections
  - Minor changes proposed to provide additional flexibilities and address possible differences in reactors licensed under 10 CFR Part 53
- § 53.1620 Maintenance of records, making of reports
- § 53.1630—53.1650 Reporting requirements
  - Minor changes proposed to equivalent requirements from 10 CFR 50.72 and 50.73 to make the 10 CFR Part 53 reporting criteria technology inclusive.
- § 53.1660 -53.1700 Financial qualification requirements
- § 53.1710 - § 53.1730 Financial protection requirements
  - Includes addition of a provision allowing plant-specific estimates of costs to stabilize and decontaminate a plant as an alternative to the $1.06 billion minimum coverage in 10 CFR 50.54(w).

Subpart M
Enforcement

§ 53.9000 Violations.

§ 53.9010 Criminal penalties.

BREAK

10 CFR Part 26 – Fitness for Duty

10 CFR Part 26
FFD Key Messages

1. A Part 26 FFD program provides reasonable assurance that covered individuals: (1) are not under the influence of any substance, legal or illegal, or mentally or physically impaired from any cause, which in any way adversely affects their ability to safely and competently perform their assigned duties; and (2) are trustworthy and reliable as demonstrated by the avoidance of substance abuse. Includes measures for the early detection of individuals not fit for duty.

2. The proposed new Subpart M to 10 CFR Part 26 applies a risk-informed graded approach to FFD program requirements for Part 53 licensees that is proportionate to associated risks of a reactor, which may be different from those risks posed by the current commercial nuclear power reactor fleet of large light water reactors.

3. The Subpart M FFD program requirements would apply to the workforces that:
   (1) construct and operate Part 53 licensed power reactors, and
   (2) manufacture reactors (i.e., Part 53 manufacturing license holders).

10 CFR Part 26
FFD Key Messages

4. The Subpart M FFD program leverages the optional FFD program for power reactors under construction that was created in 2008 (Subpart K, "FFD programs for construction"). Subpart K FFD programs have been implemented at two reactor construction sites (Vogtle Units 3 and 4; V.C. Summer Units 2 and 3).

5. The Subpart M FFD program enables the use of innovative technologies to accommodate for variations in workforce size and the geographic siting of reactors, such as:

   - Types of biological specimens that can be drug tested (e.g., oral fluid, hair)
   - Methods for testing for alcohol and/or drugs (point of collection testing providing immediate results; passive monitoring equipment to screen individuals at facility entry)
   - Methods to perform behavioral observation.

10 CFR Part 26
FFD Key Messages

6. The Subpart M FFD program includes a required performance monitoring and review program (PMRP), under which each licensee must:

   - develop performance objectives and metrics,
   - perform an annual program review to measure FFD program effectiveness against those objectives and metrics, and
   - implement timely corrective actions for adverse trends.

   A PMRP includes evaluating FFD performance at the site level, fleet level (if applicable), and industry level.

10 CFR Part 26
FFD Key Messages

Subpart M is Risk-Informed.

Considers potential risks inherent in a reactor's design and operations, and human actions necessary to:

(1) Effectively operate, maintain, surveil, decommission, and protect a facility, materials, and sensitive information

(2) Prevent or mitigate the radiological consequences of the failure of a structure, system, or component; a reactor transient or accident; or other abnormal occurrence

(3) Detect, assess, and respond to an internal or external security incident or an adverse environmental condition (e.g., earthquake)

In developing Subpart M, the NRC staff reviewed current advanced reactor designs against those of licensed non-power production or utilization facilities (no FFD program required) to establish requirements commensurate with the level of plant risk.

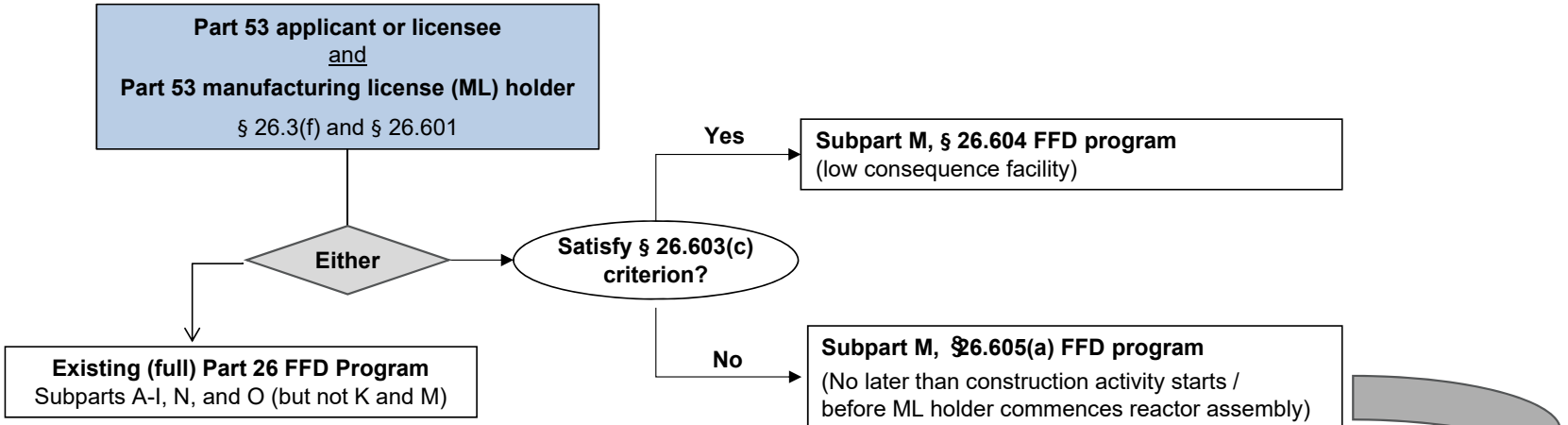
10 CFR Part 26

FFD – New Subpart for Part 53 Facilities

Subpart M – Fitness for Duty Programs for Facilities Licensed Under 10 CFR Part 53

§ 26.601 Applicability.
§ 26.603 General provisions.
§ 26.604 FFD program requirements for facilities that satisfy the § 26.603(c) criterion.
§ 26.605 FFD program requirements for facilities that do not implement § 26.604.
§ 26.606 Written policy and procedures.
§ 26.607 Drug and alcohol testing.
§ 26.608 FFD program training.
§ 26.609 Behavioral observation.
§ 26.610 Sanctions.
§ 26.611 Protection of information.
§ 26.613 Appeals process.
§ 26.615 Audits.
§ 26.617 Recordkeeping and reporting.
§ 26.619 Suitability and fitness determinations.

10 CFR Part 26 FFD – Program Applicability Part 53



Part 26 Subpart Reference:

A. Administrative Provisions
B. Program Elements
C. Granting and Maintaining Authorization
D. Management Actions and Sanctions To Be Imposed
E. Collecting Specimens for Testing
F. Licensee Testing Facilities (optional)
G. Laboratories Certified by the Department of Health and Human Services
H. Determining Fitness-for-Duty Policy Violations and Determining Fitness
I. Managing Fatigue
K. FFD Program for Construction
M. Fitness for Duty Programs for Facilities Licensed Under 10 CFR Part 53 (*new*)
N. Recordkeeping and Reporting Requirements
O. Inspections, Violations, and Penalties

10 CFR Part 26 – Subpart M FFD Program Elements

§ 26.604 FFD program (low consequence facility)	**§26.605(a) FFD program** (construction + ML holder)	**26.605(b) FFD program** (reactor operations)
§ 26.23 Performance objectives	§ 26.23 Performance objectives	§ 26.23 Performance objectives
§ 26.603 General provisions § 26.606 Written policy and procedures § 26.608 FFD program training § 26.609 Behavioral Observation § 26.611 Protection of information § 26.613 Appeals process § 26.615 Audits	§ 26.603 General provisions § 26.606 Written policy and procedures § 26.608 FFD program training § 26.609 Behavioral Observation § 26.611 Protection of information § 26.613 Appeals process § 26.615 Audits	§ 26.603 General provisions § 26.606 Written policy and procedures § 26.608 FFD program training § 26.609 Behavioral Observation § 26.611 Protection of information § 26.613 Appeals process § 26.615 Audits
	§ 26.607 Drug and alcohol testing	§ 26.607 Drug and alcohol testing
§ 26.619 Suitability and fitness determinations	§ 26.619 Suitability and fitness determinations	
Subpart A – Administrative Provisions	Subpart A – Administrative Provisions	Subpart A – Administrative Provisions
		Subpart C – Granting and Maintaining Authorization
§ 26.610 Sanctions	§ 26.610 Sanctions	Subpart D – Management Actions and Sanctions to be Imposed
		Subpart H – Determining FFD Policy Violations and Determining Fitness (unless use HHS Guidelines)
Subpart I – Managing Fatigue	Subpart I – Managing Fatigue (only ML holder)	Subpart I – Managing Fatigue
§ 26.617 Recordkeeping and reporting	§ 26.617 Recordkeeping and reporting	Subpart N – Recordkeeping and Reporting
Subpart O – Inspections, Violations, Penalties	Subpart O – Inspections, Violations, Penalties	Subpart O – Inspections, Violations, Penalties

10 CFR Part 26 FFD – Changes to Existing Sections

Subpart A – Administrative Provisions
§ 26.3 Scope.
§ 26.4 FFD program applicability to categories of individuals.
§ 26.5 Definitions.
§ 26.8 Information collection requirements: OMB approval.

Subpart C – Granting and Maintaining Authorization
§ 26.51 Applicability.
§ 26.53 General provisions.
§ 26.63 Suitable inquiry.

Subpart D – Management Actions and Sanctions To Be Imposed
§ 26.73 Applicability.

Subpart E – Collecting Specimens for Testing
§ 26.81 Purpose and applicability.

Subpart I – Managing Fatigue
§ 26.201 Applicability.
§ 26.202 General provisions for facilities licensed under part 53 (***new***)
§ 26.205 Work hours.
§ 26.207 Waivers and exceptions.
§ 26.211 Fatigue assessments.

Subpart N – Recordkeeping and Reporting Requirements
§ 26.709 Applicability.
§ 26.711 General provisions.

Subpart O – Inspections, Violations, and Penalties
§ 26.825 Criminal penalties.

10 CFR Part 26

FFD

Draft Guidance Part 53 Facilities

Draft Guide (DG)–5073, ‘‘Fitness For Duty Programs for Commercial Nuclear Plants And Manufacturing Facilities Licensed Under 10 CFR part 53’’ (*new*)

- **Provides guidance on FFD program requirements involving:**
  - Policies and procedures
  - Drug and alcohol testing
  - Laboratory requirements
  - Behavioral observation
  - Medical Review Officer responsibilities
  - Fitness determinations
  - Performance monitoring and review program (PMRP)
  - FFD program change control
  - Recordkeeping and reporting

10 CFR Part 26

FFD

Specific Request for Comment

Specific Request for Comment (89 FR 86980 and 86981)

The proposed rule under § 26.603(c) would enable a licensee or other entity to implement an FFD program under proposed § 26.604, ‘‘FFD program requirements for facilities that satisfy the § 26.603(c) criterion,’’ if the licensee or other entity performs a site-specific analysis to demonstrate that the facility and its operation satisfy the criterion in § 53.860(a)(2).

> Should the NRC consider replacing its proposed § 26.603(c) criterion referencing § 53.860(a)(2) with an alternative requirement that if the commercial nuclear plant is of the class described in § 53.800, ‘‘Facility licensees for self-reliant-mitigation facilities,’’ and either § 53.800(a)(1) or (2) is satisfied, then drug and alcohol testing would not be required?

This proposal would align the § 26.603(c) criterion with that proposed in the NRC-licensed operator regulatory framework of part 53. Please provide your considerations and rationale for your recommendation.

END OF DAY 2

PROPOSED RULE

10 CFR Part 53
"RISK-INFORMED, TECHNOLOGY-INCLUSIVE REGULATORY FRAMEWORK FOR COMMERCIAL NUCLEAR PLANTS"

November 21, 2024

Agenda – Thursday, November 21

Time	Topic	Speaker
9:00 a.m. – 9:10 a.m.	Welcome / Introductions / Logistics	NRC
9:10 a.m. – 10:20 a.m.	10 CFR Part 73	NRC / Public
10:20 a.m. – 10:30 a.m.	Break	
10:30 a.m. – 11:15 a.m.	10 CFR Part 73 (continued)	NRC / Public
11:15 a.m. – 12:00 p.m.	Wrap up discussion and questions	NRC / Public
12:00 p.m.	Adjourn	

Subpart F
§ 53.860
Security program

- Develop and implement security programs
  - Physical security
  - Cybersecurity
  - Access authorization
  - Information security
  - Fitness for duty

Subpart F
§ 53.860(a)
Security program

- Each licensee must develop, implement, and maintain a physical protection program meeting the following requirements:
  - Protection of special nuclear material based on the type, enrichment, and quantity in accordance with 10 CFR part 73, as applicable, and
  - Implement security requirements for the protection of Category 1 and Category 2 quantities of radioactive material in accordance with 10 CFR part 37, as applicable.

Subpart F
§ 53.860(a)(2)
Security program

- The licensee is required to meet the provisions set forth in § 73.55 or § 73.100 unless the licensee meets the following criterion.
  - The radiological consequences from a design-basis threat-initiated event involving the loss of engineered systems for decay heat removal and possible breaches in physical structures surrounding the reactor, spent fuel, and other inventories of radioactive materials result in offsite doses below the values in § 53.210.
  - Analysis. The licensee must perform a site-specific analysis, including the identification of target sets, to demonstrate that this criterion is met. The licensee must maintain the analysis until the permanent cessation of operations.

Section 53.210(a): 25 rem (250 mSv) total effective dose equivalent (TEDE) at any point on the boundary of the exclusion area for any 2-hour period following the onset of the postulated fission product release.

Section 53.210(b): 25 rem TEDE at outer boundary of the low population zone.

Subpart F
§ 53.860(b)-(e)
Security program

- Each licensee under this part must develop, implement, and maintain a(n):
  - FFD program that meets the requirements in 10 CFR part 26
  - access authorization program that meets the requirements in § 73.120 if the criterion in § 53.860(a)(2)(i) is met, or § 73.56, if the criterion is not met
  - cybersecurity program that meets the requirements in §73.54 or § 73.110
  - information protection system that meets the requirements of §§ 73.21, 73.22, and 73.23, as applicable

10 CFR 73.100
Technology-Inclusive Requirements for Physical Security

§ 73.100

Technology-Inclusive Requirements for Physical Protection of Licensed Activities at Commercial Nuclear Plants Against Radiological Sabotage

- Proposed new section within Part 73
- Provides a technology inclusive regulatory framework based on performance requirements
- Allows licensees flexibility to determine how to protect against the DBT and security of the plant for possession and activities involving nuclear material

Security should be incorporated early in the design to achieve a more robust and effective security posture with less reliance on human actions.

§ 73.100(a)-(b)
Introduction and general performance objectives and requirements

- Paragraph (a): requirements are implemented through the security plans which must identify, describe, and account for site-specific conditions
- Paragraph (b)(2): To satisfy the general performance objective and requirements, the physical protection program must protect against the DBT of radiological sabotage as stated in § 73.1. Specifically, the licensee must:
  - (i) Ensure that the physical protection program capabilities are maintained at all times.
  - (ii) Provide defense in depth (DID).

DID is achieved by providing multiple layers of protection, systems, and/or barriers to avoid (or provide the capability to tolerate) failures that would prevent the accomplishment of a function.

Operational requirements (i.e., security responses providing interdiction and neutralization functions) provide DID by using layers of protection and by accounting for uncertainties (e.g., equipment malfunction, human factors, neutralized or operationally ineffective responses, etc.) to perform required interdiction and neutralization function at all plant areas.

§ 73.100(a)-(b)
Introduction and general performance objectives and requirements

- Paragraph (b)(3): the design and implementation of the physical protection program must achieve and maintain at all times the capabilities for meeting the following performance requirements:
  - Intrusion detection systems
  - Intrusion assessment systems
  - Security communication systems
  - Security response
  - Control measures protecting against land and waterborne vehicle bomb assaults
  - Access control portals

The designs should apply the principles of redundancy, diversity, and appropriately layer for defense-in-depth (DID).

§ 73.100(b)(4)-(12)

Physical security for advanced reactors

- Identify and analyze site-specific conditions
- Establish, maintain, and implement performance evaluation program
- Establish, maintain, and implement access authorization program in accordance with § 73.56
- Establish, maintain, and implement cybersecurity program in accordance with § 73.54 or § 73.110
- Establish, maintain, and implement insider mitigation program (IMP) to protect against an insider (active, passive, or both)
- Have capability to track, trend, correct, and prevent recurrence of failures and deficiencies (Corrective action program)
- Coordinate implementation of security operations and plans with plant operations
- Perform firearms background check for armed members of security organization

§ 73.100(c)
Security organization

- Security organization is staffed, trained, qualified, and equipped to implement physical protection program
- Implementing procedures
- Approval process for security designs, policies, processes, and procedures
- Change process to ensure changes continue to satisfy the requirements of this section
- Retention of analyses, assessments, calculations and descriptions of technical basis for meeting the performance requirements
- Training and qualification for individuals who implement the physical protection program

§ 73.100(d) and (e)

Search requirements & training and qualification program

- Searches of individuals, vehicles, and materials to detect and prevent the introduction of firearms, explosives, incendiary devices, or other items and materials which could be used to commit radiological sabotage
- Establish and maintain a training and qualification program to effectively train personnel assigned security-related job duties and describe the program in the training and qualification plan.

§ 73.100(f)
Security reviews

- Establish and implement independent security reviews to assess effectiveness of the physical protection program, including:
  - Timely identification and documentation of vulnerabilities, improvements, and corrective actions
  - Assessment of detection, assessment, communication, delay, interdiction, neutralization functions
  - Assess capability of passive and active engineering systems to protect against DBT

Includes reviews of the security plans, implementing procedures, cybersecurity program, safety/security interface activities, the testing, maintenance, and calibration program, and response commitments by local, State, and Federal law enforcement authorities.

§ 73.100(g)
Performance evaluation

- Establish methods appropriate and necessary to assess, test, and challenge the integration of the physical protection program's functions to protect against the DBT
- Establish the frequencies for performance evaluations commensurate with the security significance of the physical protection program.
- Document processes and procedures and maintain records.

§ 73.100(h)

Maintenance, testing, and calibration and corrective actions

- Performance requirements for maintaining security structures, systems, or components (SSCs) relied on to perform security functions to protect against the DBT
- Timely corrective actions to ensure resolution of identified vulnerabilities and deficiencies
- Timely and equivalent compensatory measures in response to a failure or degradation of security equipment to perform its intended functions
- Documentation of processes and procedures and maintenance of records

§ 73.100(i)
Suspension of security measures

- Suspension of security measures in accordance with § 53.740(h) in response to:
  - an emergency to protect public health and safety
  - severe weather to protect personnel
- Suspended security measures must be reinstated as soon as conditions permit.
- The suspension of security measures must be reported and documented in accordance with the provisions of §§ 73.1200 and 73.1205 (physical security event notifications).

§ 73.100(j)
Records

- Licensee must maintain all records required to be kept by the Commission until termination of license for which records were developed and must maintain superseded records for 3 years
- If a contracted security force is used for the onsite protection program, licensee must retain the written agreement for duration of contract
- Review and audit reports must be available for inspection for 3 years

10 CFR 73.110
Cybersecurity

§ 73.110:
Technology-Inclusive Requirements for Protection of Digital Computer and Communication Systems and Networks

Proposed Cybersecurity Framework Discussion

- Key difference between existing cybersecurity framework and proposed cybersecurity framework
- Proposed cyber requirements & graded approach
- Draft guidance development
- Specific requests for comments

§ 73.110

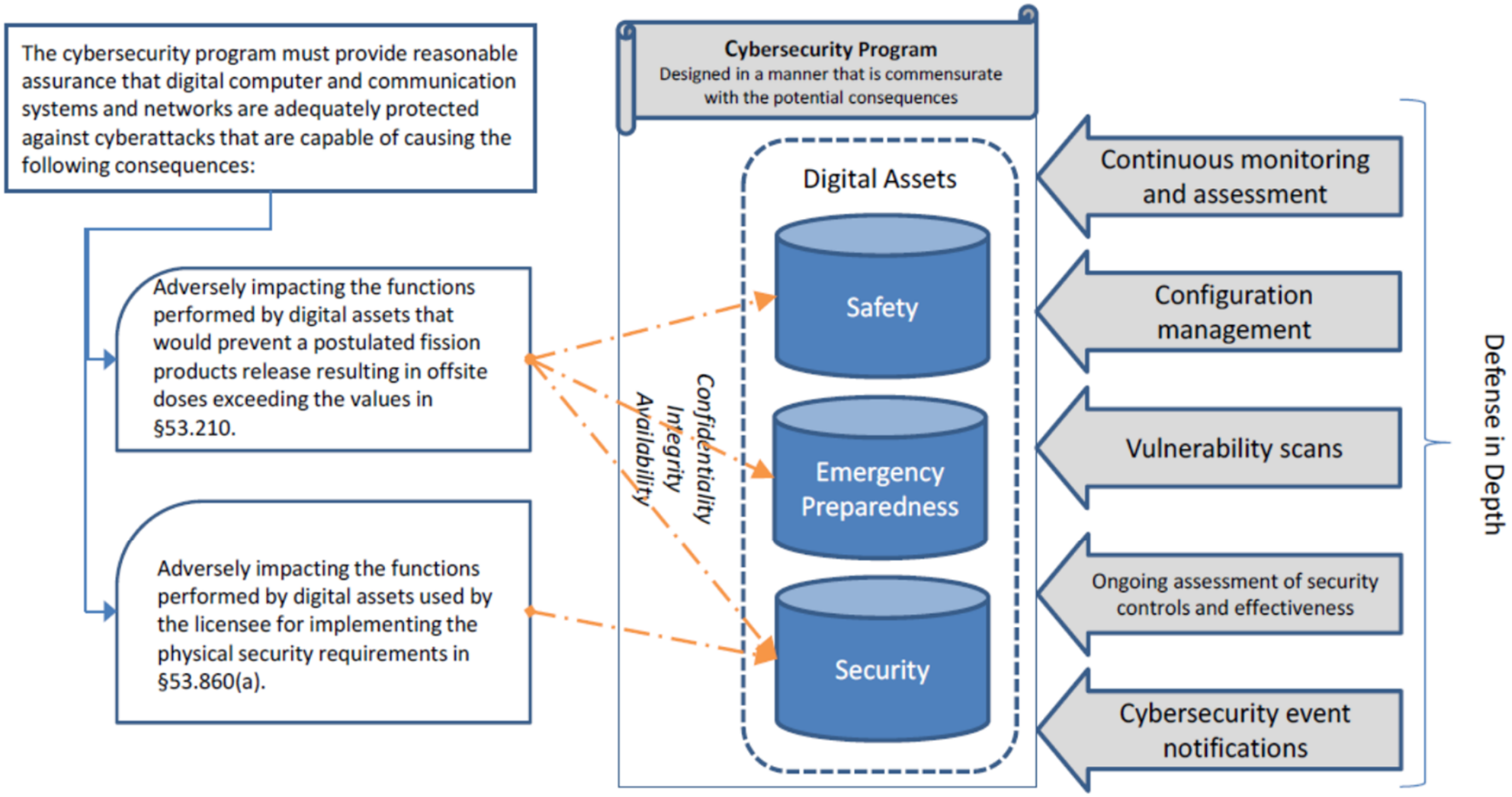
Existing vs Proposed Cybersecurity Framework

- Section 53.860(d) would require licensees to establish, implement, and maintain a cybersecurity program in accordance with either § 73.54 or proposed § 73.110.
- Section 73.100 (b)(8) would require the licensee to establish, implement, and maintain a cybersecurity program under §§ 73.54 or 73.110 and describe the program in the cybersecurity plan.
- The key differences between the § 73.54 and proposed § 73.110 requirements and associated regulatory guidance are ***primarily based on the implementation of a consequence-based approach to cybersecurity.***

§ 73.110 Proposed Framework Key Messages

- Provides a graded approach for advanced reactors to protect digital computers, communication systems, and networks based on consequences for the differing risk levels across the various advanced reactor technologies.
- Would require licensees to demonstrate protection against cyberattacks in a manner that is commensurate with the potential consequences from those attacks.
- Provides flexibility to accommodate the wide range of reactor technologies while ensuring an adequate cybersecurity posture.
- Includes guidance deemed as an acceptable approach for meeting the requirements of proposed § 73.110.

10 CFR 73.110 – Cybersecurity Requirements Overview



§ 73.110
Draft Regulatory Guide (DG)-5075 Development

"Establishing Cybersecurity Programs for Commercial Nuclear Plants Licensed Under 10 CFR Part 53"

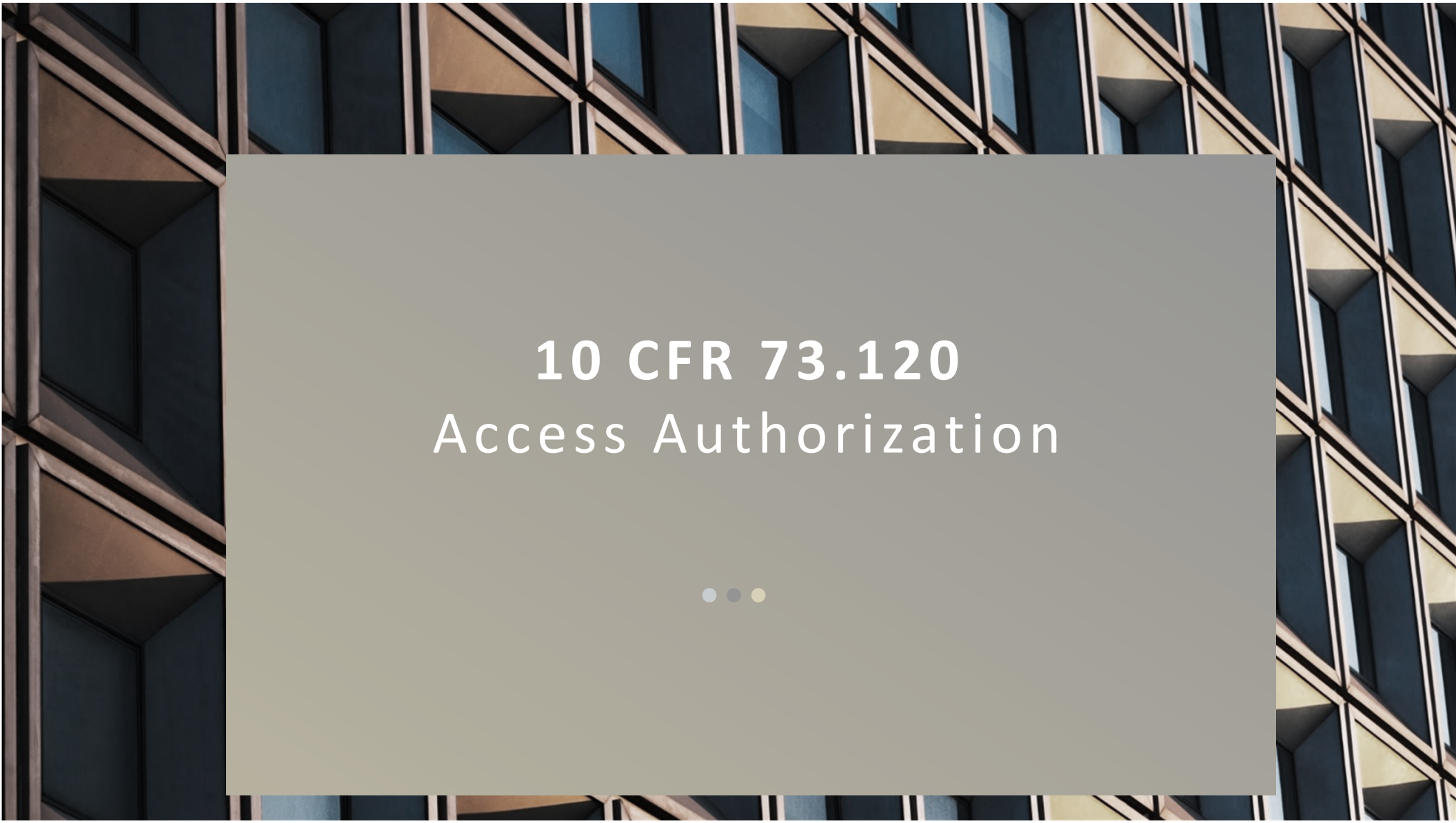
- An acceptable approach for meeting the 10 CFR 73.110 requirements
- Effective guidance to support a performance-based regulatory framework
- Leverage IAEA and IEC security approaches

§ 73.110
Specific Requests for Comments

The staff is requesting comments from stakeholders on the following:

If a cyberattack were to compromise the availability, integrity, or confidentiality of data or systems associated with security systems/measures for the protection of SNM at a commercial nuclear reactor licensed under part 53, do the potential consequences warrant requiring cybersecurity for such material?

BREAK



10 CFR 73.120
Access Authorization

§ 73.120
Access authorization

Technology Inclusive Personnel Access Authorization Requirements

- The existing regulatory framework for access authorization programs under **§§ 73.55, 73.56, and 73.57**, is sufficient to provide reasonable assurance that individuals subject to these programs are trustworthy and reliable such that they do not constitute an unreasonable risk to safety or security, **regardless of the reactor technology.**

- The proposed requirements in § 73.120 are scalable, commensurate with the demonstrated level of facility risk, considering security, and provide for the equivalent level of protections afforded by the existing requirements for the operating reactor fleet.

    - Section 73.120 is modeled after requirements for currently licensed research and test reactors and materials licensees, including fuel cycle facilities, under 10 CFR Part 37, Subpart B, "Background Investigations and Access Authorization Program."
    - DG-5074 - Access Authorization Program for Commercial Nuclear Plants (ML22199A246)

10 CFR 73.120 – Access Authorization Consequence-Based Criterion

Commercial Nuclear Plant Applicant

Consequence-Based Criterion, § 53.860(a)(2)(i)

Commensurate with risk and consequence to public health and safety and as demonstrated in a safety analysis (considering security) such that the offsite consequences would not exceed certain eligibility criteria

Criterion Not Met

Protect against the DBT

Apply Full § 73.56

Access authorization performance requirements to provide reasonable assurance that individuals are trustworthy and reliable, and do not constitute an unreasonable risk to public health and safety or the common defense and security

Apply 10 CFR Part 26, §§ 73.54/73.110, 73.55/73.100, 73.56, 73.57 requirements

Insider Mitigation Program – §§ 73.55(b)(7) & 73.55(b)(9) OR § 73.100(b)(9)

Existing performance/prescriptive requirements on design to protect against the DBT

Criterion Met

May elect to implement proposed access authorization program under § 73.120 or full program under § 73.56.

Apply § 73.120

Scalable requirements proposed in § 73.120.

Modeled after requirements for currently licensed research and test reactors and material licensees, including requirements for fuel cycle facilities under 10 CFR Part 37

- Criminal History
- Balance of performance elements
- Granting/maintaining unescorted access (UA)/Termination of UA

§ 73.120(a)

Considerations for manufactured reactors

Each applicant for an operating license or a holder of a combined license under 10 CFR Part 53 must establish, maintain, and implement an access authorization program before initial fuel load into the reactor **or, for a fueled manufactured reactor, before initiating the physical removal of any one of the independent physical mechanisms to prevent criticality required under § 53.620(d)(1) of this chapter.**

- March 4, 2024, SRM directed the staff to include factory fuel load provisions in the Proposed Rule and work with stakeholders.

§ 73.120(b)(1)-(2)
Applicability

Consistent with the performance requirements of § 73.56(b)

- Five classes of individuals subject to the program:
  1. Individuals with unescorted access to protected areas, vital areas, or controlled access areas where the material is used or stored
  2. Individuals with virtual/remote access
  3. Security Personnel and those familiar with the site's protective strategy
     - Offsite law enforcement shall not be subject to the licensee access authorization program.
  4. Reviewing Officials – licensee, applicant, or contractor/vendor (if applicable) program reviewers
  5. Other individuals at the discretion of licensee or applicant

§ 73.120(c)
General performance objectives and requirements

Objective:

- Ensure that the individuals subject to the program are trustworthy and reliable, such that they do not constitute an unreasonable risk to public health and safety or the common defense and security. *[Consistent with § 73.56(c)]*

Requirements:

1. Background investigations
2. Behavioral observation
3. Self-reporting of legal actions
4. Unescorted access
5. Termination of unescorted access
6. Determination basis for access
7. Review procedures
8. Protection of information
9. Access authorization reviews and corrective action
10. Records

§ 73.120 (c)(1)(i)-(iii)
Performance objectives and requirements

§ 73.120(c)(1)(i)-(iii) Background Investigations:

- Consistent with the background investigation elements under §§ 37.25, 37.27, and 73.56(d)(1-7):
  - Informed consent
  - Personnel history disclosures
  - Criminal history reviews credit evaluation
  - Verification of true-identity
  - Character & reputation
  - Employment verification (unemployment/military/education)

§ 73.120 (c)(2)-(3)
Performance objectives and requirements

Paragraph (c)(2), *Behavioral observation:*

- Outlines the roles and responsibilities of individuals subject to behavioral observation.
- The proposed requirement is a scaled version of the full behavioral observation program required under § 73.56(f).
    - This provision does not require the establishment of a full training program for behavioral observation (i.e., initial and refresher training including knowledge checks) as required for power reactors under § 73.56.

Paragraph (c)(3), *Self-reporting of legal actions:*

- Establishes self-reporting requirements for employees who maintain unescorted access, in alignment with the requirements found in § 73.56(g).
- Requires licensees to evaluate the totality of the legal actions taken by a law enforcement authority or court of law and make an access authorization determination.

§ 73.120 (c)(4)-(5)
Performance objectives and requirements

Paragraph (c)(4), *Unescorted Access (UA):*

- Establishes requirements for granting and maintaining UA after the licensee has verified an individual is trustworthy and reliable. *[Consistent with § 37.23(f)]*
    - A list of persons currently approved for UA to a protected area, vital area, or controlled access area must be maintained at all times. *[§ 37.23(e)]*
    - UA determinations shall be reviewed annually. *[§ 73.56(i)(1)(iv)]*
    - Criminal history updates shall be completed within 10 years of the last review. *[§ 37.25(g)]*

Paragraph (c)(5), *Termination of UA:*

- Requires a licensee's reviewing officer to promptly terminate UA when no longer required, or if an individual is determined to no longer be trustworthy and reliable. *[§ 37.23(e)]*

§ 73.120 (c)(6)-(8)
Performance objectives and requirements

Paragraph (c)(6): Determination basis for access *[§ 37.23(b)(2); § 37.23(g); § 73.56(h)(1)(i)]*

- Establishes the role of the RO and the responsibility of the RO to make determinations regarding unescorted access.
- Establishes review process for an individual's right to correct and complete information prior to any final adverse determination, obtained as a result of the licensee's background investigation. (Individual responsibility to initiate challenge procedure).

Paragraph (c)(7): Review Procedures *[§ 37.23 (f); § 73.56(l)]*

- Includes provisions for the notification of individuals who are denied UA or who are unfavorably terminated.

Paragraph (c)(8): Protection of Information *[§ 37.31; § 73.56(m)]*

- A system of files and procedures shall be established and maintained to ensure personal information is not disclosed to unauthorized persons.

§ 73.120 (c)(9)-(10)
Performance objectives and requirements

Paragraph (c)(9): Access authorization reviews and corrective action *[§ 37.33; § 73.56(n)]*

- Licensees and applicants must develop, implement, and maintain procedures for the conduct of access authorization reviews and corrective actions in accordance with § 37.33.
    - Licensees must ensure the access authorization program continues to be effective and that the program elements are in compliance.
        - Reviewed at least annually to confirm compliance
        - Ensure comprehensive actions are taken to correct any noncompliance issues identified.

Paragraph (c)(10): Records *[§ 37.23 (h); § 73.56(o)]*

- Licensees and applicants must develop, implement, and maintain procedures to document the processes for maintaining records used or created to establish an individual's trustworthiness and reliability or to document access determinations.
    - Requires records maintained in any database(s) to be available for NRC review, consistent with requirements found under §73.56(o)(6)(ii).
    - Record retention period of 3 years.


Wrap Up Discussion and Questions

Wrap Up Reminders

- Go to https://www.regulations.gov/document/NRC-2019-0062-0310 to submit comments
- We are not accepting comments on the proposed rule during this meeting
- There will not be formal responses to discussions during this meeting, but the staff may post additional information on regulations.gov
- The staff is planning to hold another public meeting during the comment period

Section VI
Specific Requests for Comments

- Section VI includes some specific requests for comments organized as follows:
  - Part 26
  - Part 53
  - Part 73
  - Recent Legislation (ADVANCE Act)
- Comments on the proposed rule are not limited to the specific requests in Section VI

- Questions on the proposed rule or associated documents on topics not already covered in this meeting
- Questions on previous topics that we did not have time to discuss
- Any other questions on the proposed rule and associated documents

Additional Information

Additional information on the 10 CFR Part 53 rulemaking is available at https://www.nrc.gov/reactors/new-reactors/advanced/modernizing/rulemaking/part-53.html

Go to https://www.regulations.gov/document/NRC-2019-0062-0310 to submit comments (Click on the blue comment button)

Provide meeting feedback for this meeting at https://feedback.nrc.gov/pmfs/feedback/form?meetingcode=20241405

Public Comment Period Closes on February 28, 2025

Acronyms

ADAMS	Agencywide Documents Access and Management System
ALARA	As low as is reasonably achievable
ARCAP	Advanced Reactor Content of Application Project
ASM	Alternative security measure
Cat I	Category I: High strategic significance
Cat II	Category II: Moderate strategic significance
Cat III	Category III: Low strategic significance
CFR	*Code of Federal Regulations*
COL	Combined license
CP	Construction permit
DBA	Design-basis accident
DBT	Design-basis threat
DC	Design certification
DG	Draft Regulatory Guide
DiD	Defense in depth
DRO	Division of Reactor Oversight
EP	Emergency planning
EPZ	Emergency planning zone
ESP	Early site permit
FFD	Fitness for duty
FSAR	Final Safety Analysis Report
GEIS	Generic Environmental Impact Statement
GLRO	Generally licensed reactor operators
HFE	Human factors engineering

Acronyms

IMP	Insider mitigation program
ISG	Interim staff guidance
LB	Licensing basis
LBE	Licensing-basis event
LWA	Limited work authorization
LWR	Light-water reactor
ML	Manufacturing licenses
mSv	millisievert
NEI	Nuclear Energy Institute
NEIMA	Nuclear Energy Innovation and Modernization Act
NRC	U.S. Nuclear Regulatory Commission
NSRSS	Non-safety-related but safety-significant
NUREG	U.S. Nuclear Regulatory Commission technical report designation
OL	Operating license
OMB	Office of Management and Budget
PRA	Probabilistic risk assessment
PSAR	Preliminary Safety Analysis Report
RG	Regulatory guide
RO	Reactor operator
SAR	Safety analysis report
SAT	Systems approach to training
SDA	Standard design approval
SECY	Office of the Secretary
SNM	Special nuclear material

Acronyms

SR	Safety-related
SRM	Staff Requirements Memorandum
SRO	Senior reactor operators
SSC	Structure, system, or component
SSNM	Strategic special nuclear material
TEDE	Total effective dose equivalent
TICAP	Technology-Inclusive Content of Application Project
TIRICE	Technology-Inclusive, Risk-Informed Change Evaluation
TS	Technical specifications
UA	Unescorted access