Public Meeting with the Nuclear Energy Institute Regulatory Issues Task Force

APRIL 18, 2022

U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

Agenda

Time	Topic	Lead
1:00 p.m. – 1:10 p.m.	Introductions/Opening remarks	NRC/NEI
1:10 p.m. – 1:30 p.m.	Innovation/EMBARK • Update on Web-based licensing requests • Update on MAP-X	NRC
1:30 p.m. – 1:40 p.m.	Update on risk-informed process for evaluations (RIPE) and discussion on exclusions using RIPE in support of the technical specifications changes	NRC/NEI
1:40 p.m. – 2:00 p.m.	Discussion on best practices in communications for the review of licensing actions	NRC/NEI
2:00 p.m. – 2:15 p.m.	Update on Standard Review Plan modernization effort	NRC
2:15 p.m. – 2:30 p.m.	Break	
2:30 p.m. – 2:45 p.m.	Industry notice of the enforcement discretion/emergency license amendment request desk guide development	NEI
2:45 p.m. – 3:00 p.m.	Overview of changes to LIC-500, Revision 9, “Topical Report Process”	NRC
3:00 p.m. – 3:10 p.m.	Proprietary Reviews	NRC
3:10 p.m. – 3:25 p.m.	Accident Tolerant Fuel next steps and coordination	NRC
3:25 p.m. – 3:40 p.m.	Feedback on the virtual 2022 Regulatory Information Conference	NEI
3:40 p.m. – 3:50 p.m.	Opportunity for public comments	Members of the Public
3:50 p.m. – 4:00 p.m.	Closing Remarks	NRC/NEI
4:00 p.m.	Adjourn	

Introductions and Opening Remarks

Mike King

Deputy Director for Reactor Safety Programs and Mission Support

Office of Nuclear Reactor Regulation

U. S. Nuclear Regulatory Commission

Brett Titus

Technical Advisor

Nuclear Energy Institute

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EMBARK Venture Studio - Innovation

Topics

- Mission and Vision – *Tim Mossman*
- **M**ission **A**nalytics **P**ortal – E**x**ternal (MAP-X) Update – *Justin Fuller*
  - MAP-X Benefits
  - MAP-X Demo
- Web-based Relief Request (WRR) – *Audrey Klett*
- WRR Suggested Improvements – *Audrey Klett*
- MAP-X Looking Forward – *Tim Mossman*

EMBARK VENTURE STUDIO

MAP-X MISSION ANALYTICS PORTAL - EXTERNAL

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EMBARK

Catalyst for change

Facilitating innovation across NRC program and corporate offices

Turn ideas into reality

MAP-X

To transform the way that we exchange data with external stakeholders

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MAP-X Update

- Web-Based Relief Requests (WRRs) – Launched April 5, 2021
- Event Notification Worksheets (Reactors, Materials)
- Licensee Event Reports (LERs) – In Development

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MAP-X Benefits

NRC

- Documents vs. Data
- Streamline incoming data
- Processing efficiency / automation

LICENSEE

- Access anywhere
- Centralized, flexible, secure, personalized
- Clone previous submittals
- Data validation / auto-populated fields
- Create, edit, preview, submit, confirmation

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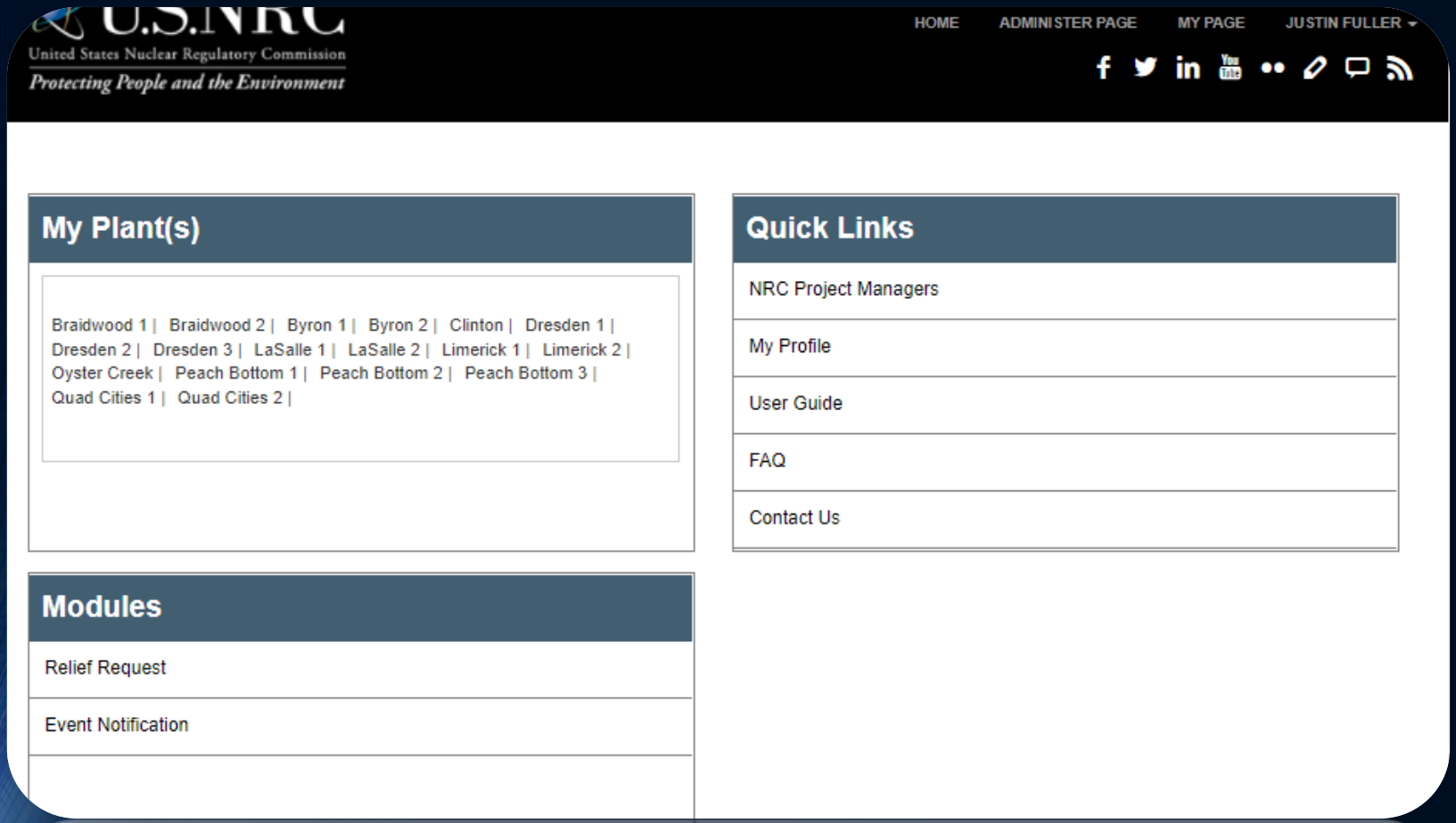

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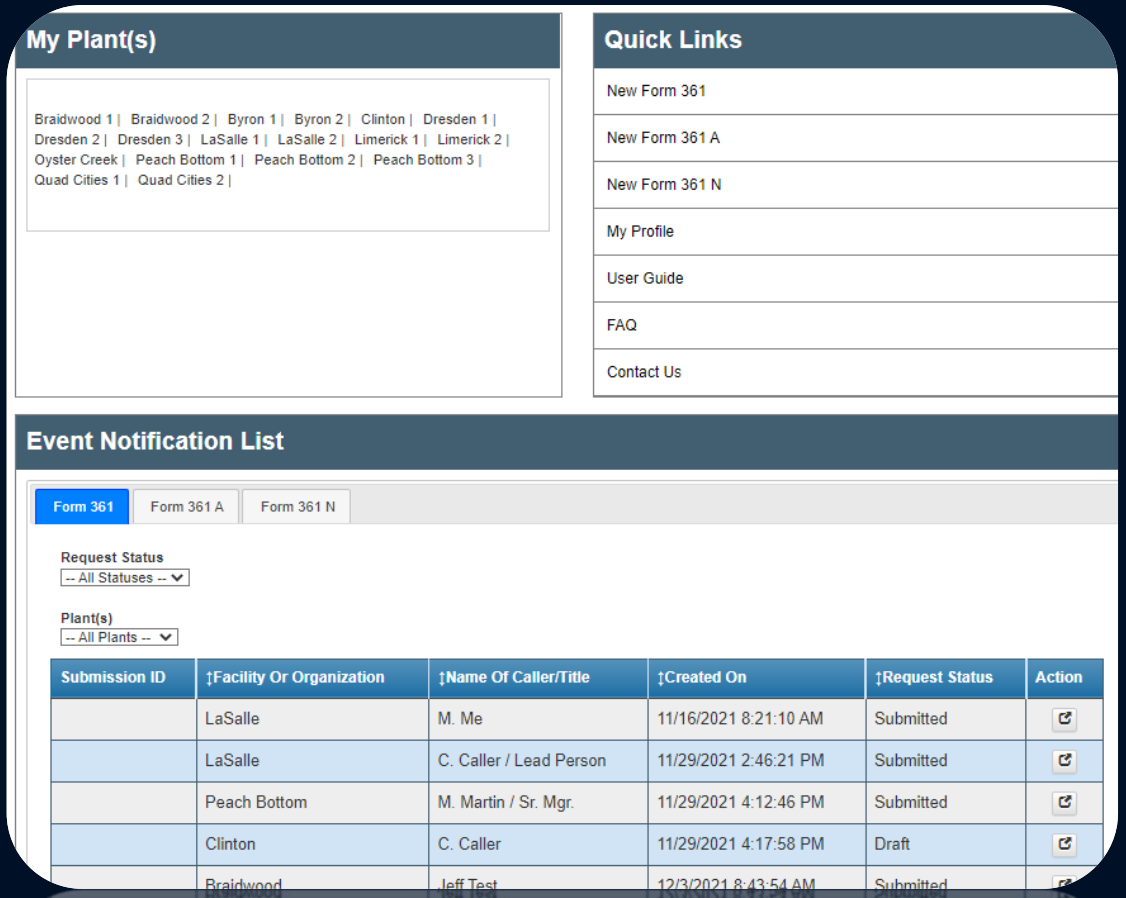

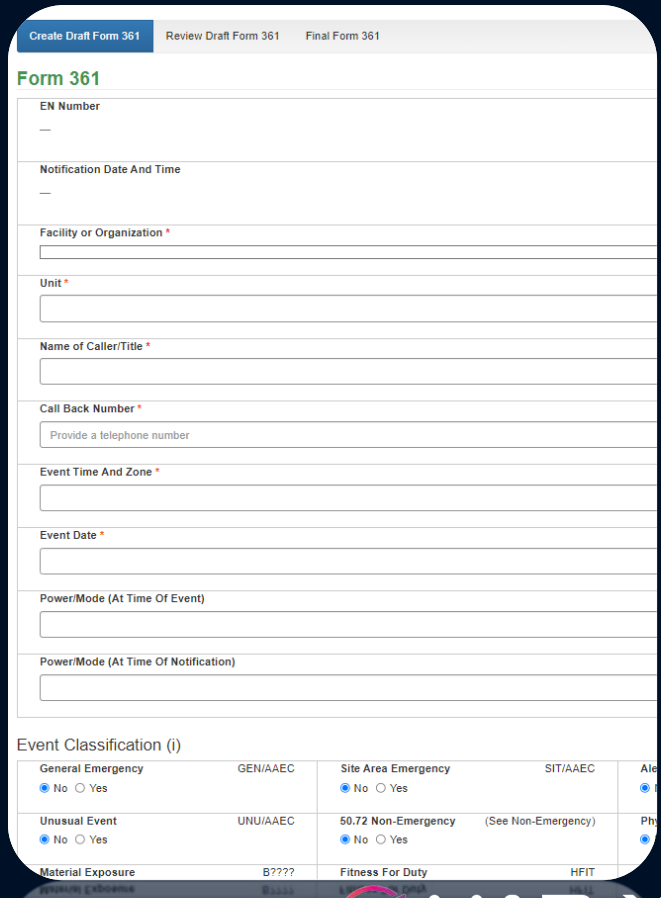

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Web-Based Relief Requests (WRR)

- 13 WRRs (Arizona Public Service Company (1), TVA (1), Xcel Energy (11))
- 2 Completed/Authorized so far
  - <50 total project hours for each project
  - <10 project manager hours billed on each project

Benefits

- Web-based submittal more flexible than the **E**lectronic **I**nformation **E**xchange (EIE)
- Text automatically transferred to NRC electronic safety evaluation (eSE)
- Subsequent submittals become easier

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WRR Suggested Improvements

- NRC review status
- More detailed instructions and tips
- Submittal formatting/appearance
- Standard submission template
- Preview Word file
- Web-Based interface
- User credentialing

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MAP-X Looking Forward

- Deploy Licensee Event Report module – 2022
- Continuous Improvement
- Identify and prioritize future modules

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Questions?

Tim Mossman, Managing Director
EMBARK Venture Studios

Justin Fuller, MAP-X Product Owner

Audrey Klett, Sr. Project Manager (DORL)

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Update on Risk-informed Process for Evaluations (RIPE) and Discussion on Exclusions Using RIPE in Support of the Technical Specifications Changes

Antonios Zoulis, Branch Chief
PRA Oversight Branch
Division of Risk Assessment
Office of Nuclear Reactor Regulation

Risk-Informed Process for Evaluations (RIPE) Revision 2

- RIPE Revision 2 (Safety Impact Characterization (SIC)) Guidance is in process and includes changes to:
  - Guidelines for Characterizing the Safety Impact of Issues
    - Revised to remove Technical Specification (TS) limitation.

- TSG-DORL-2021-01 was revised to:
  - Remove TS limitation.
  - Add TS Branch as lead for review of TS license amendment requests (LARs) submitted under RIPE.
  - Add a milestone schedule for TS LARs submitted under RIPE.

Risk-Informed Process for Evaluations (RIPE) Revision 2 (Continued)

- TSG-DORL-2021-01 (Continued):
  - Revised such that a TS LAR submitted under RIPE must demonstrate that the PRA considerations described in the TSG-DORL-2021-01 justify that the requested change is not significant to public health and safety.
  - Staff plans to complete and issue SIC guidance in June 2022.

Questions?

Send additional feedback or questions to:
Antonios.Zoulis@nrc.gov
Kristy.Bucholtz@nrc.gov

Discussion on Best Practices in Communications for the Review of Licensing Actions

NRC/NEI

Update on Standard Review Plan Modernization Effort

Jason Paige, Project Manager
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

SRP Modernization (SRPMod) Effort

Update

SRPMod Team

Caroline Carusone, NRR/DORL Deputy Division Director
James Danna, NRR/DORL/LPL1 Branch Chief
Richard Chang, NRR/DORL/LLPB Branch Chief
Jason Paige – Project Manager
Kate Lenning – Project Manager
Brent Ballard – Project Manager

Outline

- **Background**
  - Intended Benefits for Modernizing the SRP
- **Assessment of the SRPMod Effort: Why Assess Now?**
- **Outcome from Assessment: What is changing?**
  - Specifics on revised plan
- **Messaging: Why change now?**
- **Next Steps**

Background

- **The SRPMod Effort conceptualized in 2019**
  - Set expectations for reasonable assurance of adequate protection
  - Remove extraneous information from the SRP
  - Apply risk insights and engineering judgement
  - Facilitate a cultural-shift in completing reviews

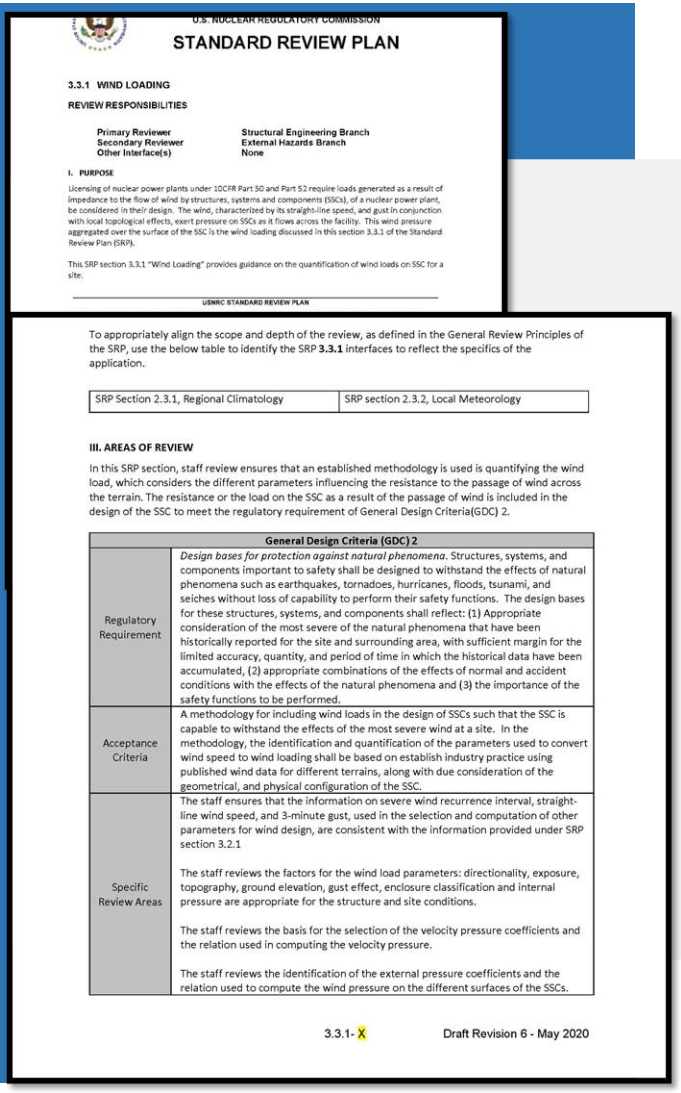
- **The SRPMod Effort identified 3 objectives:**

Realign Expectations for Reasonable Assurance of Adequate Protection	Focus on Regulatory Requirements	Empower the Staff to Consistently Use Risk-Insights and Engineering Judgment
• Rebranding "Introduction" to "General Review Principles" • "General Review Principles" will provide guidance on completing reviews	• Reformatting sections • Align specific acceptance criteria and findings to the applicable requirements • Remove extraneous information • Incorporate ISGs, BTPs information	• Reference PRA Policy Statement and SRM-SECY-17-0112 • Integrate risk guidance: LIC-206 and Be riskSMART

- **NRR identified a goal to modernize 158 sections in 2-years (from April 2021)**
  - Currently, there are ~80 sections in process for modernization
  - 13 sections (1st batch) are being reviewed by OGC

Benefits for Modernizing the SRP

- **Relates requirements with compliance criterion**
  - Focus on regulatory requirement
  - Streamlines OGC review
- **"Specific Review Areas" provides elements of analytical process reviewed**
  - Assist staff with the Acceptance Review
  - Provides reasonable assurance of safety
  - Review concepts from ISGs and BTPs incorporated in this section
- **Increased clarity on application elements**
  - Focus and reduce RAIs



U.S. NUCLEAR REGULATORY COMMISSION

STANDARD REVIEW PLAN

3.3.1 WIND LOADING

REVIEW RESPONSIBILITIES

Primary Reviewer	Structural Engineering Branch
Secondary Reviewer	External Hazards Branch
Other Interface(s)	None

I. PURPOSE

Licensing of nuclear power plants under 10CFR Part 50 and Part 52 require loads generated as a result of impedance to the flow of wind by structures, systems and components (SSCs), of a nuclear power plant, be considered in their design. The wind, characterized by its straight-line speed, and gust in conjunction with local topological effects, exert pressure on SSCs as it flows across the facility. This wind pressure aggregated over the surface of the SSC is the wind loading discussed in this section 3.3.1 of the Standard Review Plan (SRP).

This SRP section 3.3.1 "Wind Loading" provides guidance on the quantification of wind loads on SSC for a site.

USNRC STANDARD REVIEW PLAN

To appropriately align the scope and depth of the review, as defined in the General Review Principles of the SRP, use the below table to identify the SRP **3.3.1** interfaces to reflect the specifics of the application.

SRP Section 2.3.1, Regional Climatology	SRP section 2.3.2, Local Meteorology

III. AREAS OF REVIEW

In this SRP section, staff review ensures that an established methodology is used is quantifying the wind load, which considers the different parameters influencing the resistance to the passage of wind across the terrain. The resistance or the load on the SSC as a result of the passage of wind is included in the design of the SSC to meet the regulatory requirement of General Design Criteria(GDC) 2.

General Design Criteria (GDC) 2	
Regulatory Requirement	*Design bases for protection against natural phenomena*. Structures, systems, and components important to safety shall be designed to withstand the effects of natural phenomena such as earthquakes, tornadoes, hurricanes, floods, tsunami, and seiches without loss of capability to perform their safety functions. The design bases for these structures, systems, and components shall reflect: (1) Appropriate consideration of the most severe of the natural phenomena that have been historically reported for the site and surrounding area, with sufficient margin for the limited accuracy, quantity, and period of time in which the historical data have been accumulated, (2) appropriate combinations of the effects of normal and accident conditions with the effects of the natural phenomena and (3) the importance of the safety functions to be performed.
Acceptance Criteria	A methodology for including wind loads in the design of SSCs such that the SSC is capable to withstand the effects of the most severe wind at a site. In the methodology, the identification and quantification of the parameters used to convert wind speed to wind loading shall be based on establish industry practice using published wind data for different terrains, along with due consideration of the geometrical, and physical configuration of the SSC.
Specific Review Areas	The staff ensures that the information on severe wind recurrence interval, straight-line wind speed, and 3-minute gust, used in the selection and computation of other parameters for wind design, are consistent with the information provided under SRP section 3.2.1 The staff reviews the factors for the wind load parameters: directionality, exposure, topography, ground elevation, gust effect, enclosure classification and internal pressure are appropriate for the structure and site conditions. The staff reviews the basis for the selection of the velocity pressure coefficients and the relation used in computing the velocity pressure. The staff reviews the identification of the external pressure coefficients and the relation used to compute the wind pressure on the different surfaces of the SSCs.

3.3.1- X Draft Revision 6 - May 2020

Benefits for Modernizing the SRP (Cont.)

Current State of Chapter 7, "Instrumentation and Controls" Standard Review Plan	Desired State of Chapter 7, "Instrumentation and Controls" Standard Review Plan
System specific review guidance	Safety focused and requirement specific review guidance
Repetitive – Several topics are covered in multiple areas of the SRP	Streamlined approach - Topics covered in one area of the SRP
8 System specific sections	5 Sections – focused on safety and regulatory requirements for I&C systems
4 Appendices	Appendices content transferred to regulatory requirement sections
17 BTPs	4 BTPs - 13 BTPs deleted, system specific content transferred to I&C system review guide
No consideration of the DSRS or DRG	Takes into consideration prior work of DSRS & DRG

SRP = Standard Review plan
BTP = Branch Technical Position

DSRS = Design Specific Review Standard
DRG = Design Review Guide

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Assessment of SRPMod Effort

- **Evaluate progress of the SRPMod effort**
  - Opportunity to gauge intended benefits early in the process of modernizing the SRP
- **Obtain insights from modernizing the 1st batch of sections**
  - Received staff and industry feedback on the effort
  - Example feedback: Benefit of modernizing the SRP is dependent on the section
- **Evaluate resources to modernize the SRP**
  - Hours used and projected to complete the effort
  - Other high priority areas for guidance development
- **Implement lessons-learned based on assessment**
  - Incorporate revisions to the project plan, process, etc.

Outcome: What is Changing?

Recommendation: Modernize or prioritize only SRP sections that need updating and that will benefit from incorporating concepts that currently go beyond SRPMod guidance (e.g., technology-neutral guidance)

	Current Plan	Revised Plan	Pros/Cons
Process	• All sections (300) modernized	• Only sections identified by staff and industry will be modernized	• Focuses resources on staff and industry needs/format differences
	• Two step process: develop Modernization plan and draft modernized SRP section	• Eliminate "develop modernization plan" step	• Eliminates redundancy in the process/management review of modernized section later in the process
	• Issue sections only as "public comment" before issuing as final	• Work with tech staff to revise SRPMod guidance for clarity and incorporate modern concepts (e.g., technology-neutral)	• Incorporates lessons-learned and modern concepts, as desired by the staff
		• Issue the 13-draft modernized SRP sections as "public comment and use"	• Obtain staff/industry feedback from using the sections before issuing the sections as final
Schedule	• NRR Goal: 158 Modernized Sections in 2-years! (52% of 313 Sections); potential completion within 4-years	• SRPMod effort potentially completed within 2-years	• Saves resources and accelerates completion of effort

Specifics: Revised SRPMod Project Plan

- **Prioritize SRP sections for modernizing**
  - Develop criteria for selecting sections to modernize
    - Out of date information
    - Incorporate modern concepts into the SRP section
    - Section interdependencies
- **Evaluate sections currently in process**
  - Sections currently with OGC (13) will continue through modernization process
  - Coordinate with staff/industry on sections currently under review (67) and evaluate sections against modernization criteria to determine path forward
  - Remaining sections (~220) will be evaluated against modernization criteria to determine path forward
- **Completion of SRPMod Effort**
  - SRPMod transitions into routine maintenance of SRP per LIC-200, “Maintaining and Updating the Standard Review Plan”

Messaging: Why Change Now?

- **The revised plan considers the feedback from staff and industry on the effort and the results of an assessment to check the progress of the effort.**
- **The revised plan right-sizes the projected resources (hours) with the outcome or intended benefits from completing the effort**
- **The revised plan creates an enduring framework for future SRP updates, as needed**

Next Steps

- **Issue the draft 13 modernized sections for "public comment and use"**
  - 2.4.1, 2.4.2, 3.3.1, 3.4.1, 4.4, 6.2.2, 6.2.4, 6.2.6, 9.1.2, 9.2.1, 9.4.1, 10.2, and 10.4.1.
- **Execute revised plan**
  - Develop criteria for staff selecting sections for modernization
  - Develop framework for future SRP updates as needed (i.e., Revise LIC-200)
- **Obtain industry feedback**
  - Feedback on the 13 sections once issued for public comment and use
  - Feedback on SRP sections to modernize
- **SRPMod public meeting**
  - Summer 2022

Break

Industry Notice of the Enforcement Discretion/Emergency License Amendment Request Desk Guide Development

NEI

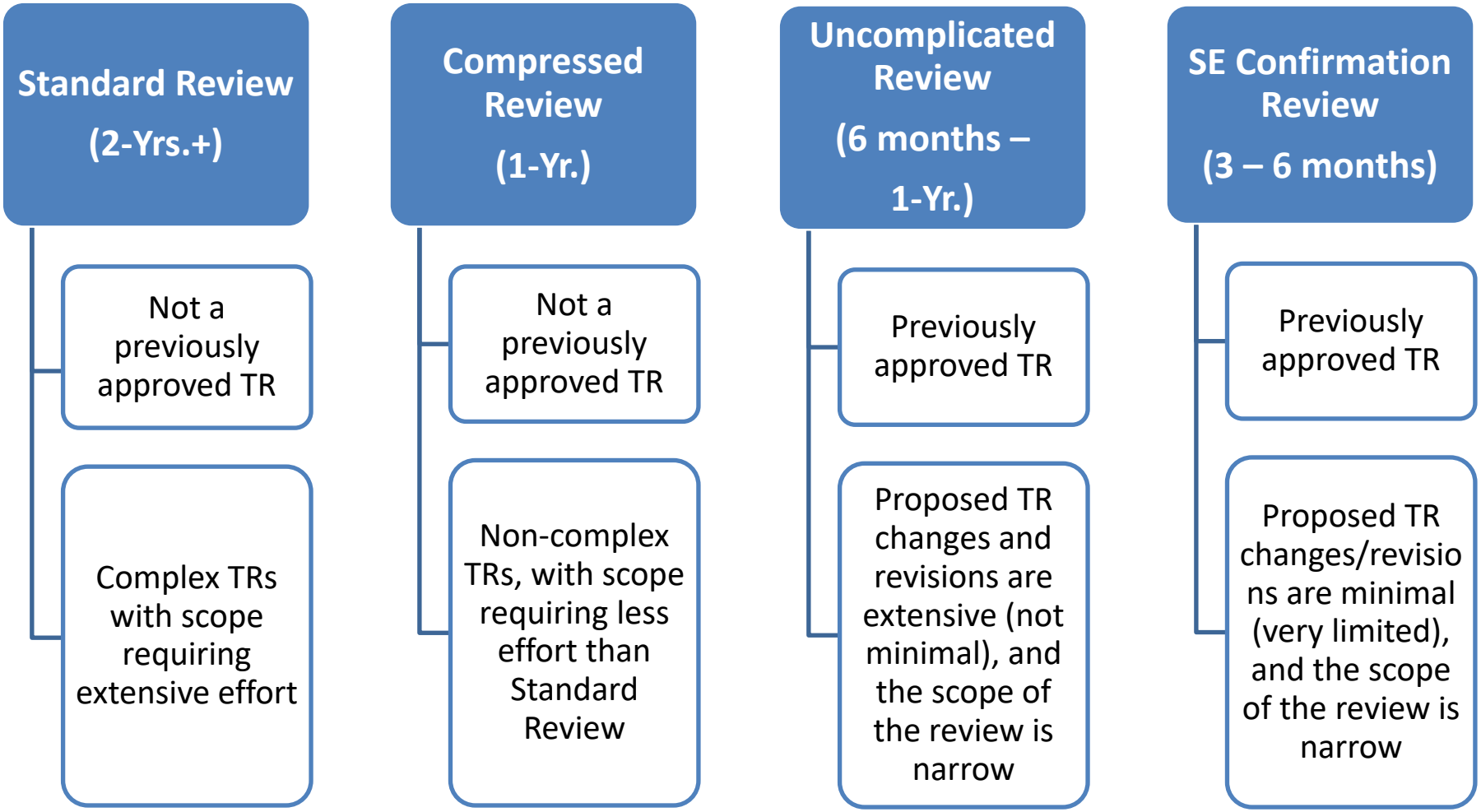
Overview of Changes to LIC-500, Revision 9, "Topical Report Process"

Ngola Otto, Project Manager
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

LIC-500, Revision 9, "Topical Report Process," Changes

- **Added 3 New Review Pathways to Increase Efficiency and Timeliness:**
  - Compressed,
  - Uncomplicated, and
  - Safety Evaluation (SE) Confirmation Reviews.
- **Traditional Review Still Available:**
  - Standard Review (2 – Yr.+)
- **Review Process Efficiencies:**
  - E-mail transmittals of RAIs, Draft and Final SEs, Audits, 4 New NRC Forms (895-898).
- **Some Changes to the 7 Phase Review Process:**
  - (1) Submission; (2) Work Plan and Development; (3) Completeness Review and Decision Letter; (4) Draft SE with "holes," and RAIs; (5) Draft SE; (6) Final SE; (7) "-A" Version – Approved Version.

Topical Report (TR) Review Pathways Criteria



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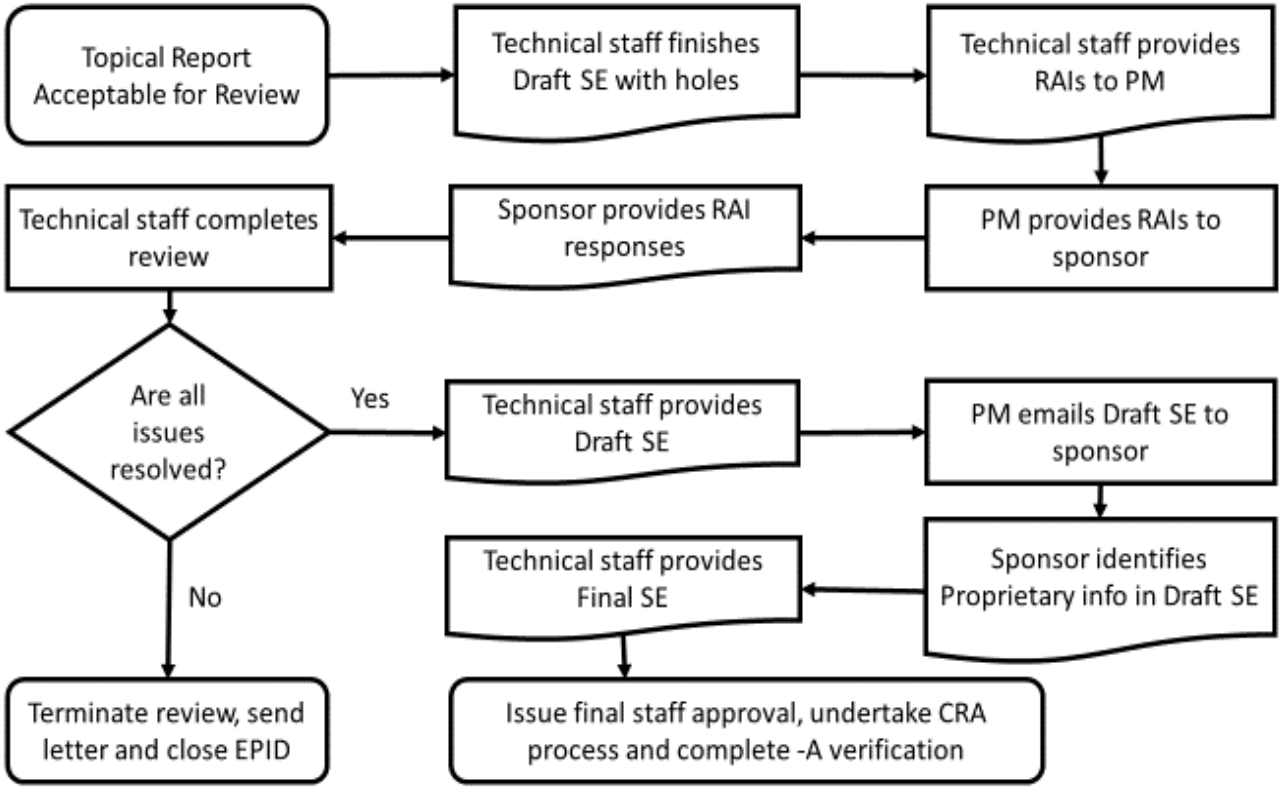
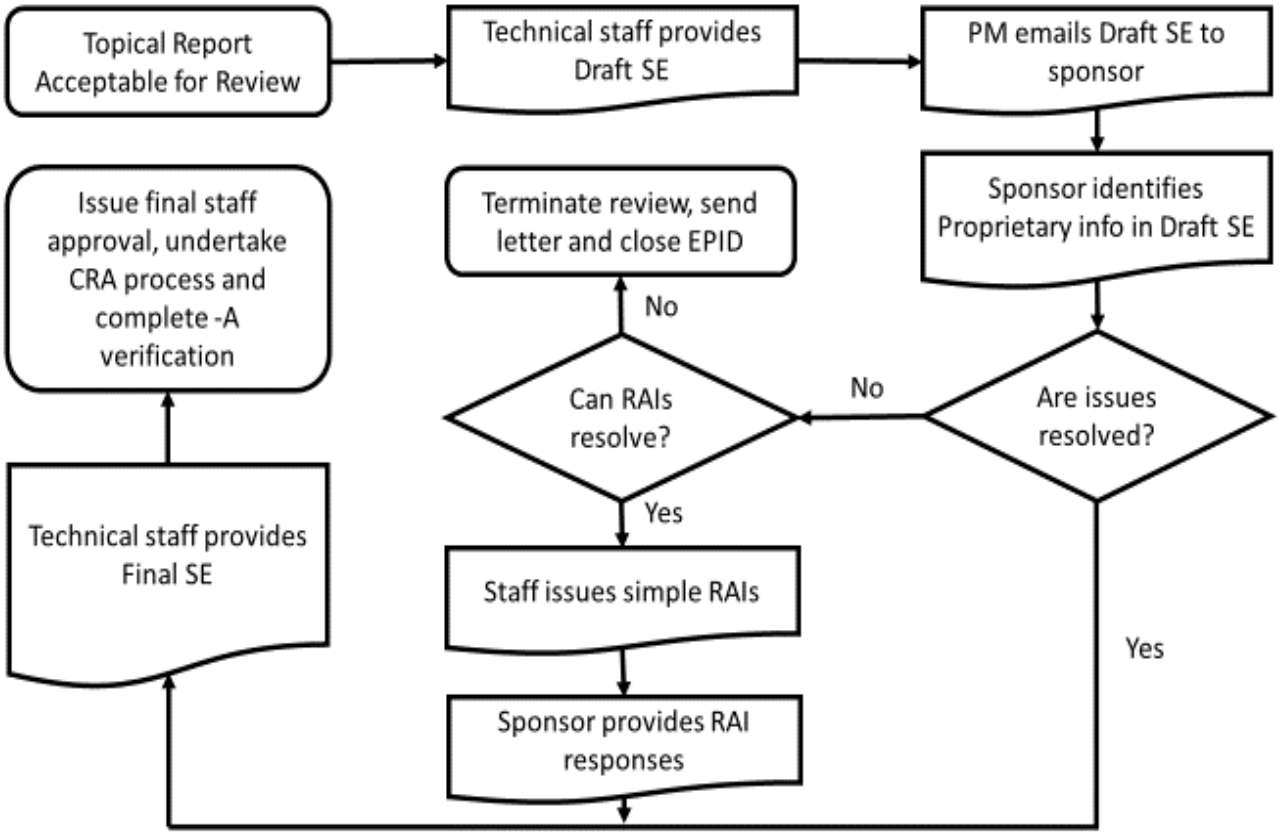
Standard Review

Figure 1: Topical Report Standard Review (Two-year Schedule)



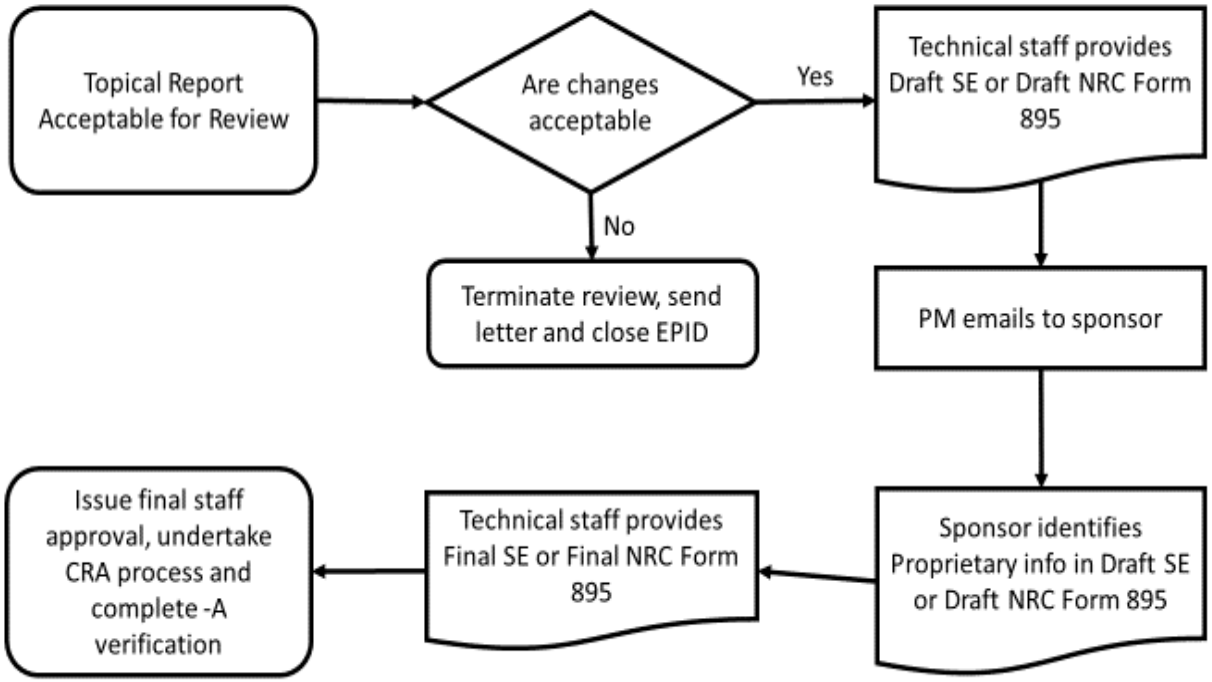
Compressed Review

Figure 2: Compressed Review (One-year Schedule)



Uncomplicated or SE Confirmation Review

Figure 3: Uncomplicated TR Revision Review (Six Months to One Year Schedule) or SE Confirmation Review (Three to Six Months Schedule)



TR Review Prioritization

- **Current Schedule Priority Considerations:**
  - Business Line or Agency priority?
  - Is this item related to the direct response to a safety significant event?
  - What is the level of safety significance?
  - What is the schedule priority?
  - Accident Tolerant Fuel (ATF) related?

- **NRC is currently reviewing these priorities and is considering others:**
  - Complexity, requested timeline, related to a future licensing action, resource availability, and exigent requests.

QUESTIONS?

Proprietary Reviews

Caroline Carusone, Deputy Division Director
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Accident Tolerant Fuel Next Steps and Coordination

Bo Pham, Division Director
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Feedback on Virtual 2022 Regulatory Information Conference

NEI

Opportunity for Public Comments

Closing Remarks

Mike King

Deputy Director for Reactor Safety Programs and Mission Support

Office of Nuclear Reactor Regulation

U. S. Nuclear Regulatory Commission

Brett Titus

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Nuclear Energy Institute

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Acronyms

ADAMS	Agencywide Documents Access and Management System
AEA	Atomic Energy Act of 1954
BTP	Branch Technical Position
CFR	Code of Federal Regulations
DRG	Design Review Guide
DSRS	Design Specific Review Standard
LAR	License Amendment Request
NEI	Nuclear Energy Institute
NOED	Notice of Enforcement Discretion
NRC	U.S. Nuclear Regulatory Commission
NRR	Office of Nuclear Reactor Regulation
OGC	Office of the General Counsel
OMB	Office of Management and Budget
PRA	Probabilistic Risk Assessment
RAIs	Requests for Additional Information
SRP	NUREG-0800, “Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants”
TSTF	Technical Specifications Task Force