

Public Meeting

Options for Regulatory Flexibility in Part 52 during Construction and Operational Phases

January 15, 2025

ADAMS Accession No. ML24358A001

Purpose

- Obtain feedback from external stakeholders about the staff's preliminary concepts for providing regulatory flexibility in 10 CFR Part 52 during construction and operational phases, including a change process for Tier 1 and Tier 2* and adjustment of Tier designations.
- NRC will consider the input received but will not prepare written responses.



Agenda

- Welcome and Logistics
- Opening Remarks
- Background
- Concepts Under Consideration
- Next Steps
- Open Discussion
- Closing Remarks



Logistics

- Meeting is being transcribed
- Keep line muted until you intend to speak
- Raise hand button in Teams (*5 on phone)
- Unmute button in Teams (*6 on phone)
- Chat feature is disabled
- Presentation slides shown on the Microsoft Teams screen and in ADAMS at <u>ML24358A001</u>



Opening Remarks

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Office of Nuclear Reactor Regulation





Background

Standardization and 10 CFR Part 52

- In 1989, the NRC promulgated 10 CFR Part 52 as an alternative method to 10 CFR Part 50 for licensing nuclear power plants.
- 1987 Commission Policy Statement on Standardization:
 - Encouraged the use of standard plant designs
 - Improve the licensing process
 - Reduce complexity and uncertainty in regulatory process
- Reactor designs can be reviewed and certified by the NRC through rulemaking. The certified designs may then be used by applicants as part of an application for a combined license.



Tiers of Design Information

- A design certification under 10 CFR Part 52 includes "tiers" of design information. This information is incorporated into the regulations.
 - Tier 1: Information that is approved and certified in a rulemaking (high level, safety significant design information). Includes inspections, tests, analyses, and acceptance criteria (ITAAC).
 - Tier 2: Information that is approved but not certified (equivalent to information in the final safety analysis report).
 - Tier 2*: Information in Tier 2 that a licensee can only change via an amendment (would otherwise be considered Tier 1 information).
- Note: Tier 2* is not used in all design certifications.



Change Control Processes

- If a licensee who is constructing or operating a reactor under a certified design wishes to change any of the certified design information, it must follow the appropriate change control process.
 - Tier 1: exemption request
 - ITAAC are Tier 1 (departures require exemptions) but are also incorporated into COLs.
 - Departure from ITAAC also require amendments.
 - Tier 2: 50.59-like process (may require a license amendment request)
 - Tier 2*: license amendment request



Recent Experience

- Construction and initial operation of Vogtle Electric Generating Plant, Units 3 and 4
- Current guidance includes RG 1.237, "Guidance for Changes During Construction for New Nuclear Power Plants Being Constructed Under a Combined License Referencing a Certified Design Under 10 CFR Part 52" (ML20349A335).
- An NRC rulemaking activity is in progress to update 10 CFR Parts 50 and 52 to address lessons learned. See draft proposed rule: <u>ML21159A055</u>.
- The Nuclear Energy Institute has called for increased flexibility for changes to Tier 1 information (for example, att. 2 of <u>ML21144A164</u>, comment 39, pp 20–26).
- Southern Nuclear Operating Company (SNC) requested an exemption to change all Tier 1 and Tier 2* information to Tier 2 (<u>ML24207A108</u>). NRC staff stated that this is not consistent with current Commission policy (<u>ML23055A090</u>). SNC withdrew the request (<u>ML24269A253</u>).



Commission Direction

- Approved publication of the proposed rule to update 10 CFR Parts 50 and 52 to address lessons learned.
- Directed the staff to provide a paper with options for increased regulatory flexibility for control of Tier 1 and Tier 2* information in 10 CFR Part 52 during construction and operational phases.
- Directed that the options include a change process for Tier 1 and Tier 2* and adjustment of Tier designations.
- Pause issuance of the proposed rule until the Commission provides direction on the options paper.



Commission Direction

Within 120 days of the date of this staff requirements memorandum, the staff should develop a paper evaluating options for providing regulatory flexibility in Part 52 during construction and operational phases, including a change process for Tier 1 and Tier 2* and adjustment of Tier designations. During development of the paper, the staff should consider experience to date and engage with external stakeholders. The staff should also provide proposed rule language, if applicable, to implement considered options. The staff should pause issuance of this proposed rule until the Commission provides direction on the options paper.

SRM-SECY-22-0052 dated November 20, 2024 (ML24326A003)



Concepts Under Consideration

- The following slides discuss concepts that the staff is currently considering for options to address the Commission's direction.
- No final decisions have been made.
- The NRC staff is open to alternative ideas.



Editorial changes

- The NRC would amend Part 52 and its appendices to allow editorial changes to Tier 1 and Tier 2* information without submitting an exemption or license amendment.
- The NRC would develop a short guidance document to define what types of changes qualify as editorial.



Tier 1 information after construction

• The NRC would amend Part 52 and its appendices to allow a licensee to treat Tier 1 information as Tier 2 information and integrate it into a plant specific design control document once the plant first achieves full power.



Tier 2* information after construction

- The NRC would amend Part 52 and its appendices to state that all Tier 2* information will revert to Tier 2 status once the plant first achieves full power.
 - Some Tier 2* information would have been controlled by license condition under Part 50 but was included in Tier 2* because the legal effect, i.e., an amendment would be required for changes, was the same. Stakeholders should be aware that the traditional tool of license conditions may still be employed to control some design issues.



Tier 1 changes allowed without prior approval, but amendments required before placing in service

 The NRC would amend its regulations to allow licensees to implement proposed departures from Tier 1 information without first obtaining an exemption or, for ITAAC, an exemption and an amendment, and revise RG 1.237 accordingly. However, before a licensee can declare a changed structure, system, or component operable or place it in service, it would still need to obtain all required exemptions or exemptions and amendments.



Other ideas considered

- Risk-inform the change control process
- Vendor petitions for rulemaking to modify design certification
- Exemptions
- Licensee converts from a Part 52 license to a Part 50 license
- Tier 2* changes during construction



Summary

	Editorial changes	Tier 1 information	Tier 2* information	Tier 1 changes allowed without prior approval, but amendments required before placing in service
Provides increased flexibility during construction	0	0	0	
Provides increased flexibility during operations	•	\bullet		\bullet
Applies to current Part 52 licensees	\bullet	\bullet		
Applies to future Part 52 licensees	•			

0	Not anticipated to address this/addresses to a small extent	
	Anticipated to partially address this/addresses to a moderate extent	
	Anticipated to address this/addresses to a large extent	



Next Steps

- Options paper due to the Commission (March 2025)
- Commission votes on the options paper
- Staff implements Commission direction
- Staff publishes Part 50/Part 52 lessons learned proposed rule
- Public comment period
- Staff addresses public comments
- Staff prepares final rule for Commission review
- Commission reviews draft final rule and provides direction to staff
- If approved, staff addresses Commission direction and publishes the final rule





Open Discussion

Opportunity for General Feedback

- Are there other approaches that should be considered?
- Any other questions or feedback?





Closing Remarks

How did we do?

• NRC Public Meeting Feedback Form (QR code):



• The public meeting feedback form is also available on the <u>meeting details</u> page.



References

Document Title	ADAMS Accession Number/ Federal Register citation
NRC Policy Statement, "Nuclear Power Plant Standardization," dated September 15, 1987.	<u>52 FR 34884</u>
SECY-19-0034, "Improving Design Certification Content," dated April 8, 2019.	ML19080A032
"Alignment of Licensing Processes and Lessons Learned from New Reactor Licensing, Regulatory Basis for Comment," dated January 15, 2021.	<u>ML20149K680</u>
Regulatory Guide 1.237, "Guidance for Changes During Construction for New Nuclear Power Plants Being Constructed Under a Combined License Referencing a Certified Design Under 10 CFR Part 52," dated February 2021.	<u>ML20349A335</u>
SECY-22-0052, "Proposed Rule: Alignment of Licensing Processes and Lessons Learned from New Reactor Licensing (RIN 3150-AI66)," dated June 6, 2022.	<u>ML21159A055</u>



References

Document Title	ADAMS Accession Number/ Federal Register citation
Staff Requirements – SECY-22-0052 – Proposed Rule: Alignment of Licensing Processes and Lessons Learned from New Reactor Licensing (RIN 3150-AI66), dated November 20, 2024.	<u>ML24326A003</u>
Public Comments on Alignment of Licensing Processes and Lessons Learned from New Reactor Licensing, Regulatory Basis for Comment. Marcus Nichol, Nuclear Energy Institute, dated May 14, 2021.	<u>ML21144A164</u>
Vogtle Electric Generating Plant, Units 3 and 4 – License Amendment Request and Exemption Request: Remove Tier 1 and Tier 2* Requirements, dated July 25, 2024.	<u>ML24207A108</u>



References

Document Title	ADAMS Accession Number/ Federal Register citation
February 16, 2023, Summary of Meeting with Southern Nuclear Operating Company.	<u>ML23055A090</u>
Vogtle Electric Generating Plant, Units 3 and 4, Withdrawal of License Amendment Request and Exemption Request: Remove Tier 1 and Tier 2* Requirements, dated September 25, 2024.	<u>ML24269A253</u>



Acronyms

- ADAMS Agencywide Documents Access and Management System
- CFR Code of Federal Regulations
- COL combined license
- DC design certification
- FRN Federal Register notice

ITAAC inspections, tests, analyses, and acceptance criteria
NRC Nuclear Regulatory Commission
RG regulatory guide
SNC Southern Nuclear Operating Company
SRM staff requirements memorandum

