

Leveraging inspections to reduce licensing review effort

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Bottom Line Up Front



- We're proposing a new process that leverages increased oversight on fuel vendors to gain efficiency in licensing reviews
- We're seeking feedback on TRIO to determine if continued development of this process is warranted



Agenda



1. Describe TRIO process
2. Review an example of a methods implementation LAR and describe how it would be treated differently in TRIO
3. Discuss potential benefits
4. Review next steps
5. Questions and feedback



Process Overview



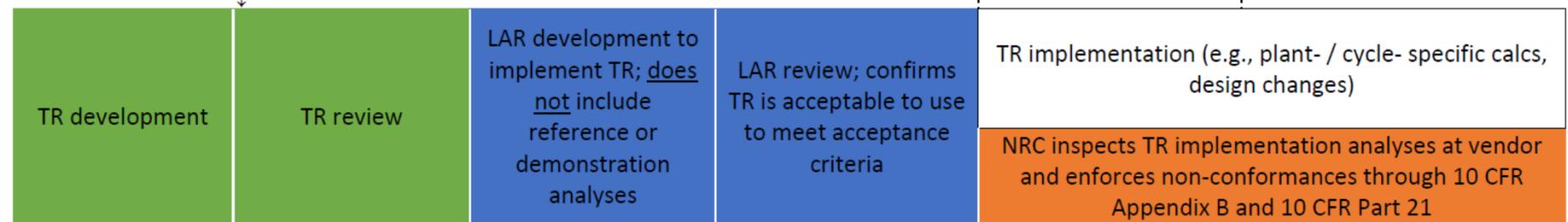
traditional



minimal change, if any, in the TR development and review

← schedule efficiency for individual LAR →

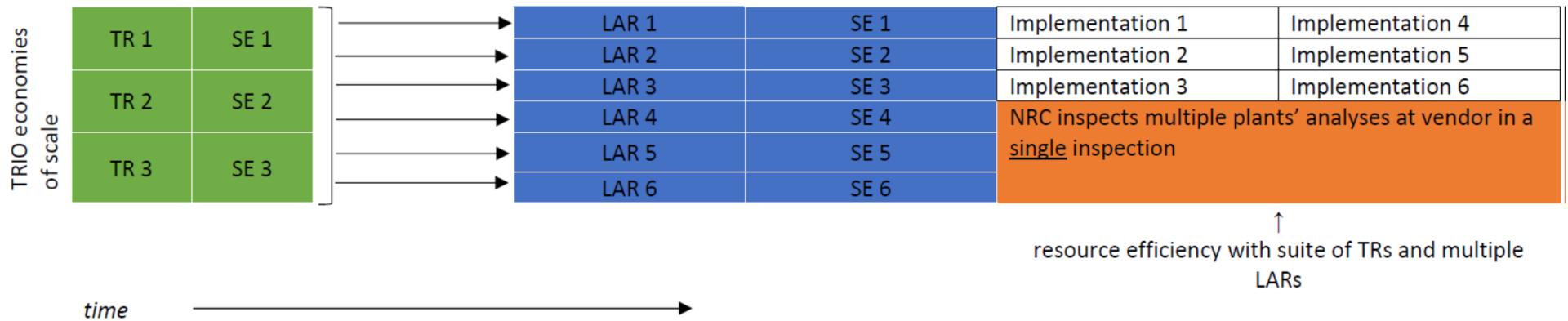
TRIO approach



time



Process Overview



Applicability



- Currently envisioned as a process that would be implemented in the area of safety analyses associated with fuel and reactor systems performance for the operating fleet
- TRIO has the potential to be implemented in other areas and staff will consider expansion to other areas based on internal and external feedback



Background on Applicable TRs within the Licensing

~~Basis~~ 10 CFR 50.36 requires licensed facilities to have Technical Specifications (TS)

- The TS contain, in part, an Administrative Controls section
- Some topical reports are contained in core operating limits report (COLR) in the Administrative Controls section of the TS and are used to establish cycle specific parameters
- A license amendment request is required if the licensee wants to use a different TR in the COLR

Topical Report Review in TRIO



- Topical report process would change very little, if at all, from traditional approach
 - Vendor still develops robust method which typically includes demonstration analyses
 - Staff performs detailed review and develops safety evaluation including limitations and conditions
- Topical reports would have to be approved for use under the TRIO process
 - Ensure limitations and conditions are appropriate for TRIO
 - TRIO is applicable for new or previously approved topical reports
- The staff expects a majority of topical reports could be used under TRIO

License Amendment Request in TRIO



- License amendment request process would change relative to the traditional approach
- The licensee would still need to demonstrate, and the staff would still review that:
 - the proposed TR is applicable to the plant and can be used to meet the applicable acceptance criteria
 - the TR limitations and conditions are satisfied
- **Demonstration that the applicable acceptance criteria and licensing basis requirements are met would not be required in the license amendment request**
 - The licensee is still required to ensure analysis results meet acceptance criteria and licensing basis requirements

License Amendment Request in TRIO



- The conclusion in the safety evaluation will be based on the staff determining the licensee's use of the topical report is acceptable to meet the acceptance criteria.
- This efficiency gain in the license amendment request process is reasonable since:
 - Acceptance criteria and licensing basis requirements are typically tied to regulatory requirements
 - If acceptance criteria or licensing basis requirements were violated, the licensee would not comply with the underlying requirements, which would be a citable offense

Oversight in TRIO



- After a TRIO topical report is implemented, the staff will inspect the fuel vendor periodically.
- Enforcement of nonconformances will be through 10 CFR 50 Appendix B and 10 CFR Part 21
 - Licensee specific issues would be referred to the Region
- Oversight can be a more holistic and efficient way to ensure public health and safety.
 - Access to broader suite of documentation:
 - Plant- and cycle-specific calculations
 - Design change evaluations
 - Quality assurance review documentation
 - Effort saved by including multiple plants' analyses in a single inspection

Example – Non-Conservative Initial Conditions



- A fuel vendor performed a load rejection analysis to demonstrate acceptance to peak vessel pressure assuming nominal initial plant conditions, like RCS pressure
- Analyses should be performed at limiting condition permitted by Technical Specifications and include margin for uncertainties
- If there was little margin to a safety limit, an inadequate assumption could lead to insufficiently conservative plant operating limits

Example – Non-Conservative Initial Conditions



	Current Approach	TRIO
Process	Request for Additional Information	Document in Inspection Report
Regulatory Drivers	GDC 15 and 10 CFR 50.36	10 CFR 50 Appendix B 10 CFR 21
Plant-Specific Fix	Revised Safety Analysis <i>before</i> implementation	Revised Safety Analysis <i>after</i> implementation
Generic Implications	Plants before - no backfit Plants after - use RAI	Plants before - corrective action Plants after - corrective action

THE SAFETY AND RISK
IMPLICATIONS ARE
DIFFERENT, BUT ACCEPTABLE.

Safety Significance



- As NRC continues its transformation to being a modern, risk-informed regulatory agency, we are striving to focus on safety significant issues
- While it may be more familiar for the staff to obtain information in licensing space, the staff has the tools through inspection and backfit to address safety significant issues
- The key point is the oversight component allows the staff the opportunity to address safety significant issues, and, therefore, allows for efficiency gains in licensing



Benefits



- Reduction in overall staff effort
- Reduction in the license amendment request development effort
- Improved consistency in safety evaluations of topical report implementation LARs
- Ability to provide broader oversight of the lifecycle of an implemented topical report
- Consistent means to address latent/emergent issues
- No new regulatory programs needed



Next Steps



- Incorporate feedback from this meeting
- If there is external stakeholder interest in continued development of TRIO:
 - Refine process, work through details with stakeholders,
 - Develop any needed guidance for staff and industry
- Continue discussions internally on process details