

# Overview of TRISO-X License Application Review Status

June 17, 2024

Public Meeting with TRISO-X

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# Meeting Category and Public Participation

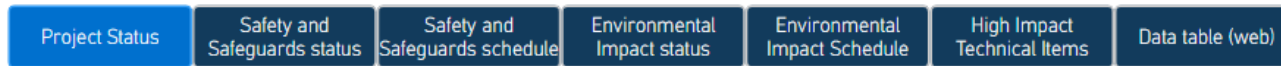
This is an Observation Meeting in which attendees will have an opportunity to observe the NRC performing its regulatory function or discussing regulatory issues. Attendees will have an opportunity to ask questions of the NRC staff or make comments about the issues discussed following the business portion of the meeting; however, the NRC is not actively soliciting comments towards regulatory decisions at this meeting.

# Overview of the TRISO-X License Application Review

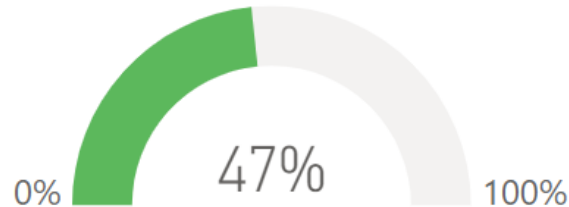
- November 18, 2022 – The TRISO-X License Application was accepted for formal NRC review (ML22320A110) with a 30 months review schedule based on the following assumptions:
  - A high-quality and complete application
  - 1 round of RAIs with timely responses
  - Electrical and Instrumentation and Control (I&C) submittal by August 2023
- Review Schedule Impacts:
  - 6 months extension of the submittal date for the electrical and I&C information
  - High Impact Technical Items – 14 of 20 methodology requests for additional information need supplemental information for resolution
  - On January 20, 2024 (ML24020A010), TRISO-X informed the NRC of plans to submit a revised license application by December 31, 2024, to process alternate types of uranium feed stock
- These items are likely to have an impact on the review schedule to be published in the summer of 2024.

# TRISO-X Review Status Summary - Dashboard

<https://www.nrc.gov/info-finder/fc/triso-x/project-status.html>.

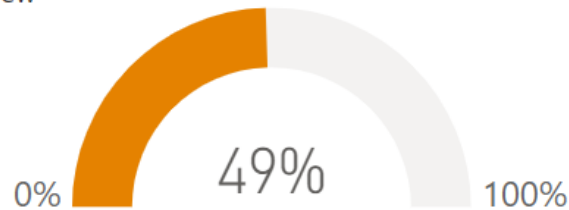


Overall project completion



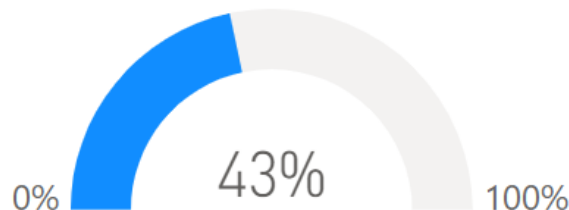
Overall Project Status provides the percentage of completion based on milestones.

Safety and Safeguards Review



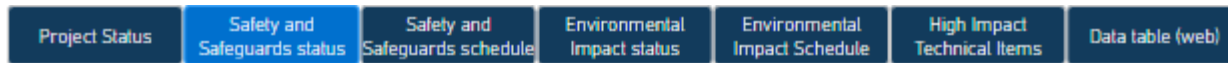
The Safety and Safeguard Review involves milestones for the technical disciplines.

Environmental Impact Review

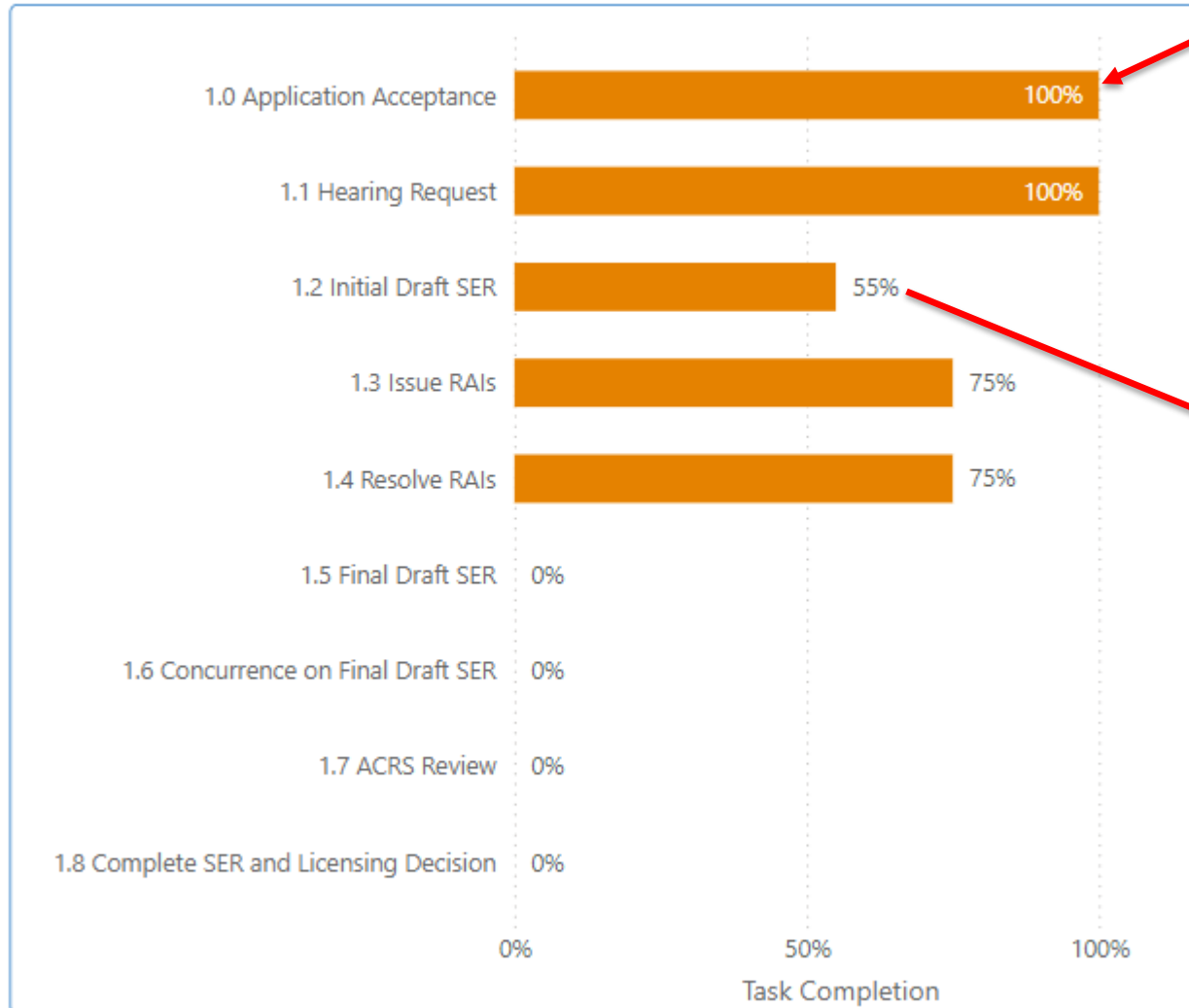


The Environmental Impact Review presents the status of the environmental impact statement.

# Safety and Safeguards Tab



Note: Hover over the chart data for more details



The percentages are based on the number of milestones completed from the current application.

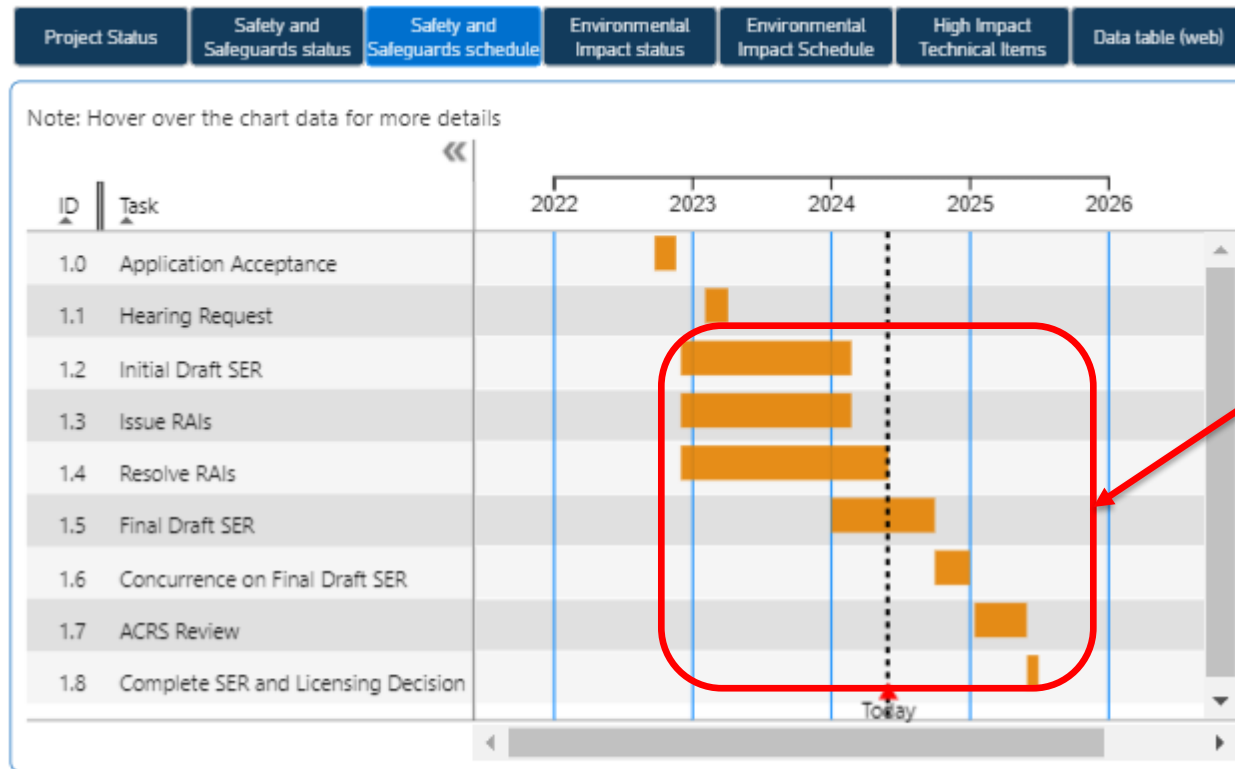
A pop-up displays the milestone information.

Technical Area	Status
Administration	Complete
Chemical safety	Complete
Emergency management	Complete
Environmental safety	Complete
Fire safety	Complete
General information and organization	Complete
Geotechnical	Complete
Human factors	Complete
Hydrological	Complete
Material control & accounting	Complete
Radiation protection	Complete
Criticality safety	Pending
Digital-electrical	Pending
Financial qualifications and decommissioning	Pending
Funding and financial insurance	Pending
ISA summary	Pending
Management measure & quality assurance	Pending
Security physical protection	Pending
Security transportation	Pending
Structural and NPH	Pending

11 milestones completed

$$\left(\frac{11}{20}\right) \times 100 = 55\%$$

# Safety and Safeguards Schedule Tab



The current Gantt chart indicates the projected status of the review based on the standard 30-months schedule.

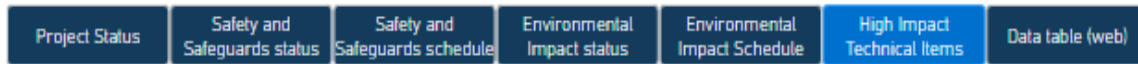
The Gantt chart will be updated to more accurately represent the status of review.

The scope of revisions depends on:

- 1) Resolution of the High Impact Technical Issues (HITI),
- 2) Progress on the detailed technical reviews, and
- 3) The supplemental license application to support a new fuel feed source.

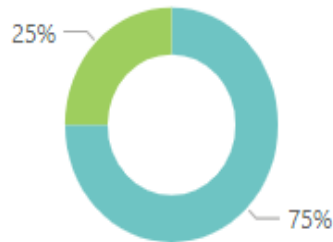
ID	Start	End	Duration	% complete	Abbreviations
1.0	9/23/2022	11/18/2022	56 days	100%	ACRS = Advisory Committee on Reactor Safeguards
1.1	2/3/2023	4/4/2023	60 days	100%	RAI = Request for Additional Information
1.2	12/1/2022	2/23/2024	449 days	55%	SAR = Safety Analysis Report
1.3	12/1/2022	2/23/2024	449 days	75%	SER = Safety Evaluation Report
1.4	12/1/2022	5/31/2024	547 days	75%	
1.5	1/1/2024	9/30/2024	273 days	0%	
1.6	9/30/2024	12/31/2024	92 days	0%	
1.7	1/13/2025	5/30/2025	137 days	0%	
1.8	5/31/2025	6/30/2025	30 days	0%	

# High Impact Technical Items (HITI) Tab



Status: All

- Awaiting response
- NRC reviewing
- Resolved



ID	Items	Status
4.0	Resolution of 10 items identified in requests for additional information regarding the Integrated Safety Analysis methodology.	Awaiting response
4.1	Resolution of 1 item identified in requests for additional information regarding the structural review.	Awaiting response
4.3	Resolution of 3 items identified in requests for additional information regarding the management measures and quality assurance program.	Awaiting response
4.4	TRISO-X needs to provide supplemental information on the electrical and digital instrumentation and control program to support the application.	NRC reviewing

Total items: 4    Awaiting response: 3    NRC reviewing: 1    Resolved:

The HITIs include 20 methodology issues identified for the Integrated Safety Analysis Summary/Criticality, Management Measures and Quality Assurance, Human Factors, and Structural portions of the license application.

Status of work on the HITIs is as follows:

- 6 items are resolved
- 12 items are moving toward resolution based on discussions and awaiting written responses
- 2 items remain unresolved

The detailed electrical review is in progress

# Path Forward for the TRISO-X License Application Review

The original 30-month review schedule will be adjusted to allow for resolution of the HITIs and the review of the TRISO-X supplement to the license application in December 2024.

The NRC staff plans to issue a revised schedule letter for TRISO-X in the summer of 2024.

The NRC dashboard will be updated to reflect the revised schedule once the updated reschedule letter is issued.



# **Opportunity for Comments/Questions**

**Related to the NRC Dashboard or the  
TRISO-X Review Schedule**