



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
WASHINGTON, D.C. 20555-0001

August 1, 2024

MEMORANDUM TO: Samantha Lav, Chief
Fuel Facility Licensing Branch
Division of Fuel Management
Office of Nuclear Material Safety
and Safeguards

FROM: Matt Bartlett, Sr. Project Manager
Fuel Facility Licensing Branch
Division of Fuel Management
Office of Nuclear Material Safety
and Safeguards

A handwritten signature in cursive script, appearing to read "Matthew Bartlett", is positioned to the left of the typed name.

Signed by Bartlett, Matthew
on 08/01/24

SUBJECT: SUMMARY OF MEETING ON MAY 24, 2024, WITH TRISO-X, LLC, TO
ALIGN ON THE SUPPLEMENT RESPONSES TO THE INTEGRATED
SAFETY ANALYSIS REQUESTS FOR ADDITIONAL INFORMATION,
(ENTERPRISE PROJECT IDENTIFIER L-2022-PMP-0005)

The U.S. Nuclear Regulatory Commission (NRC) staff conducted a closed Microsoft Teams meeting with TRISO-X, LLC (TRISO-X) on May 24, 2024, from 9:00 AM until 12:30 PM. The purpose of the meeting was to align on TRISO-X's draft responses to the supplement for the requests for additional information (RAIs) related to their integrated safety analysis (ISA) summary submitted via letter dated October 12, 2023 (Agencywide Documents Access and Management System Accession No. ML23285A344). The TRISO-X original application was received April 5, 2022 (ML22101A200) and was supplemented by letters dated October 13, 2022 (ML22286A144), November 4, 2022 (ML22308A251) and February 29, 2024 (ML24060A239).

The NRC staff has held a number of meetings with TRISO-X to discuss the supplemental information needed to resolve the RAIs including December 11, 2023, December 14, 2023, January 8, 2024, January 11, 2024, January 17, 2024, January 23, 2024 (combined meeting summary - ML23332A075), February 1, 2024 (ML24043A240 - non-public), February 21, 2024, and February 22, 2024 (combined meeting summary - ML24071A156). This meeting continues these discussions, as summarized below.

CONTACT: Matt Bartlett, NMSS/DFM
301-415-7154

Enclosure 2 transmitted herewith
contains Security-Related
Information. When separated from
Enclosure 2, this document and
Enclosure 1 are decontrolled.

During the meetings, TRISO-X presented draft updates to sections of the license application (LA) to demonstrate examples that provide a basis for their methodology assumptions, calculations, and potential revisions to the RAI responses, the LA, and the ISA Summary.

During the meeting, discussions were continued on the NRC ISA concerns and potential ways to supplement the RAI responses to address those concerns. The NRC staff began the meeting by discussing the response provided by TRISO-X to address the 10 outstanding RAIs on the TRISO-X's ISA methodology. The draft supplement provides information likely to provide sufficient information for the staff move forward with the detailed review for the ISA methodology RAIs 1, 2, 3, 4, 6, and 7. The NRC finds the proposed response for RAI-5 inadequate, and the staff needs additional time to evaluate the responses for RAIs 8, 9 and 10. The titles of the RAIs are listed below:

- RAI 1 Definition of Unlikely for Application of the Double Contingency Principle (DCP)
- RAI-2 Definition of Credible/Not Credible Event
- RAI-3 Inherently Safe Active Engineered Control
- RAI-4 Consequences Requiring Evaluation
- RAI-5 Definitions of Highly Unlikely and Unlikely
- RAI-6 Likelihood Index Score Method, Failure Probability Versus Frequency:
- RAI-7 Likelihood Index Score Method for Initiating and Enabling Events
- RAI-8 Likelihood Index Score Method for IROFS
- RAI-9 Critical Non-structural Components
- RAI-10 Likelihood Definitions and 10 CFR 70.61 compliance evaluations for Natural Phenomena Hazards

TRISO-X indicated they believe their response to RAI-5 is adequate and they plan to move forward with submittal of the existing draft. The NRC staff discussed option for resolving the RAI-5 supplement.

1. The draft RAI supplemental responses could be revised to resolve the methodology items based on the NRC staff's feedback. Resolution of the RAI would allow the staff to move forward with the detailed review.
2. If the formal submittal does not resolve the methodology RAI, the detailed review will continue to be on hold, subject to resolution of this item. The NRC staff and TRISO-X can continue to work towards resolving the issue through additional calls and meetings, issuance of an additional request for supplement, or follow-on RAIs.

Once the issues related to the outstanding RAIs for ISA, structural, and management measures are resolved through adequate supplemental information, the formal detailed review can proceed for those technical review areas.

The NRC staff and TRISO-X agreed to continue discussions on a meeting scheduled for June 6, 2024.

S. Lav

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A list of participants is provided as Enclosure 1. Additional meeting summary information is provided in Enclosure 2 (non-public).

Docket No. 07007027

Enclosures:

1. Participant List (public)
2. Additional Meeting Summary (non-public)

cc: triso@listmgr.nrc.gov

S. Lav

SUBJECT: SUMMARY OF MEETING ON MAY 24, 2024, WITH TRISO-X, LLC, TO ALIGN ON THE SUPPLEMENT RESPONSES TO THE INTEGRATED SAFETY ANALYSIS REQUESTS FOR ADDITIONAL INFORMATION, (ENTERPRISE PROJECT IDENTIFIER L-2022-PMP-0005)

DOCUMENT DATE: August 1, 2024

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ADAMS Accession Nos. : ML24178A400(pkg), ML24178A402(memo), ML24178A404(encl 1), ML24178A405(encl 2, non-public)

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