



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

January 11, 2022

Mr. Nima Ashkeboussi
Senior Director, Fuel Cycle and
Radiation Safety Programs
Nuclear Energy Institute
1201 F Street NW, Ste. 1100
Washington, DC 20004

SUBJECT: SCHEDULING EXPECTATIONS REGARDING THE LICENSING OF ACCIDENT
TOLERANT, INCREASED ENRICHMENT, AND HIGHER BURNUP FUELS

Dear Mr. Ashkeboussi:

Consistent with the approach described in Version 1.2 of the Accident Tolerant Fuel (ATF) Project Plan (Agencywide Documents Access and Management System (ADAMS) Accession No. ML21243A298), the U.S. Nuclear Regulatory Commission (NRC) staff has been actively involved in preparations intended to support the effective and efficient licensing of ATF-concept, higher burnup, and increased enrichment fuels. Based on interactions with the Nuclear Energy Institute and representatives from industry, the NRC staff understands that the industry's current goal is to begin the deployment of higher burnup and increased enrichment fuels by the mid-2020s.

The NRC has a variety of regulatory approaches available to vendors and power plant licensees seeking to obtain the approval for the use of nuclear fuel in a reactor. The NRC staff understands that the industry's preferred licensing approach will be for vendors to seek approval of a fuel technology through the NRC's topical report review process, first, followed by one or more site-specific licensing actions supporting the adoption of that technology at a given site. The NRC staff supports the use of this approach as it leverages a process already in place that has been proven to increase the efficiency of the NRC's overall licensing process, while reducing resources needed to conduct site-specific reviews. The NRC is already engaged in the review of some of these topical reports and presubmittal interactions for future intended submittals.

The NRC staff does not yet have enough information to reliably commit to completing its review of a topical report or site-specific licensing action within a specific timeframe. However, the NRC staff has developed the enclosed generic schedule based on available information and recent similar reviews to help establish nominal expectations for the length of review time that will be required to support the industry's stated goal of deployment of ATF-concept, higher burnup, and increased enrichment fuels by the mid-2020s. The schedule is based on the following assumptions:

- Only one licensee will submit a license amendment request per fuel vendor as a pilot plant for that approach.
- Both the topical report and the related license amendment request are sufficiently supported and any novel technical issues have been adequately addressed.

- Vendors and licensees provide timely responses to any staff requests for additional information.
- The Advisory Committee on Reactor Safeguards will review both the topical report and license amendment request.
- Any requests for exemption from the NRC's regulations can be reviewed in parallel with the corresponding license amendment request.
- The required approvals for the manufacturing and transport of the fuel, as discussed in the NRC staff's August 26, 2019 letter (ADAMS Accession No. ML19235A265), have been obtained.

As discussed throughout the ATF Project Plan (ADAMS Accession No. ML21243A298), the NRC staff considers early engagement as critical for an effective and efficient review of these regulatory actions. The NRC staff continues to strongly encourage licensees and vendors to request pre-application meetings with the NRC staff to: (1) discuss technical and regulatory issues, (2) identify key technical and regulatory features, and (3) establish the schedule for submitting applications. Such additional details will greatly assist the NRC staff in planning for future licensing activities and provide added confidence that industry goals can be achieved.

We would appreciate any feedback on the enclosed schedule, as well as any insight you may have on industry's plan to adopt these fuels. Please do not hesitate to contact Michael Wentzel of my staff, at 301-415-6459 or Michael.Wentzel@nrc.gov, if you have any questions.

Sincerely,

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

Enclosure:
As stated

cc:

1. Listserv
2. NextEra Energy
3. Entergy Services, LLC

Nominal Schedule for Reviewing Requests to Adopt ATF-Concept, Higher Burnup, and Increased Enrichment Fuels

Task	Duration	Start	Finish	2022				2023				2024			
				Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Vendor Topical Report	16 mos	7/2022	10/2023												
Site-Specific License Amendment	15 mos	11/2023	12/2024												
Exemption (If Applicable)	15 mos	11/2023	12/2024												

NRC staff review

ACRS review

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ADAMS Accession No.: ML22003A168

*by e-mail

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