



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

March 26, 2021

MEMORANDUM TO: Christopher Regan, Deputy Director
Division of Fuel Management
Office of Nuclear Material Safety
and Safeguards

FROM: Pierre Saverot, Project Manager
Storage and Transportation Licensing Branch
Division of Fuel Management
Office of Nuclear Material Safety
and Safeguards

A handwritten signature in black ink, appearing to read "Saverot", is placed over the "FROM:" line.

Signed by Saverot, Pierre
on 03/26/21

SUBJECT: SUMMARY OF MARCH 11, 2021 MEETING WITH ORANO
FEDERAL SERVICES LLC

Background

On March 11, 2021, a Category 1 public meeting was held by video conference between the U.S. Nuclear Regulatory Commission (NRC) staff and representatives from ORANO Federal Services, LLC, DOE, NNSA, SRNL, and INL to discuss the transport of low enriched uranium (LEU) research reactor fuel elements in the Model No. ATR-FFSC package.

The March 11, 2021, meeting was noticed on February 22, 2021 (ML21053A089). The meeting attendance list and public presentation are provided as Enclosure Nos. 1 and 2, respectively.

Discussion

The Model No. ATR-FFSC package is an insulated stainless-steel package designed for the transport of unirradiated research reactor fuel, including intact fuel elements or fuel plates. Air transport of fuel elements or loose plates is authorized. All payloads have a Type A fissile quantity, and most are high enriched uranium (HEU) material.

DOE is preparing an amendment request for new contents, i.e., LEU fuel elements (ATR, MIT, MURR prototype elements) enriched up to 20% U²³⁵, as well as for design demonstration elements (DDE) with a fissile mass and element weight being bounded by their associated LEU prototype elements; only the DDE end fittings are different from the prototype elements.

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Because LEU fuel elements are heavier than HEU elements, two new fuel handling enclosures are required, and new licensing drawings for those enclosures will be provided in the application. The applicant explained the licensing approach that will be used for the criticality analysis, in line with what had been accepted by the NRC staff in previous revisions of the certificate of compliance (CoC), i.e., the fuel mass will be maximized (beyond tolerances) while the non-fuel material will be minimized; credit will be taken for restricting the movement of fuel plates in accordance with the existing HEU analysis; all available space will be filled with variable-density moderator, etc. This classic licensing approach did not elicit any specific comment from staff. Staff only said that it was not familiar with the use of the Whisper module for the USL calculation.

The structural chapter of the application will not be modified because there is no change in either the packaging or the weight of the payload, and assumptions used for post-HAC plate configuration are highly conservative. The applicant explained that the effect of the HAC fire on the balsa wood will be considered in the thermal chapter and that it will show that the pressure increase is negligible.

Staff concluded the meeting by noting that the Model No. ATR-FFSC has already been reviewed multiple times (the current CoC is under Revision No. 14) and that the DOE requested date of December 2021 for the issuance of the revision No. 15 of the CoC appears achievable. Staff made no regulatory commitment during the meeting.

Docket No. 71-9330
EPID L-2021-LLA-0020

Enclosures:

1. Meeting Attendees
Presentation

**Meeting Between ORANO FEDERAL SERVICES LLC
and the
Nuclear Regulatory Commission
March 11, 2021
Meeting Attendees**

NRC/NMSS/DFM

Pierre Saverot
Jeremy Smith
Bernard White

ORANO FEDERAL SERVICES

Phil Noss
Rich Smith
Erik Gonsiorowski

INL

Eric Woolstenhulme
Don Darrington

DOE

Larry Gelder
Michael McAnulty

NNSA

Brian Waud
Scott Ravenhill
Brett Cox

SRNL

Mike Cercy

March 11, 2021, meeting summary with Orano Federal Services DATE March 26, 2021

DISTRIBUTION:

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DHills, R-III/DNMS/MCID

GWarnick, R-IV/DNMS/RIB

ADAMS Accession No.: ML21085A213; Memo ML21085A211

OFFICE	NMSS/DFM/STLB	NMSS/DFM/STLB	NMSS/DFM/STLB	
NAME	SFigueroa	SF JMcKirgan	JM PSaverot	PS
DATE	Mar 26, 2021	Mar 26, 2021	Mar 26, 2021	

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