



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

April 14, 2020

MEMORANDUM TO: Dennis C. Morey, Chief  
Licensing Projects Branch  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

FROM: Ngola Otto, Project Manager */RA/*  
Licensing Projects Branch  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF MARCH 11, 2020, MEETING REGARDING GLOBAL  
NUCLEAR FUEL UPDATE ON ACCIDENT TOLERANT FUEL  
LICENSING PLANS

On March 11, 2020, the U.S. Nuclear Regulatory Commission (NRC) staff held a Category 2 public meeting with representatives from Global Nuclear Fuel (GNF). The purpose of the meeting was for GNF to provide the NRC staff with an update on accident tolerant fuel (ATF) and licensing plans. The meeting was noticed on February 13, 2020, and is available in the Agencywide Documents Access and Management System (ADAMS) Accession No. ML20045E765.

At the beginning of the meeting, the NRC staff provided an update on ATF and allowed an opportunity for public comment. There were no comments from the public during the initial open portion of the meeting. During the closed portion of the meeting, the NRC staff and GNF discussed ARMOR Testing Update, ARMOR Specified Acceptance Fuel Design Limit (SAFDL) Treatments, ARMOR Upscaling Qualification Linkages, the Integrated schedule for Licensing (RIS-2019-03), ATF lead test assemblies (LTA) Update for Clinton and Hatch plants. During the recap and the opportunity for public comments at the end of the meeting, there were no questions or comments from members of the public.

A list of the attendees and the NRC staff ATF update are enclosed. The GNF presentation material can be found at ADAMS Accession Nos. ML20100H685 (proprietary) and ML20100H690 (non-proprietary).

Docket No. 99901376

Enclosures: As stated

CONTACT: Ngola Otto, NRR/DORL  
301-415-6695

## List of Attendees

Public Meeting Between the U.S. Nuclear Regulatory Commission Staff and Global Nuclear  
Fuel Representatives for the Update on Global Nuclear Fuel Accident Tolerant Fuel and  
Licensing Plans  
March 11, 2020  
2:00 pm – 5:00 pm

<u>NAME</u>	<u>ORGANIZATION</u>
Sarah DeSilva	Global Nuclear Fuel (GNF)
Yang-Pi Lin	GNF
Tyler Schweitzer	GNF
Kent Halac	GNF
Russ Fawcett	GNF
Ian Porter	GNF
Patty McCumbee	GNF
Paul Cantonwine*	GNF
Myles Connor*	GNF
Mike Cook*	GNF
Mason Makovicka*	GNF
Russell Stachowski*	GNF
Tao Wu*	GNF
Juswald Vedovi*	GNF
Ngola Otto	Nuclear Regulatory Commission (NRC)
Tae Ahn*	NRC
Joshua Whitman	NRC
Bob Lukes*	NRC
Dennis Morey	NRC
Lucas Kyriazidis	NRC
Michelle Bales	NRC

Kevin Heller	NRC
James Corson	NRC
Joshua Borromeo	NRC
Mike Orenak	NRC
Mohamed Shams	NRC
Joe Donoghue	NRC
MJ Ross-Lee*	NRC
Paul Clifford	NRC
Marilyn Diaz Maldonado	NRC
Mathew Panicker*	NRC
Ricardo Torres*	NRC
Tadasuke Tanabe	Tokyo Electric Power Company
Makoto Nisihara	Shikoku Electric Power Company
Tatsuro Kobayashi	Tokyo Electric Power Company

\* Participated remotely by telephone

# **U.S. Nuclear Regulatory Commission (NRC) Accident Tolerant Fuel (ATF) Updates**

## **for Global Nuclear Fuel (GNF) Meeting**

Public Meeting Between the NRC staff and GNF representatives  
for the Update on GNF ATF and Licensing Plans  
March 11, 2020

### **ISG for Cr-coated Cladding**

- A public meeting was held on December 4, 2019, to discuss the two received stakeholder comments
- ISG was issued on January 9, 2020

### **High Burnup + Increased Enrichment**

- The staff understands that the industry is planning to seek extensions of current fuel burnup limits and increased enrichment for their fuels
- Two license amendments for increased enrichment have been received
  - Global Nuclear Fuels to increase enrichment to 8 percent
  - Louisiana Energy Services to enrich to 5.5 percent

### **RIS 2019, Pre-application Communication and Scheduling for ATF Submittals**

- RIS 2019-03 was issued on November 20, 2019, that requested timeline details, fuel qualification plans, and licensing strategy information from nuclear fuel vendors pursuing the various ATF concepts
- NRC project managers will continue to solicit submission schedules from vendors outside of the RIS, which aligns with current practices for workload management and resource forecasting (ex. Topical Reports)
- Two responses have been received at this point and a third is expected soon

### **Commission Meeting on ATF**

- Held on February 25, 2020
- More in-depth dive into the status of ATF
- Webcast recording is available online in the NRC website
- Major points
  - We are ready to license Cr-coated cladding
  - The staff is preparing for higher burnup and increased enrichment due to DOE and industry activities in these areas
  - We're performing literature reviews for other technologies and a severe-accident phenomena identification and ranking table exercise will be started this summer
  - Our communications have allowed us, and continue to pave the way, to enable the use of ATF technologies

SUBJECT: SUMMARY OF MARCH 11, 2020, MEETING REGARDING GLOBAL NUCLEAR FUEL UPDATE ON ACCIDENT TOLERANT FUEL LICENSING PLANS DATED APRIL 14, 2020

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**ADAMS Accession No. ML20104A038 (Summary)**

**\*via email**

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