




Maximizing Efficiency and Transparency in Safety Research of Accident Tolerant Fuel

Michael Case
Director of Division of Safety Systems




Working Together – Accident Tolerant Fuel

- Collaboration defined in two Memorandum of Understanding (MOU)
- MOUs with DOE and EPRI written to:
 - Reduce duplication of effort
 - Allow NRC to obtain data from DOE and EPRI experimental programs for independent analysis and to inform regulatory decisions
 - Increase transparency for all stakeholders
- Multiple NRC technical staff participate in DOE and EPRI led research progress meetings to maintaining real-time cognizance



Memorandum of Understanding - EPRI

- Signed October 23, 2017
- Expected areas of interaction include:
 - Research on deterministic ATF thermal-mechanical design criteria
 - Research to characterize the safety and risk significant characteristics of ATF as part of an integrated nuclear reactor system
- Available in ADAMS [ML17248A392](#)



Memorandum of Understanding - DOE

- Signed October 26, 2017
- Expected areas of interaction include:
 - Testing of ATF under steady-state and transient conditions
 - Efforts to develop and validate material property correlations needed to model ATF
- Available in ADAMS [ML17130A815](#)



**Working Together –
Maintaining Independence**

- Data obtained in DOE and EPRI experimental programs will be used to:
 - Draw independent conclusions
 - Update the NRC’s independent analysis tools (FRAPCON/FRAPTRAN, TRACE, etc)



**Working Together –
Success Story: Subsequent License Renewal**

- NRC collaborated with DOE and industry:
 - Shared data
 - Drew independent conclusions
 - Completed the guidance before the first lifetime extension application arrived

 **USNRC**
United States Nuclear Regulatory Commission
Protecting People and the Environment

RIC 2018



For More Information on NRC's ATF plans:

- *Draft Project Plan to Prepare the U.S. Nuclear Regulatory Commission to License and Regulate Accident Tolerant Fuel* was published in the Federal Register ([82 FR 60633](#)) for public comment December 21, 2017 - February 5, 2018
- Docket [NRC-2017-0236](#)
- February 12, 2018 public meeting summary (**INSERT ML TBD**)
- Commission Meeting planned for April 10, 2018 (**INSERT Meeting notice TBD**)
