



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 945022



Program of the PUMA Workshop on

## Fuel qualification and code validation for advanced reactors: irradiation programs in MTR and SFR

Organised by JRC and NRG

**Location: Forum, NRG, Petten, September 6-7, 2022**

### Draft Agenda Version 01

- 1.5 days of presentations, 0.5 day visit (with prior registration):
- HFR and Hot Cells at NRG
  - plasma Focus Ion Beam, TRIAS, LILLA at JRC

#### Day 1 – 6 September 2022

Time	Presentations & Speakers	Lecturer	Organisation
09h00	<b>Introduction</b>		<i>JRC, NRG</i>
9h15	<b>Organization</b>		<i>JRC, NRG</i>
	<b>Session 1 : Fuel qualification: need of experimental irradiations</b>		
9h30	Basic expectations from fuel qualification: what needs to be known, what is missing?	<i>(O. Baudraud)</i>	<i>IRSN</i>
10h00	How a MTR can contribute to fuel qualification, differences and complementarities between MTR/SFR	<i>Sander van Til</i>	<i>NRG</i>
10h30-11h00	Break		
11h00	Feedback on experimental devices used to perform fuel qualification	<i>(S. Bejaoui)</i>	<i>CEA</i>



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 945022

11h30	Acceleration of experimental irradiations (devices and methodology)	Jason Harp	INL
12h00 – 13h00	Lunch Break		
	<b>Session 2 : Link between irradiation programs, codes validation and fuel design</b>		
13h00	Overview of tests of fuel for fast reactors (dedicated and integral irradiations) - PIE Caprix (MOX 45%Pu, fast spectrum, nominal conditions)	<i>V. Blanc</i>	<i>CEA</i>
13h30	- PIE Trabant 2 (MOX 45%Pu, thermal spectrum, nominal conditions)	<i>S. Van Til</i>	<i>NRG</i>
14h00	- PIE Trabant 1 (MOX 45%Pu, thermal spectrum, overpower conditions)	<i>D. Staicu</i>	<i>JRC</i>
14h30	<b>Break</b>		
15h00	Fuel qualification and code validation with irradiations, benchmark and PIE - Experimental irradiations for fuel qualification and code validation	<i>V. Blanc</i>	<i>CEA</i>
15h30	- Modelling and Simulation of Nuclear Fuels	<i>(J. Lavarenne)</i>	<i>U. Cam.</i>
16h00	Analytical irradiations for model validation: swelling or redistribution - Design of experimental devices for analytical tests in MTR	<i>(J. Julien)</i>	<i>RJH</i>
16h30	- Roles of Research Reactors in Methods Validation for Fuel Modeling	<i>P. Van Uffelen</i>	<i>JRC</i>
17h00	<b>End of Day 1</b>		

Day 2 – 7 September 2022

Time	Presentations & Speakers	Lecturer	Organisation
	<b>Session 2 (cont'd) : Link between irradiation programs, codes validation and fuel design</b>		
09h00	Perspective from the industry and regulators. Feedback from the scenarios for the Pu management, what will be needed for the qualification.	<i>(B. Carlier)</i>	<i>Framatome</i>
09h30	<b>Session 3 : Fuels for plutonium or MA burning: Feedback from 30 years of irradiations on</b>	<i>E. d'Agata</i> <i>N. Chauvin</i>	<i>JRC</i> <i>CEA</i>



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 945022

	<b>plutonium burning and minor actinides transmutation</b>		
11h30	<b>Review of participation to visits</b>		
12h00 – 13h00	Lunch Break		
13h00- 17h00	<b>Visits at NRG and JRC according to prior registration:</b> - HFR and Hot Cells at NRG - plasma Focus Ion Beam, TRIAS, LILLA at JRC		
17h	<b>End of Day 2</b>		