

RERTR-2017 – 38th INTERNATIONAL MEETING ON REDUCED ENRICHMENT FOR RESEARCH AND TEST REACTORS

November 12-16, 2017

Chicago, IL USA



The U.S. Department of Energy / National Nuclear Security Administration's Office of Material Management and Minimization will host "RERTR-2017 – 38th International Meeting on Reduced Enrichment for Research and Test Reactors" in Chicago, Illinois, USA from November 12-16, 2017.

Technical Program (Preliminary)

This document is still subject to minor changes and is to be considered as PRELIMINARY. Please check frequently back with us for updates. Updated versions of this document will be published as soon as they become available on the RERTR web site at http://www.rertr.anl.gov/meeting_announcements/2017/agenda.html.

The Meeting Organizers:



Sunday, November 12

Embassy Suites Chicago Downtown/Magnificent Mile Hotel

Registration: 4:30 – 6:00 pm, Chicago River Ballroom Foyer

Welcome Reception: 6:00 – 8:00 pm, Atrium Dining Room (*Main Floor*)

#	Session Title	Time	Paper Title	Presenter
Monday, November 13				
Meeting Room: Embassy Suites, Chicago River Ballroom				
	Opening and Welcome John Stevens	9:00 am	Welcome to Chicago and the RERTR-2017 International Meeting	Matthew Tirrell Deputy Laboratory Director for Science, Argonne National Laboratory
1	Global Progress in HEU Minimization Chaired by John Stevens	9:15 am	HEU Minimization, An International Collaboration	Jessica Halse (DOE-NNSA)
			HERACLES Overview	Yann Guinard (AREVA NP, CERCA)
			Completion of Ghana's MNSR Conversion from HEU to LEU	Henry Cecil Odoi (GAEC)
10:00 am Coffee Break, Chicago River Ballroom Foyer				
	Global Progress in HEU Minimization (<i>Continued</i>) Chaired by Chris Landers	10:30 am	IAEA Activities in Support of HEU Minimization: 2017 Update	Frances Marshall (IAEA)
First One-Year Operation of the WWR-K Research Reactor with LEU Fuel			Asset Shaimerdenov (KZ-INP)	
Fuel Conversion Overview of MARIA Reactor (NCBJ Swierk – Poland)			Cyrille Rontard (AREVA-NP)	
Current State of Conversion of the IGR Reactor and IVG.1M Reactor to LEU Fuel			Ildar Derbyshev (IAE-NNC)	
12:00 pm Lunch Break				
2	MNSR and Other International Conversions to LEU Operation Chaired by James Morman	1:30 pm	Role of the Regulatory Body in Ghana's MNSR Conversion from HEU to LEU	Rex Abrefah (NRA-G)
			Status Report on NIRR-1 Conversion Activities: From LEU Feasibility Search To Conversion Proper	Sunday Jonah (CERT)
			Neutronic and Safety Analysis of KUCA Wet Core using LEU Fuel	Hironobu Unesaki (KURRI)
			The NIRR-1 HEU to LEU Conversion: The Value of Risk and Material Attractiveness	Stephen Dahunsi (INS)
3:00 pm Coffee Break, Chicago River Ballroom Foyer				
3	Fuel Development and Qualification Chaired by Sven Van den Berghe	3:30 pm	European Developments for Monolithic UMo Fuel: A Status Report	Harald Breikreutz (FRM II)
			Progress on U.S. High Performance Research Reactor LEU Fuel Element Designs	Erik Wilson (ANL)
			U.S. Progress in U-Mo Monolithic Fuel Qualification	Barry Rabin (INL)
			Swelling of UMo Dispersion Fuel Dependence on Mo Content and Fission Rate	Gerard Hofman (ANL)
			Swelling Analysis and Verification of U-10Mo Monolithic Fuel	Adam Robinson (INL)
5:30 pm Adjourn				
RERTR-2017 Dinner and Activities – Pinstripes (<i>Walking directions will be provided.</i>) Dinner and Drinks 6:30 pm (<i>Complimentary</i>); Bowling and Bocce (<i>Cash Bar</i>) 8:30 to 10:30 pm				
Tuesday, November 14				
Meeting Room: Embassy Suites, Chicago River Ballroom				
4	Perspectives on HEU Removal and Operations Chaired by Tiffany Blanchard-Case	8:00 am	Eliminating All HEU from Indonesia	Jessica Jagmin Brookins (DOE-NNSA)
			JAEA-LANL Experiments Supporting the Remove Program	George McKenzie IV (LANL)
			HEU Removal from Kazakhstan	Stanley Moses (INL)
			Enhancing Readiness to Respond to Emerging Threats: Exercise Corvina Loco	R. E. Agee (DOE-NNSA)

			Research Reactor Spent Fuel Management: Growing Needs and Available Services	Vanessa Vo Van (AREVA-NC)
			Research Reactor Silicide Fuel Reprocessing at La Hague Plant	Jean-Francois Valery (AREVA-NC)
10:00 am Coffee Break, Chicago River Ballroom Foyer				
5	High Performance Reactor Conversions Chaired by Scott Ravenhill	10:30 am	Updates on the MIT Research Reactor (MITR) Conversion from Highly Enriched Uranium to Low Enriched Uranium Fuel	Lin-Wen Hu (MIT)
			Conversion Status of the University of Missouri-Columbia Research Reactor from Highly-Enriched to Low-Enriched Uranium Fuel	Les Foyto (UM-C)
			Activities in Support of Conversion of the NBSR to LEU Fuel	Thomas Newton (NIST)
			ATR LEU Conversion Update	Thomas Maddock (INL)
			Continuing LEU Conversion Activities at the High Flux Isotope Reactor	David Renfro (ORNL)
12:30 pm Lunch Break				
6	Conversion Analysis (1) Chaired by Sunday Jonah	1:30 pm	Status of Transient Reactor Test Facility (TREAT) Conversion Preparations	Doug Burns (INL)
			An Overview of Analyses for the LEU Conversion of the Transient Reactor Test Facility (TREAT)	Heather Connaway (ANL)
			Transition Core Calculations for LEU Conversion of NBSR	David Diamond (BNL)
			Verification and Application of New Lateral Heat Conduction Capability in PLTEMP/ANL Code	Son Pham (ANL)
3:00 pm Coffee Break, Chicago River Ballroom Foyer				
7	Fuel Development – Fabrication Technology Chaired by Natraj Iyer	3:30 pm	USHPRR Fuel Fabrication Pillar Process Optimizations and Future Plans	Jared Wight (PNNL)
			Progress on the Fabrication and Scale Up of TREAT Fuel Blocks	Douglas Burns (INL)
			Irradiation of U-Mo/Mg Dispersion Fuel in the NRU Reactor	Ning Wang (CNL)
			Design Demonstration Elements (DDE) and Full-Size Multi-Plate Test of HFIR (FSP-HFIR) Scoping Study	Greg Housley (INL)
			Impacts of Pacific Northwest National Laboratory R&D in Support of the USHPRR Fuel Fabrication Pillar	Nick Lombardo (PNNL)
5:30 pm Adjourn				
Setup Posters, Chicago River Ballroom Foyer				
8	Poster Session and Reception Chicago River Ballroom Foyer Chaired by John Holland	6:30 – 8:00 pm	Assessment of the Total Effective Dose Equivalent for Hypothetical Accidental Release from the LEU GHARR-1 Core	Francis Otoo (GAEC)
			Preparation on the Coated U-7Mo Mini-plates for HAMP-2(HANARO) Irradiation Test	Yong Jin Jeong (KAERI)
			Effect of Fission Rate on the Intergranular Gas Bubble Swelling - A Phase-Field Study	Zhi-Gang Mei (ANL)
			Characterizations of the LEU UMo Powders Used in EMPIRE Irradiation Experiment	Florence Vanni (AREVA-NP)
			Analysis of Thermal Conductivity of U-Mo/Al and U-Mo/Al-5Si Dispersion Fuel	Tae Won Cho (UNIST)
			Development Options for the TUM PVD Zr Application Process for Monolithic U-Mo Fuel	Bruno Baumeister (FRM II)
			Preliminary Manufacturing Studies of the KUCA LEU Conversion Fuels	Bertrand Stepnik (AREVA-NP)
			Inspection of Reactor Vessel and Pool for Ghana's MNSR after Core Removal	Henry Cecil Odoi (GAEC)
			Comparison of Moritz, Fabrega, Saha-Zuber, and Whittle-Forgan Criteria for OFI with 75 Experiments	M. Kalimullah (ANL)
			Preliminary Results of Design Calculation for Research Reactor Using VVR-KN Fuel with Nominal Power 10 MW	Kien-Cuong Nguyen (VINATOM)

			U-10Mo Conversion Burnup Benchmarking Activities for Full-Size LEU Fuel Plates	Joseph Nielsen (INL)
			Development of Temperature-Controlled Irradiation Station for Heavy-Ion Irradiations in ATLAS	Yin-Bin Miao (ANL)
			Evaluation of Effect of Post-Fabrication Voids on the Performance of C2TWP Mini-Plates	Walid Mohamed (ANL)
			Ultrasound high resolution imaging of research reactor fuel cladding thickness	E. Le Clézio (CNRS)
			Investigation of High Energy Heavy Ion Irradiation of ALD Coated LEU U-Mo in a Dispersion Fuel Mini Plate	Kun Mo (ANL)
			The TN@MW, a New Optimized Cask for Research Reactors' Waste Management	Assia Talbi (AREVA-NC)
Wednesday, November 15				
Meeting Room: Embassy Suites, Chicago River Ballroom				
9	Fuel Irradiation Testing and Characterization Chaired by Yeon Soo Kim	8:00 am	U.S. Contributions to Manufacturing of the EMPIRE UMo Irradiation Experiment	Latif Yacout (ANL)
			Manufacturing of the SEMPER FIDELIS UMo Irradiation Experiment	Bertrand Stepnik (AREVA-NP)
			Update on the Progress and Plans for Large-Size Plate Irradiation Testing of Monolithic Fuels	Nicolas Woolstenhulme (INL)
			MiniPlate – 2 (MP–2) Experiment Conceptual Design for Irradiation in the Advanced Test Reactor	Irina Glagolenko (INL)
			Recent Results from the Microstructural Characterization of Irradiated LEU-Mo Fuels	Dennis Keiser (INL)
10:00 am Coffee Break, Chicago River Ballroom Foyer				
10	Conversion Analysis (2) Chaired by Erik Wilson	10:30 am	Overview of PLTEMP/ANL Verification and Validation	M. Kalimullah (ANL)
			Impact of Fuel Heterogeneity on Neutronic Characteristics of U-Mo Dispersion LEU Fuel	Hironobu Unesaki (KURRI)
			Generic Test Plate Assembly Flow Testing Update	Warren Jones (INL)
			Reduced Enrichment for Naval Propulsion Reactors	Alan Kuperman (UT)
12:00 pm Lunch Break				
11	Fuel Performance Measurement, Analysis and Modeling (1) Chaired by Adam Robinson	1:00 pm	Microstructure of Fresh As-Atomized and Annealed U-7Mo Particles: Grain Growth and Mo Homogenization	Hervé Palancher (CEA)
			Overview of Out-of-Pile Testing Activities to Support U-Mo Monolithic Fuel Qualification	James Cole (INL)
			Pore Pressure Estimation in Irradiated UMo	Daniele Salvato (SCK-CEN)
			Fission-Induced Swelling of U-7Mo Fuel	Yeon Soo Kim (ANL)
			Summary of Properties and Fuel Performance Data for USHPRR U-10Mo LEU Conversion Analysis	Laura Jamison (ANL)
3:00 pm Coffee Break, Chicago River Ballroom Foyer				
12	Fuel Performance Measurement, Analysis and Modeling (2) Chaired by Harald Bretkreutz	3:30 pm	Inter-Diffusion Layer Formation in U-Mo/Al Dispersion Fuel at High Power	Bei Ye (ANL)
			Analysis of the Effect of Interaction Layer on Thermo-Physical Properties of U-Mo/Al Dispersion Fuel	Tae Won Cho (UNIST)
			Deflection of Plates by Flow Channel Disparities in Research Reactor Fuel	Cezary Bojanowski (ANL)
			High-Resolution Ultrasonic Sensor for Channel Gap Thickness Measurement	Meriem Chrifi Alaoui (CNRS)
			PRIME code for Thermo-Mechanical Performance Analysis for U-Mo/Al Dispersion Fuel	Gwan Yoon Jeong (UNIST)
5:30 pm Summary and Closure John Stevens (ANL) and Jeff Chamberlin (DOE-NNSA)				

Adjourn

**Thursday
November 16**

Optional Technical Tour of Argonne National Laboratory Facilities

(Bus transportation provided)

Buses will depart the Embassy Suites Hotel at 8:00 am. Following the tour, one bus will stop at O'Hare (approx. 12:30 pm); the other will stop by Midway (approx. 12:30 pm) before returning to the Embassy Suites Hotel at 1:00 pm.