

2024 DOE-NE Advanced Reactor Technologies Gas-Cooled Reactor Program Review Meeting

July 16-18, 2024

July 16-17: Energy Innovation Laboratory (EIL)

July 18: Collaborative Computing Center (C3)

**All buildings are established General Access Area (GAA), no badging is required.*

Agenda

Tuesday, July 16, 2024

Energy Innovation Laboratory (EIL), Conference rooms A111-A113)

775 MK Simpson Blvd, Idaho Falls, ID 83401

(All times are MT)

Advanced Gas Reactor (AGR) TRISO Fuel Qualification Program

08:00	Welcome and Meeting Logistics.....	Gerhard Strydom, INL
08:05	Department of Energy Nuclear Energy Perspectives	Alison Hahn, DOE-HQ
08:15	Department of Energy ART Program Perspective.....	Matt Hahn, DOE-HQ
08:25	ART GCR Program Overview	Gerhard Strydom, INL
08:40	DOE AGR Fuel Development and Qualification Program Overview	Paul Demkowicz, INL
09:05	AGR-3/4 Fuel Compact Fission Product Concentration Profiles	Lu Cai, INL
09:25	Break (10 minutes)	
09:35	AGR-3/4 PIE and Data Analysis.....	Adriaan Riet, INL
10:05	AGR-5/6/7 PIE Overview 2024.....	John Stempien, INL
10:35	AGR-5/6/7 Partial Mass Balance.....	Lu Cai, INL
10:55	Break (10 minutes)	

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AGR TRISO Fuel Qualification Program (Continued)

- 11:05 AGR-5/6/7 Compact Destructive Exams and Safety Testing—ORNL..... Will Cureton, ORNL
- 11:35 AGR-5/6/7 Compact Destructive Exams and Safety Testing 2024—INL John Stempien, INL
- 12:05 Break for lunch setup (15 minutes)**

TRISO Fuels NEUP Projects (60 minutes)

- 12:20 Robust bullet-time tagging and tracking system based on computer vision Muthanna Al-Dahhan,
for individual ex-core TRISO-fueled pebble identification..... Missouri S&T
- 12:40 Statistical modeling of the effect of microstructural heterogeneity on the..... Yongfeng Zhang,
irradiation behavior of TRISO fuel buffer layer University of Wisconsin Madison
- 13:00 Separate-effect Test Facilities Under Prototypical Conditions for N.K. Anand & Y. A. Hassan,
Depressurization and Water-ingress Accidents..... Texas A&M University

AGR TRISO Fuel Qualification Program

- 13:20 Supplemental PIE Activities Supporting Mechanistic Understanding of Tyler Gerczak, ORNL
TRISO Performance.....
- 13:40 Microtensile Specimen Analysis..... Tanner Mauseth, INL
- 14:00 X-ray Computed Tomography of TRISO Fuel William Chuirazzi, INL
- 14:20 Break (15 minutes)**
- 14:35 Thermophysical Property Characterization of Irradiated TRISO Compacts Ethan Hisle, INL
- 14:55 Overview of New Quality Control Methods Development at ORNL in FY24..... Grant Helmreich, ORNL
- 15:15 AGR Fuel Oxidation Testing Summary and Plans John Stempien, INL
- 15:35 Break (15 minutes)**

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AGR TRISO Fuel Qualification Program

- 15:50 Fission Product Release Data Summary Covering AGR-1 through AGR-3/4 John Stempien, INL
- 16:10 Fuel Performance Modeling Status Update and Potential Model ImprovementsBill Skerjanc, INL
- 16:30 NDMAS Portal Updates Courtney Otani, INL
- 16:45 Concluding remarksPaul Demkowicz, INL
- 17:00 **Adjourn**