

February 7, 2017

MEMORANDUM TO: Raj Iyengar, Chief  
Component Integrity Branch  
Division of Engineering  
Office of Nuclear Reactor Research

FROM: Jay S. Wallace, Materials Engineer */RA/*  
Component Integrity Branch  
Division of Engineering  
Office of Nuclear Reactor Research

SUBJECT: SUMMARY OF U.S. NUCLEAR REGULATORY COMMISSION  
COMPUTATION OF NEUTRON FLUENCE INFORMATION  
EXCHANGE PUBLIC MEETING

On January 13, 2016, the U.S. Nuclear Regulatory Commission (NRC) staff hosted a Category 2 public meeting with industry representatives. The participants included representatives from vendors, academia, National Laboratories and the Electric Power Research Institute. This meeting took place at the NRC Headquarters, Three White Flint North, 11601 Landsdown Street, North Bethesda, Maryland.

The purpose of this meeting was to facilitate an exchange of technical information about current NRC-sponsored research on computation of neutron fluence. The meeting summary, participants, agenda and presentation are provided in Enclosures 1, 2, 3, and 4, respectively.

CONTACT: Jay S. Wallace, RES/DE/CIB  
(301) 415-2418

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**ADAMS Accession Numbers: Package: ML17038A125**

<b>OFFICE</b>	RES/DE/CIB
<b>NAME</b>	JWallace
<b>DATE</b>	2/07/2017

**OFFICIAL RECORD COPY**

## U.S. Nuclear Regulatory Commission Public Meeting Summary

**Title:** Computation of Neutron Fluence Information Exchange

**Meeting Identifier:** 20161594

**Date of Meeting:** January 13, 2017

**Location:** NRC Three White Flint North  
11601 Landsdown Street, 1C03  
Rockville MD

**Type of Meeting:** Category 2

**Purpose of the Meeting:** To inform internal NRC stakeholders, industry, and the general public about current research on computational approaches to provide analysis of neutron fluence.

### General Details:

- There were 7 NRC staff in attendance;
- There were approximately 20 members of the public representing 14 organizations;
- The meeting started at 10:00 AM and ended at 12:10 PM
- Approximately 8 members of the public asked questions or made comments

**Summary of Presentations:** Ben Parks (US NRC, NRR) presented a brief summary of the background and the goals of the present research project. Joel Risner (Oak Ridge National Laboratory) presented the current results of neutron fluence simulations for both Boiling Water Reactors and Pressurized Water Reactors. He noted that the calculation of fluence levels outside the beltline region may be subject to phenomena that are not important for beltline region fluence calculations. The presentation discussed the analysis methodology for fluence calculations and presented the results of some parametric studies that illustrate effects of source, geometry, and materials that affect 'beyond the beltline' fluence calculations in ways that they do not affected beltline region calculations.

### Action Items/Next Steps:

- Schedule a meeting in April 2017

### Attachments:

- Meeting agenda
- Attendees
- Presentation slides, ADAMS ML17038A135 and ML17038A136

ATTENDEES

COMPUTATION OF NEUTRON FLUENCE  
INFORMATION EXCHANGE PUBLIC MEETING (CATEGORY 2)  
AT U.S. NUCLEAR REGULATORY COMMISSION HEADQUARTERS  
THREE WHITE FLINT NORTH (ROOMS 1C03), 11601 LANDSDOWN STREET  
NORTH BETHESDA, MD 20852

B. Biwer	Argonne National Laboratory
J. Byard	AREVA
N. Chapoutier	AREVA
D. Jones	TransWare Enterprises
E. Jones	TransWare Enterprises
K. Watkins	TransWare Enterprises
E. Taber	TransWare Enterprises
J. Hall	Westinghouse
M. Manahan	MP Machinery and Testing, LLC
Y. Orechwa	NRC
N. Palm	EPRI
B. Parks	NRC
A. Patel	NRC
K. Roberts	AREVA
M. Sircar	NRC
R. Iyengar	NRC
L. Tilly	GE Power
J. Lamy	GE Hitachi Nuclear
S. Lamb	GE Hitachi Nuclear
C. Edgar	GE Hitachi Nuclear
F. Rahman	GE Hitachi Nuclear
J. Yang	Oak Ridge National Laboratory
J. Risner	Oak Ridge National Laboratory
C. Daily	Oak Ridge National Laboratory
A. Haghighat	Virginia Tech
D. Beacon	NRC
J. Wallace	NRC

AGENDA

COMPUTATION OF NEUTRON FLUENCE  
INFORMATION EXCHANGE PUBLIC MEETING (CATEGORY 2)  
AT U.S. NUCLEAR REGULATORY COMMISSION HEADQUARTERS  
THREE WHITE FLINT NORTH (ROOMS 1C03), 11601 LANDSDOWN STREET  
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- |               |   |
|---------------|---|
| 10:00 – 10:10 | Introduction, B. Parks, J. Wallace (NRC)      |
| 10:10 – 11:00 | Presentation, J. Risner, Charles Daily (ORNL) |
| 11:00 – 11:50 | Discussion                                    |
| 11:50 – 12:00 | Public Comments                               |