

May 26, 2009

MEMORANDUM TO: Gregory V. Cranston, Chief  
Reactor Systems Branch  
Division of Safety Systems Analysis  
Office of Nuclear Reactor Regulation

FROM: Kent A. L. Wood, Reactor Systems Engineer */RA/*  
Reactor Systems Branch  
Division of Safety Systems Analysis  
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF THE MAY 1, 2009, CATEGORY 2 MEETING WITH  
NUCLEAR ENERGY INSTITUTE TO DISCUSS SPENT FUEL  
CRITICALITY AMENDMENT REQUESTS

On May 1, 2009, the Nuclear Regulatory Commission (NRC) staff held a Category 2 public meeting with representatives of Nuclear Energy Institute (NEI), industry representatives and members of the public at NRC offices in Rockville, MD. The purpose of these meetings was to discuss spent fuel criticality analysis. The staff has found that recent spent fuel pool (SFP) license amendment requests have required significantly more interaction and additional information, not in the original submittal, to be able to reach a reasonable assurance determination for the criticality analysis. The probability of an inadvertent criticality in the SFP has increased due to higher fuel enrichments, higher bundle loading density in the SFP, denser and more complex storage patterns, and unexpected (and potentially unknown) deterioration of SFP neutron absorber material. The goal for the May 1<sup>st</sup> meeting was to continue the dialogue started during a February 26th meeting regarding the staff's expectations for spent fuel pool criticality analysis in license amendment requests.

On May 1<sup>st</sup> NEI and industry representatives presented their position on SFP criticality analysis issues from license amendment requests to the staff. Topics included an overview of SFP criticality guidance document NEI intends to have drafted by July, a discussion of a BWR SFP criticality analysis, the use of CASMO, recent ANS/ANSI standards on burnup credit, conservatisms in the analyses, fuel assembly misloading, and Boraflex degradation. Questions were raised and discussed during the course of the presentation. Topics that elicited further discussion included the scope and range of the proposed NEI guidance document, changes in BWR SFP criticality analysis, validation and use of CASMO, the scope and range of the new standards, and whether or not Boraflex is experiencing accelerated degradation.

CONTACT: Kent A.L. Wood NRR/DSS/SRXB  
301-415-4120

G. Cranston

- 2 -

The meeting was also broadcast via video teleconferencing and through the new webinar 'Go To Meeting' tool.

Enclosures:

- 1) List of Attendees
- 2) Industry Meeting Slides

CONTACT: Kent A.L. Wood, DSS/SRXB  
301-415-412

cc: See next page

G. Cranston

-2-

The meeting was also broadcast via video teleconferencing and through the new webinar 'Go To Meeting' tool.

Enclosures:  
List of Attendees  
Industry Meeting Slides

CONTACT: Kent A.L. Wood, DSS/SRXB  
301-415-412

cc: See next page

**DISTRIBUTION:**

PUBLIC RidsOgcRp  
RidsAcrsAcnw&mMailCenter RidsNrrTNakanishi RidsNrrKWood  
RidsNrrGCranston RidsNrrDJackson RidsNrrDSS

Accession Number: ML091410296

OFFICE	NRR/DSS	NRR/DSS	
NAME	KWOOD	GCRANSTON	
DATE	5/22/09	5/26/09	

OFFICIAL RECORD COPY

MEETINGS BETWEEN NUCLEAR REGULATORY COMMISSION (NRC)

AND

NEI, INDUSTRY AND THE PUBLIC

LIST OF ATTENDEES

SPENT FUEL POOL CRITICALITY

MAY 1, 2009

**Attended in Person**

<u>First Name</u>	<u>Last Name</u>	<u>Affiliation</u>
Brian	Gutherman	ACI Nuclear
Scott	Leland	APS
Robert	Neville	APS
Robert	Smith	AREVA
Linda	Farrell	AREVA
Steven	Rowe	Entergy
Dominick	Napolitano	ENERCON
Andrew	Sowder	EPRI
Alan	Wells	EPRI
Adam	Levin	Exelon
Robert	Borland	FENOC
Ed	Knuckles	FPL
Vernon	Mills	GNF
Walid	Metwally	GNF
Kris	Cummings	Holtec
Stefan	Anton	Holtec
Jimmy	Seawright	Luminant
Everett	Redmond	NEI
Ken	Lindquist	NETCO
Matt	Harris	NETCO
Dale	Lancaster	Nuclear Consultant
Kord	Smith	Studsvik
Zita	Martin	TVA
William	Marshall	Westinghouse
Edmond	Mercier	Westinghouse
William	Slagle	Westinghouse
Maureen	Conley	Platts
Andrew	Barto	NRC
Christian	Farmer	NRC
Kimberly	Ropon	NRC
Kent	Wood	NRC
Tony	Nakanishi	NRC
Greg	Cranston	NRC

**Attended in Person (continued)**

Zhian	Li	NRC
Michael	Call	NRC
Meraj	Rahimi	NRC
Carl	Withee	NRC
Natreon	Jordan	NRC

**Attended by phone or VTC:**

<u>First Name</u>	<u>Last Name</u>	<u>Affiliation</u>
Deann	Raleigh	Curtiss Wright
Bob	Hall	Dominion
William	Murphy	Duke
John	Massari	Constellation
Tracy	Bishop	Westinghouse
Justin	Clarity	Westinghouse
Andrew	Blanco	Westinghouse
Richard	Chang	SCE
Dang	Ho	SNC
Richard	Roenigk	Omaha Public Power District

CC:

Mr. Anthony Pietrangelo, Vice President  
Regulatory Affairs  
Nuclear Energy Institute  
1776 I Street, NW, Suite 400  
Washington, DC 20006-3708  
[arp@nei.org](mailto:arp@nei.org)

Mr. Alexander Marion, Vice President  
Nuclear Operations & Engineering  
Nuclear Energy Institute  
1776 I Street, NW, Suite 400  
Washington, DC 20006-3708  
[am@nei.org](mailto:am@nei.org)

Mr. Tom Houghton, Director  
Safety-Focused Regulation  
Nuclear Energy Institute  
1776 I Street, NW, Suite 400  
Washington, DC 20006-3708  
[tch@nei.org](mailto:tch@nei.org)

Mr. James H. Riley, Director  
Engineering  
Nuclear Energy Institute  
1776 I Street, NW  
Washington, DC 20006-3708  
[jhr@nei.org](mailto:jhr@nei.org)

Mr. Steven Kraft, Senior Director  
Used Fuel Management  
Nuclear Energy Institute  
1776 I Street, NW, Suite 400  
Washington, DC 20006-3708  
[spk@nei.org](mailto:spk@nei.org)

Mr. Dennis Buschbaum  
PWROG Chairman  
Comanche Peak Steam Electric Station  
6322 North Farm to Marked Rd 56  
Mail Code E15  
Glen Rose, TX 76043  
[Dennis.Buschbaum@luminant.com](mailto:Dennis.Buschbaum@luminant.com)

Mr. Everett Redmond, Senior Project  
Manager  
Nuclear Energy Institute  
1776 I Street, NW, Suite 400  
Washington, DC 20006-3708  
[elr@nei.org](mailto:elr@nei.org)

Mr. Doug Coleman  
BWROG Chairman  
Columbia Generating Station Engineering  
Center  
Mail Drop PE04  
North Power Plant Loop  
Richland, WA 99352-0968  
[dwcoleman@energy-northwest.c](mailto:dwcoleman@energy-northwest.c)

Ms. Barbara Lewis  
Assistant Editor  
Platts, Principal Editorial Office  
1200 G St., N.W., Suite 1100  
Washington, DC 20005  
[Barbara\\_lewis@platts.com](mailto:Barbara_lewis@platts.com)