

June 8, 2012

MEMORANDUM TO: David W. Alley, Acting Chief  
Piping and NDE Branch  
Division of Engineering  
Office of Nuclear Reactor Regulation

FROM: John C. Tsao, Senior Materials Engineer */RA by David Alley for/*  
Piping and NDE Branch  
Division of Engineering  
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF PUBLIC MEETING WITH THE INDUSTRY  
REPRESENTATIVES REGARDING RECENT OPERATING  
EXPERIENCE WITH ULTRASONIC INSPECTIONS OF DISSIMILAR  
METAL BUTT WELDS

On May 30, 2012, the U.S. Nuclear Regulatory Commission (NRC) staff held a public meeting with industry representatives at the NRC Headquarters in Rockville Maryland to discuss recent operating experience regarding ultrasonic testing (UT) of a nickel-based Alloy 82/182 dissimilar metal weld at a domestic nuclear power plant. In March 2012, a licensee was not able to detect five significant flaws in the dissimilar metal weld joining the hot leg and the steam generator nozzle even though the licensee used the UT that was qualified in accordance with the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code), Section XI, Appendix VIII, *Performance Demonstration for Ultrasonic Examination Systems*.

As a result of the operating experience, the NRC raised the following concerns regarding: (1) the reliability of the UT probe design, (2) the qualification of the probe and associated mock-ups, (3) the potential use of unqualified probe, (4) the potential deficiency in the UT qualification using mock-ups per Performance Demonstration Initiative program, and (5) UT records.

The industry stated that it recognized the significance of the recent operating experience that raised the NRC's concern regarding the reliability of UT examination. To resolve the reliability of the UT examination, the industry presented the organizational framework that includes executive teams providing oversight and technical groups performing studies. The industry discussed its action plans including establishing the NDE Implementation Focus Group (NIFG) to resolve the UT examination reliability issue. The industry stated that NIFG will use the 2012 operating experience data as a starting point to begin its evaluation, but will not limit its efforts to this specific operating experience event. The initial study will focus on reliability issues relating directly to the manual UT examinations of dissimilar metal welds and lessons learned will be expanded to other nondestructive examination applicability.

The industry will evaluate technical and administrative improvements to processes associated with UT examinations of dissimilar metal welds. The industry will provide guidance to utilities and vendors as a part of the initiatives toward resolving the UT reliability issue. In the meeting, the industry also presented its responses and specific action plans to address the above NRC's five concerns.

D. Alley

- 2 -

The NRC and the industry representatives agreed to meet periodically to assess progress toward the resolution of this issue. The list of participants is in Enclosures 1. The meeting agenda and presentation slides are included in Enclosures 2 and 3, respectively.

CONTACT: John Tsao, NRR/DE  
301-415-2702

Enclosures:

1. Participants List
2. Meeting Agenda
3. Presentations

The NRC and the industry representatives agreed to meet periodically to assess progress toward the resolution of this issue. The list of participants is in Enclosures 1. The meeting agenda and presentation slides are included in Enclosures 2 and 3, respectively.

CONTACT: John Tsao, NRR/DE  
301-415-2702

Enclosures:

- 4. Participants List
- 5. Meeting Agenda
- 6. Presentations

DISTRIBUTION:

DE R/F	RidsNrrDci	EPNB	WNorris	RHardies	ACsontos
GWerner	DHills	SVias	RConte	TLupold	ARezai
SRichards	PHiland	MCheok	SCumblidge	CNove	BLin
HGray	HRathbun	KHoffman	JCollins	WNorris	AButcavage

**ADAMS Accession Numbers: Package: ML12160A582**

**Meeting Summary: ML12160A593**

**Meeting Notice: ML12135A230**

**Agenda: ML12153A366**

**Slides: ML12153A386**

<b>OFFICE</b>	NRR/DE/EPNB	NRR/DE/EPNB
<b>NAME</b>	JTsao	DAlley
<b>DATE</b>	06/08/2012	06/08/2012

**OFFICIAL RECORD COPY**

PARTICIPANTS FOR THE NRC/INDUSTRY PUBLIC MEETING  
MAY 30, 2012

<b>NAME</b>	<b>ORGANIZATION or Email</b>
Bernie Rudell	<a href="mailto:Bernie.Rudell@cengllc.com">Bernie.Rudell@cengllc.com</a>
Brad Thigpen	<a href="mailto:brad.thigpen@areva.com">brad.thigpen@areva.com</a>
Carl Latiolais	<a href="mailto:clatiola@epri.com">clatiola@epri.com</a>
Chuck Wirtz	<a href="mailto:cjwartz@firstenergycorp.com">cjwartz@firstenergycorp.com</a>
Dan Nowakowski	<a href="mailto:Dan.Nowakowski@fpl.com">Dan.Nowakowski@fpl.com</a>
Daniel Cordes	<a href="mailto:DRCordes@southernco.com">DRCordes@southernco.com</a>
Dave Anthony	<a href="mailto:David.Anthony@exeloncorp.com">David.Anthony@exeloncorp.com</a>
David King	<a href="mailto:david02.king@urs.com">david02.king@urs.com</a>
David Zimmerman	Duke Power
Dennis Tougaw	<a href="mailto:detouga@wcnoc.com">detouga@wcnoc.com</a>
Donald Adamonis	<a href="mailto:adamondc@westinghouse.com">adamondc@westinghouse.com</a>
Frank C. Leonard	<a href="mailto:fcleonard@tva.gov">fcleonard@tva.gov</a>
William Sims	<a href="mailto:WSims@entergy.com">WSims@entergy.com</a>
Steve Scott	Entergy
Mike Bratton	Entergy
Chris Pickering	Entergy
Shane Charbonnet	Entergy
Lina Cossio-Gonzalez	Entergy
Greg Gerzen	<a href="mailto:Greg.Gerzen@exeloncorp.com">Greg.Gerzen@exeloncorp.com</a>
Greg Selby	<a href="mailto:gselby@epri.com">gselby@epri.com</a>
Harold Queen	<a href="mailto:hqueen@structint.com">hqueen@structint.com</a>
Jack Spanner	EPRI
Jeff Devers	<a href="mailto:jdevers@curtisswright.com">jdevers@curtisswright.com</a>
Joe Donahue	Joe.W.Donahue@pgnmail.com
Joel Harrison	<a href="mailto:joel.harrison@urs.com">joel.harrison@urs.com</a>
John Hayden	jhayden@structint.com
John Lindberg	<a href="mailto:Jlindberg@epri.com">Jlindberg@epri.com</a>
Kevin Hacker	<a href="mailto:Kevin.J.Hacker@Dom.com">Kevin.J.Hacker@Dom.com</a>
Mark Huting	<a href="mailto:Mark.Huting@xenuclear.com">Mark.Huting@xenuclear.com</a>
Michael Briley	<a href="mailto:mbriley@entergy.com">mbriley@entergy.com</a>
P. T. Vu	<a href="mailto:Phong.vu@duke-energy.com">Phong.vu@duke-energy.com</a>
Paul E Deeds Jr.	<a href="mailto:pdeeds@entergy.com">pdeeds@entergy.com</a>
Robin Dyle	<a href="mailto:rdyle@epri.com">rdyle@epri.com</a>
Rich Fuller	<a href="mailto:rfuller@firstenergycorp.com">rfuller@firstenergycorp.com</a>
Richard Gimple	<a href="mailto:rigimpl@wcnoc.com">rigimpl@wcnoc.com</a>
Rodney Sheffield	Duke Power
Ronald Swain	EPRI
Ronald Williams	<a href="mailto:RWILL15@entergy.com">RWILL15@entergy.com</a>
Steven Todd	<a href="mailto:stodd@ihiswt.com">stodd@ihiswt.com</a>

<b>NAME</b>	<b>ORGANIZATION or Email</b>
William Jensen	<a href="mailto:William.jensen@nexteraenergy.com">William.jensen@nexteraenergy.com</a>
William Muilenburg	<a href="mailto:wimuile@wcnoc.com">wimuile@wcnoc.com</a>
Michael Anderson	Michael.Anderson@PNNL.gov
Steve Doctor	PNNL
Wallace Norris	NRC
Keith Hoffman	NRC
Carol Nove	NRC
Stephen Cumblidge	NRC
Jay Collins	NRC
Pat Hiland	NRC
Mike Cheok	NRC
David Alley	NRC
Tim Lupold	NRC
Harold Gray	NRC
Robert Hardies	NRC
Howard Rathbun	NRC
Aladar Csontos	NRC
Bruce Lin	NRC
John Tsao	NRC
Alexander Butcavage	NRC
Ali Rezai	NRC

AGENDA  
FOR THE NRC/INDUSTRY PUBLIC MEETING  
AT NRC HEADQUARTERS  
11555 ROCKVILLE PIKE,  
ROCKVILLE, MD  
MAY 30, 2012

**Wednesday, May 30, 2012, 1:00 p.m. – 4:00 p.m.**

1:00 – 1:15	NRC Introduction
1:15 – 1:25	Utility Executive Perspective; Joe Donahue
1:25 – 2:05	Industry Response to DM NDE OE; Mark Huting
2:05 – 2:15	EPRI Engagement; Greg Selby
2:15 – 2:30	Break
2:30 – 3:15	NRC pre-submitted question discussion; Carl Latiolais
3:15 – 3:20	Utility Executive closure remarks; Joe Donahue
3:20 – 3:35	Public Comments
3:35 – 3:45	Action item discussion
3:45 – 4:00	Conclusions NRC/Industry

HANDOUT AND PRESENTATIONS  
FOR MAY 30, 2012, NRC/INDUSTRY PUBLIC MEETING

(ADAMS Accession Number ML12153A339)

- NDE reliability issues Industry perspective and action plan
- Meeting Agenda