

February 25, 2015

MEMORANDUM TO: David W. Alley, Chief  
Component Performance, NDE, and Testing Branch  
Division of Engineering  
Office of Nuclear Reactor Regulation

FROM: Ali Rezai, Materials Engineer */RA/*  
Component Performance, NDE, and Testing Branch  
Division of Engineering  
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF INDUSTRY / U.S. NUCLEAR REGULATORY  
COMMISSION NONDESTRUCTIVE EXAMINATION TECHNICAL  
INFORMATION EXCHANGE PUBLIC MEETING (TAC NUMBER  
ME8140)

On January 13-15, 2015, the U.S. Nuclear Regulatory Commission (NRC) staff hosted a Category 2 public meeting with industry representatives. The participants from industry included representatives from licensees, vendors, and the Electric Power Research Institute (EPRI) Nondestructive Examination (NDE) Center consisting of the NDE Integration Committee (IC) and the Performance Demonstration Initiative (PDI) program. 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 the current and emerging NDE issues as well as to discuss lessons learned from the recent operating experience (OE). The meeting participants, agenda, list of action items, handouts and presentations are provided in Enclosures 1, 2, 3, and 4, respectively.

Industry provided an update on the NDE activities that involve interaction with the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code). This presentation titled "NDE Program Related Code Activities" is in Enclosure 4, Item Number 1. Industry has developed code cases and/or proposed code change as a result of PDI program extent-of-condition assessment review. The assessment identified one non-compliance that was related to bolting ultrasonic testing (UT). Industry developed a revision to ASME Code Case N-845 in order to align the program and Supplement 8 of Appendix VIII, Section XI of the ASME Code. In addition, industry has been working on several code actions to clarify the requirements and intent of Appendix VIII.

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Industry presented the PDI qualification activities, which included statistics of pass rates, new procedure development, revision to the existing procedure, and new sample fabrication. This presentation titled "PDI Program Update" is provided in Item Number 1 of Enclosure 4.

In the presentation titled "Adoption of Latest Procedure Versions (Action 2014-01-04)" in Item Number 1 of Enclosure 4, industry explained the PDI processes for revising the PDI generic procedures as well as having the latest version of the procedures to be adopted and implemented by utilities and vendors. Industry provided this information at the request of the NRC staff. The PDI's past course of action was as follows: when PDI published a new revision to an existing generic procedure, PDI considered the previous revisions of the procedure to no longer be the current best procedure to be used by utilities and vendors. Utilities and vendors could adopt the latest version of the procedures at their discretion. PDI has no jurisdiction over utilities and/or vendors to require adoption of the latest version of the procedures within one year.

In 2013, PDI FG promulgated a new policy recommending utilities and vendors adopt and implement the latest revision of generic procedures within one year of effective date. In late 2014, EPRI NDE IC and Action Plan Committee proposed and approved Nuclear Energy Institute (NEI) 03-08 "Good Practice" guidelines for the use of PDI generic and EPRI Appendix VIII qualified procedures.

Furthermore, industry noted that vendor-specific Appendix VIII qualified UT procedures are controlled by neither PDI nor EPRI NDE IC. Each utility has the sole responsibility to ensure that a vendor-specific procedure being used at its facility is applicable for the examinations being performed. The NRC staff expressed concerns that, even with the industry's new policy and NEI "Good Practice" guidelines, utilities and/or vendors may elect not to adopt and implement the latest revision of the procedures because it is not a mandatory requirement but rather a "Good Practice." It is also not clear to the NRC staff, how the "Good Practice" trickles down to the vendors. The NRC staff requested that PDI consider a "Sunset Policy" regarding use of prior PDI generic procedures and consider making the use of revised procedures mandatory through NEI 03-08 guidelines. This discussion has been identified as an action item for future teleconference meetings.

Industry provided an update on activities related to the PDI bolting program. This presentation titled "PDI Bolting Program Update" is provided in Item Number 1 of Enclosure 4. Industry described details of the PDI bolting program, and highlighted the differences and non-compliances identified between the program and the Supplement 8 of Appendix VIII, Section XI of the ASME Code requirements. Industry noted that when PDI discovered these differences, it immediately issued "NDE Alert 2013-09" on December 23, 2013. Industry also informed the NRC by a drop-by meeting on December 16, 2013, and a public meeting on January 8, 2014. In addition, industry took appropriate corrective actions which include the following: developing ASME Code Case N-834 to ensure the PDI program is in alignment with the ASME Code requirements, drafting an update to the PDI generic procedure for bolting, performing extent of condition evaluation, and developing preventive actions under the EPRI Quality Procedures to preclude recurrence. The ASME Code approved Case N-834. PDI will issue a new revision to its current PDI generic procedure for bolting as soon as the NRC promulgates an Enforcement Guidance Memorandum (EGM) and Regulatory Issue Summary (RIS). In the meanwhile, PDI has taken additional action by providing interim guidance to utilities and vendors on the bolting UT via NDE Alert 2014-03. The NRC staff requested that industry include the NRC on the NDE

Alert list. The NRC staff noted that EGM/RIS will be issued shortly pursuant to final approval. On January 29, 2015, the NRC issued RIS 2015-01 "Qualification Requirements for Bolt and Stud Non-destructive Examinations," (Agencywide Documents Access and Management System (ADAMS) Accession Number ML14169A612).

Industry presented a status update on equipment equivalency. This presentation titled "Ultrasonic Instrument Equivalency, The PDI Process for Adding UT Instruments to Table 3" is provided in Item Number 1 of Enclosure 4. Industry explained the processes PDI utilizes in revising Tables 2 and 3. These tables document the UT instruments and settings.

At the request of the NRC staff, industry presented statistical data on pass rates for the Appendix VIII qualifications that PDI has administered. This presentation titled "PDI Qualification Statistics Update" is provided in Item Number 1 of Enclosure 4. The NRC staff sought to understand the industry's pass rates for the intergranular stress corrosion cracking (IGSCC) qualifications. The data industry provided referred to the combined qualifications and not for the IGSCC stand-alone qualification in which the NRC staff was primarily interested. The NRC staff asked industry to provide pass rates data for the IGSCC qualifications.

At the request of the NRC staff, industry presented a historical overview of the successful resolution of the PDI inside diameter depth sizing accuracy issue. This presentation titled "Resolution of Sizing Accuracy Criteria for UT Performed from the Inside of a Pipe" is provided in Item Number 1 of Enclosure 4. This issue has burdened EPRI, utilities, and the NRC for a decade by creating several dozens of relief requests. Finally, a resolution was reached as a result of memorandum of understanding that made the coordinated collaborations between EPRI and the regulators possible. EPRI Report Number 3002000612 (MRP-373) documents the technical basis behind this resolution. This report is freely downloadable from [www.epri.com](http://www.epri.com). The outcomes of this resolution have resulted in revising ASME Code Cases N-695 and N-696 that were approved by the ASME Code. However, the NRC has not approved Code Cases N-695 and N-696 in the Regulatory Guide 1.147; therefore, the relief request is still required from the NRC for their use.

Industry discussed the NDE research initiative with goals of developing and maintaining an NDE recommendations document based on the OE and emerging issues as well as best practices. This presentation titled "Response to Emerging Issues" is provided in Item Number 1 of Enclosure 4. The initial stage for developing this document will be conducted in 2015 and 2016. It is envisioned this document will be broad in scope and contain all NDE methods and applications. It is further envisioned this document will facilitate in identifying future research initiatives to improve the NDE's state of practices and reliability.

At the request of the NRC staff, industry presented a status update on the Diablo Canyon Nuclear Power Plant (Diablo Canyon) extent of condition assessments. This presentation titled "Diablo Canyon OE (Action 2014-04-01) (Action 2014-07-03)" is provided in Item Number 1 of Enclosure 4. In 2013, an inservice inspection (ISI) performed by the manual non-encoded phased array ultrasonic technique discovered weld overlay (WOL) fabrication flaws that were not identified during post WOL inspection performed by the manual non-encoded conventional ultrasonic technique. Both the ISI and the post WOL inspection were performed by the qualified examiner using the PDI qualified UT procedures. EPRI NDE IC thoroughly evaluated the Diablo Canyon OE and concluded that human performance errors and less than adequate implementation of the PDI generic procedure were the cause. EPRI

NDE IC believes that the manual non-encoded conventional UT procedure is capable of detecting the flaws if applied properly. The NRC staff questioned industry on the quality and integrity of similar inspections performed in other plants on similar weld overlays. Discussions on the extent of condition assessments of Diablo Canyon issue has been identified as an action item for future teleconference meetings.

At the request of the NRC staff, industry discussed the reasons, benefits, and added values that team scanning may offer when applied in the field. This presentation titled "Team Scanning Effectiveness Assessment" is provided in Item Number 1 of Enclosure 4. Industry provided sample photos demonstrating difficult situations in which team scanning seems to be necessary. Industry maintains that, if team scanning is not used in these difficult situations, the effectiveness and reliability of the inspections performed would be questionable. The NRC staff acknowledged the industry's recent efforts to conduct a PDI laboratory demonstration of team scanning to assess a team coordination and reliability of a team inspection. However, the NRC staff is not convinced that the limited laboratory demonstrations are sufficient and adequate to conclude that implementing team scanning in the field environment will have the same team coordination and inspection reliability observed in the laboratory setup. Therefore, the NRC staff sees that further evaluation of team scanning in the laboratory and field is warranted. Detailed assessment of the influence of human performance factors on the integrity of inspection is necessary.

Industry provided an overview of the current and future NDE projects under the Materials Reliability Program (MRP) and the Boiler Water Reactor (BWR) Vessel Internal Program (VIP). These presentations titled "Overview of MRP Inspection TAC NDE Projects" and "Overview of BWRVIP NDE Projects" are provided in Item Number 1 of Enclosure 4.

Industry provided an overview of communications between EPRI and the NRC Office of Research (RES) regarding the EPRI's ongoing and new projects and work-plans. This presentation titled "NDE Program projects of regulatory interest" is provided in Item Number 1 of Enclosure 4. In these communications, the NRC RES staff has identified those projects that are of high and low interest to the regulators.

Industry presented the guidelines developed for use of encoded UT technique. This presentation titled "Industry Guidance on Selecting Encoded UT Technology" is provided in Item Number 1 of Enclosure 4. The development of these guidelines was the result of the efforts of the NDE Improvement Focus Group (NIFG) to enhance UT. These guidelines are published in Appendix A of EPRI Report Number 3002000091, Revision 1, "Nondestructive Evaluation: Guideline for Conducting Ultrasonic Examinations of Dissimilar Metal Welds." The ASME Code does not require use of encoded UT. Industry sees that some welds can benefit from encoded UT. However, the benefits must be carefully evaluated due to cost, time for setup/removal of testing equipment and protective shielding, and the radiation dose rates accrued by the involved personnel.

Industry presented a progress update on cast austenitic stainless steel (CASS) examinations. This presentation titled "Update of Progress in the Examination of CASS Welds" is provided in Item Number 1 of Enclosure 4. The results of industry's extensive research and development activities on the NDE of CASS were published in EPRI Report Numbers 1021146, 1022924, and 1025217, 3002000444, 1021145, 1026773, 1022950, and 1022928. The recent findings on CASS examination have led industry in the development of ASME Code Case N-824 that was

approved by the ASME Code. However, the NRC has not approved ASME Code Case N-824 in Regulatory Guide 1.147. Therefore, relief is required from the NRC for its use. Industry envisions that utilities will adopt and use ASME Code Case N-824; however, proposed NRC conditions increase the difficulty of implementing this code case, therefore discourage its use.

The NRC staff discussed initiating internal research on human factors and the "Transfer Function." This presentation titled "Planned NRC Research into Human Factors and Training" is provided in Item Number 2 of Enclosure 4. The goals are to identify and assess factors that can degrade the quality of NDE in the field against the results found in PDI qualification tests. The NRC has initiated this research due to the recent human performance issues in NDE identified by the industry during the root cause analysis. Examples include recent OE on missed flaws by UT in the Diablo Canyon pressurizer overlay welds, the Shearon Harris Nuclear Power Plant control rod drive nozzle, and the North Anna Power Station. The NRC staff envisions that addressing human factor issues will provide an opportunity to improve inspections of safety significant welds. Previous NRC research efforts on human factors in NDE were documented in NRC NUREG/CR-4436 in 1986, NUREG/CR-4600 in 1986, and NUREG/CR-6605 in 1998. The NRC staff purports that direct industry and EPRI participation and collaboration with the NRC RES through MOU will provide valuable information that may be used to minimize the effects of human performance factors in NDE and improve the NDE reliabilities in the field.

The NRC staff presented an overview and status of the collaborative NDE research projects between the NRC RES and EPRI through MOU. This presentation titled "Overview of NRC/EPRI NDE MOU" is provided in Item Number 3 of Enclosure 4. The NRC staff described and highlighted the benefits of MOU which is a vehicle that allows and encourages cooperation between the regulators and industry in nuclear safety research. The outcomes of MOU benefit both the regulators and the nuclear industry in nuclear safety. Examples of ongoing and new MOUs include high-density polyethylene pipe (HDPE), NDE modeling which includes the UT modeling and simulation, visual testing, CASS, and UT in lieu of radiographic testing (RT). Examples of completed MOUs that has benefited both the NRC and industry include NUREG/CR-7165 documented technical basis of Appendix VIII of Section XI to the ASME Code (ADAMS Accession Number ML13144A107), and EPRI Report Number 3002000612 (MRP-373) documented the resolution for the inside diameter pipe examination depth sizing root mean square error. These reports are publicly available.

The NRC staff presented issues with surface examinations and expectations for acceptance standards and qualification requirements for the eddy current testing. This presentation titled "NRC Expectations for Eddy Current Inspections of Peened, Inlaid, and Onlaid Dissimilar Metal Welds" is provided in Item Number 4 of Enclosure 4.

In this presentation, the NRC staff discussed lack of requirements for CASS welds inspections in Appendix VIII of Section XI. This presentation titled "CASS Inspections: The Path Forward" is provided in Item Number 5 of Enclosure 4. The NRC staff suggested that industry needs to take the initiative in developing Supplement 9 of Appendix VIII for CASS piping particularly for pipes with thickness less than 1.6 inches. In the meantime, ASME Code Case N-824 can be considered a useful stop-gap until Supplement 9 is completed and implemented.

In this presentation, the NRC staff provided suggestions to help utilities develop a complete relief request (RR). Submitting a complete RR will reduce burdens on both the NRC staff and utilities by minimizing requests for additional information after the receipt of the RR. This

presentation titled "Coverage Relief Requests" is provided in Item Number 6 of Enclosure 4. Industry welcomed this idea. To improve the relief request process, this subject has been identified as an action item to be further discussed during future teleconference meetings.

The NRC staff presented a status update on the UT in lieu of RT research project. This presentation titled "UT in Lieu of RT for Nuclear Power Plant Applications" is provided in Item Number 7 of Enclosure 4.

The Pacific Northwest National Laboratory (PNNL), the NRC contactor, presented results of a study conducted under NRC funded research. This study has addressed the difference in ultrasonic responses from the implanted thermal fatigue cracks as compared to responses from the hot iso-statically pressed (HIP) electric discharge machining (EDM) notches. This presentation titled "Preliminary Flaw Response Comparison" is provided in Item Number 8 of Enclosure 4.

The next three teleconferences are scheduled for Wednesday on April 8, July 8, and October 14, 2015.

Enclosures:

1. Attendance List
2. Meeting Agenda
3. List of Action Items
4. List of Handouts and Presentations

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**ADAMS Accession Numbers:**

**Package: ML15056A302**

**Summary: ML15026A289**

**Meeting Notice: ML14329B338**

**ADAMS Accession Number: ML15026A289**

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<b>NAME</b>	ARezai	DAlley
<b>DATE</b>	02/03/2015	02/25/2015

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ATTENDANCE

FOR INDUSTRY / U.S. NUCLEAR REGULATORY COMMISSION NONDESTRUCTIVE  
EXAMINATION TECHNICAL INFORMATION EXCHANGE PUBLIC MEETING

<b>NAME</b>	<b>ORGANIZATION</b>
Kevin Hacker	Dominion
Gary Lofthus	SNC
Greg Selby	EPRI
Carl Latiolais	EPRI
David Anthony	Exelon
Tony Oliveri	PSEG
Dan Nowakowski	NextEra
Damon Priesttley	TVA
Edison Fernandez	APS
Jack Spanner	EPRI
Leo Martin	Duke
Jeff Devers	LMT
Fred Hull	LMT
Lonnie Cochran	LMT
Robert Bouck	EPRI
Phil Ashwin	EPRI
Christopher Roche	GEH
John Hayden	SIA
Joel Harrison	AECOM
Ted Sullivan	PNNL
Aaron Diaz	PNNL
Mike Anderson	PNNL
Dave Alley	USNRC
Robert Hardies	USNRC
Josh Kusnick	USNRC
Carol Nove	USNRC
Jay Collins	USNRC
Dave Rudland	USNRC
Anthony Cinson	USNRC
Keith Hoffman	USNRC
Ali Rezai	USNRC
John Tsao	USNRC
Eric Reichelt	USNRC
Stephen Cumblidge	USNRC
Iouri Prokofiev	USNRC

<b>NAME</b>	<b>ORGANIZATION</b>
Wallace Norris	USNRC
Matthew Homiack	USNRC
Steve Vitto	USNRC
Amy D'Agostino	USNRC
Steven Downey	USNRC
Stacey Rosenberg	USNRC
Rob Tregoning	USNRC
Jeff Poehler	USNRC

## AGENDA

FOR INDUSTRY / U.S. NUCLEAR REGULATORY COMMISSION NONDESTRUCTIVE  
EXAMINATION TECHNICAL INFORMATION EXCHANGE PUBLIC MEETING  
NRC HEADQUARTERS, THREE WHITE FLINT NORTH, ROOM 1C03,  
11601 LANDSDOWN STREET, NORTH BETHESDA, MARYLAND  
JANUARY 13 – 15, 2015

Time	Topic	Topic (detail)	Presenter
<b>Tuesday</b>			
<b>Opening items</b>			
1:00	Meeting opening	<ul style="list-style-type: none"> <li>Attendance, announcements, action items, EPRI and advisory organizational update</li> </ul>	Industry/NRC
<b>Code related</b>			
1:30	ASME Code Cases <i>(Action 2014-07-04)</i>	<ul style="list-style-type: none"> <li>Reviews of industry proposed Code Cases (or revisions) currently in Working Group</li> </ul>	Industry
<b>PDI</b>			
2:00	PDI update	<ul style="list-style-type: none"> <li>Standard update of PDI operational items</li> </ul>	Industry
2:30	Adoption of latest procedure versions <i>(Action 2014-01-04)</i>	<ul style="list-style-type: none"> <li>Provide status and discussion of industry guidance for adoption of the latest versions of generic procedures</li> </ul>	Industry
3:00	Break		
3:15	Bolting qualification issue <i>(Action 2014-04-04)</i>	<ul style="list-style-type: none"> <li>Status of actions to bring industry bolting qualification program and Appendix VIII, Supplement 8 into alignment. Both Industry and NRC have actions.</li> </ul>	Industry/NRC
4:55	Public comments/questions		NRC
5:00	Adjourn		
<b>Wednesday</b>			
8:00	Instrument equivalency	<ul style="list-style-type: none"> <li>PDI explain the process for adding UT instruments to Table 3</li> </ul>	Industry
8:30	PDI qualification statistics update	<ul style="list-style-type: none"> <li>Statistics for personnel who have attempted the Appendix VIII qualification examinations and passed/failed over the past year</li> </ul>	Industry

Time	Topic	Topic (detail)	Presenter
9:00	Resolution of sizing accuracy criteria for UT performed on the inside of a pipe	<ul style="list-style-type: none"> <li>Overview of how this issue was resolved, using RMSE. This is to provide a historical perspective on the successful resolution of a difficult technical issue.</li> </ul>	
9:45	Break		
	<b>Reliability</b>		
10:00	POD for NDE as performed in the field	<ul style="list-style-type: none"> <li>Discussion: how to account for the "transfer function" between qualification and field application of procedures; includes team scanning, human factors, ongoing proficiency maintenance activities after qualification.</li> </ul>	NRC
10:45	Response to emerging issues	<ul style="list-style-type: none"> <li>NDE performance in the area of safety culture, thoroughness of response to issues, dissemination of OE etc.</li> </ul>	Industry
11:15	Diablo Canyon OE (Action 2014-04-01) (Action 2014-07-03)	<ul style="list-style-type: none"> <li>Industry action to identify cross-cutting issues and extent of condition activities from Diablo Canyon RCE</li> </ul>	Industry
12:00	Public comments/questions		NRC
12:05	Lunch		
1:00	Team Scanning	Present the results of the "Team Scanning Assessment" performed by the NIFG	Industry
	<b>Broad NDE picture</b>		
1:45	Broad overview of Industry NDE projects	<ul style="list-style-type: none"> <li>Brief descriptions of all projects in:                             <ul style="list-style-type: none"> <li>MRP and BWRVIP NDE groups</li> <li>NDE Program (limited to scope of regulatory interest)</li> </ul> </li> <li>Deeper dive into projects specifically and jointly identified for closer regulatory cognizance, during March 2014 meetings</li> </ul>	Industry
3:00	Break		
3:30	Overview of activities under EPRI/RES MOU	<ul style="list-style-type: none"> <li>Industry and RES are engaged in joint research, under a Memorandum of Understanding (MOU). This presentation is to provide a medium-level overview of activities.</li> </ul>	Industry/NRC
	<b>Other</b>		
4:15	Capability of ET for surface examinations	<ul style="list-style-type: none"> <li>Techniques for examining the weld of BMIs and characterizing flaws</li> <li>ET acceptance criteria, given current ASME Code application of the PT</li> </ul>	NRC

Time	Topic	Topic (detail)	Presenter
		criteria to ET <ul style="list-style-type: none"> <li>Assessing near-surface detection capabilities of ET</li> <li>Discussion of performance demonstration aspects of all of the above</li> </ul>	
4:55	Public comments/questions		NRC
5:00	Adjourn		
<b>Thursday</b>			
8:00	Industry guidance on selecting encoded UT technology	<ul style="list-style-type: none"> <li>In Spring 2013 Industry published guidelines for selection of encoded versus non-encoded UT examination technology. This is an Industry update on licensees' implementation of the guidance.</li> </ul>	Industry
8:30	Cast stainless steel	<ul style="list-style-type: none"> <li>Update of progress in the examination of CASS welds.</li> </ul>	Industry/NRC
9:00	What NRC looks for in a complete relief request to minimize RAIs		NRC
9:30	UT in lieu of RT for carbon steel		NRC
10:00	Break		
10:15	A flaw response comparison for thermal fatigue cracks versus EDM notches		NRC
<b>Closing items</b>			
10:45	Open discussion	<ul style="list-style-type: none"> <li>Further discussion of any items; looking ahead</li> </ul>	Industry/NRC
11:30	Closing items	<ul style="list-style-type: none"> <li>New action items, announcements, next meeting</li> </ul>	Industry/NRC
11:55	Public comments and questions		NRC
12:00	Adjourn		

ACTION ITEMS

Open and New Actions

Action No.	Topic	Own by	Action Description	Date Open	Due
2014-01-04	PDI generic procedures	Ind	Regarding NDE IC's consideration of NEI 03-08 implementation for PDI policy 13-01 on adoption of newer versions of PDI generic procedures, report status at next quarterly call	01/09/14	Ongoing
2014-01-07	Examiner population	Ind	Discuss false call rate data availability at next quarterly call	01/09/14	Ongoing
2014-01-08	Coverage calculations	NRC	Send to NDE IC Chairman examples of well-prepared coverage submittals, with clarification of what staff would like to see	01/09/14	Ongoing
2014-01-09	Coverage calculations	Ind	Report status on developing industry guidance, at next quarterly call	01/09/14	Ongoing
2014-04-01	Cross-cutting issues	Ind	Provide continuing updates on improvement activities resulting from recent, prominent OEs -- training, communications, proficiency maintenance, etc.	04/09/14	Ongoing
2014-04-04	PDI bolting	NRC	Issue RIS and EGM to facilitate implementation of new bolting approach.	04/09/14	Ongoing
2014-04-05	PDI equivalency approach	Ind	Continue discussions of N-780 on quarterly calls. PDI is evaluating the use of N-780 in addition to meeting the existing Appendix VIII requirements during some performance demonstrations, but is waiting until N-780 is finalized and approved.	04/09/14	Ongoing

2014-07-02	NRC comments on EPRI Report	Ind	Respond to NRC comments (Gary Stevens) on EPRI Technical Report No. 1025787, "Nondestructive Evaluation: Probabilistic Analysis of Performance Demonstration Ultrasonic Flaw Detection and Through-Wall Sizing Results for Reactor Pressure Vessel Inspections," September 2012.	06/04/14	Ongoing
2014-07-03	Diablo Canyon discussion	Ind	In the January 2015 Industry/NRC NDE technical meeting, include an industry presentation on the extent of condition evaluation of the Diablo Canyon missed flaw.	07/10/14	01/13/15
2014-07-04	ASME Code actions update	Ind	Ongoing action. Every meeting, industry informs NRC staff about new ASME Code actions including new Code Cases being drafted. Optional, but requested: provide an update at least one week before each Code week.	07/10/14	Ongoing
2014-10-01	January 2015 agenda development	Ind	Develop a draft agenda for NRC review, based on the discussion during the 10/15/2015 quarterly call.	10/15/14	10/31/14
2014-10-02	IGSCC qualification status	Ind	Send updated information to NRC. RE: number of examiners who have qualified for IGSCC through the IGSCC test, versus through Supplement 12 demonstrations.	10/15/14	12/31/14
2015-01-01	Team scanning	Both	Continue discussing path to resolution.	01/15/15	04/08/15

2015-01-02	NRC participation in 2015 NDE Issues Meeting	Ind	Ensure NRC is on Issues agenda.	01/15/15	07/15/15
2015-01-03	Coverage reliefs	Both	Discuss alternatives to the relief request process.	01/15/15	04/08/15
2015-01-04	Positive McGuire thermal fatigue OE	Ind	Report progress on what industry has done with the positive OE.	01/15/15	07/08/15
2015-01-05	Research coordination meeting	NRC	Plan and execute a meeting to discuss MOU and communications	01/15/15	04/30/15

Closed Actions

Action No.	Topic	Own by	Action Description	Date Open	Date Close
2014-01-01	NIFG products	NRC	Provide to NDE Integration Committee (IC) Chairman a prioritized omnibus of NRC staff comments	01/09/14	06/09/14
2014-01-02	NIFG products	NRC	Contact EPRI to explore release of EPRI informational reports on North Anna modeling and on experiments performed on the North Anna probes and site-specific mockup	01/09/14	04/09/14
2014-01-03	Diablo Canyon, Harris OE	Ind	NDE IC issues an NDE Alert. RE: the DCCP OE and changes to PDI-UT-8; report at next quarterly call, along with progress on cross-cutting aspects	01/09/14	04/09/14
2014-01-05	Bolting	Ind	Release to NRC EPRI's technical basis report regarding changes to Appendix VIII Supplement 8, along with a letter to Director, NRR requesting NRC support	01/09/14	04/09/14
2014-01-06	Examiner population	Ind	Report on industry plans for improving the PDI pass rates, at next quarterly call	01/09/14	04/09/14
2014-01-10	ET reliability	Ind	Relay the concerns to MRP Inspection TAC	01/09/14	04/09/14
2014-01-11	ET reliability	NRC	Present concerns to MRP at the next (or subsequent) quarterly Materials call	01/09/14	10/15/14

2014-01-12	Next meeting	Ind	Recommend to NRC staff a date for next face-to-face; discuss next quarterly call	01/09/14	10/15/14
2014-01-13	NIFG sunset	Ind	NDE Integration Committee to advise NRC when NIFG is dissolved and how that scope of work will be addressed.	01/14/14	
2014-03-01	PDI equipment equivalencies	Ind	Previous PDI/NRC action item 12-2011-2 Include in quality instructions all actions required to add new equipment equivalencies for commercially available manual instruments	03/01/14	04/09/14
2014-03-02	N-780	Ind	Previous PDI/NRC action item 12-2011-3 Provide finalized quality instruction documenting the PDI processes that will be used to implement ASME Code Case N-780 (provide status update each meeting or call)	03/01/14	04/09/14
2014-03-03	Modeling meeting	Both	EPRI and RES provide briefing to NRR and industry on UT modeling as it is used today in support of licensee relief requests related to examination coverage. Half-day in DC.	03/14/14	06/05/14
2014-04-02	PDI bolting	Ind	Send bolting Alert letter to NRC.	04/09/14	04/09/14
2014-04-03	PDI bolting	Ind	At next quarterly call, continue discussion on industry's approach to the bolting issue.	04/09/14	07/10/14
2014-07-01	PDI bolting Code actions	Ind	Send PDI bolting extent of condition ASME Code actions to NRC	07/10/14	07/17/14

## LIST OF HANDOUTS AND PRESENTATIONS

1. ML15013A515 – Industry-RES tech exchange Jan 2015
2. ML15013A258 – Planned NRC Research into Human Factors and Training slides
3. ML15013A293 – Overview of NRC/EPRI NDE MOU slides
4. ML15013A279 – NRC Expectations for Eddy Current Inspections of Peened, Inlaid, and Onlaid Dissimilar Metal Welds slides
5. ML15013A239 – CASS Inspections: The Path Forward slides
6. ML15013A266 – Coverage Relief Requests slides
7. ML15009A025 – Slides – UT in Lieu of RT for Nuclear Power Plant Applications
8. ML15009A023 – Slides - Preliminary Flaw Response Comparison
9. ML15013A211 – Industry/NRC NDE Technical Information Exchange Public Meeting slides
10. ML15013A225 – Agenda – Industry/NRC Technical Information Exchange – Public Meeting January 13-15, 2015