

Industry Baffle-Former Bolt Focus Group NRC Update

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Charter and Objectives

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Industry Plans

- The Industry Baffle to Former Bolt (BFB) Focus Group was formed to support an integrated approach among industry organizations to address recent operating experience
 - AREVA
 - EPRI
 - PWROG
 - Utility Staff
 - Westinghouse
 - Others
- Six focus areas with key actions defined

Focus Area	Lead Organization
#1 – /Extent of Condition, Interim Guidance, Technical Interfacing with the NRC	MRP
#2 – Plant/Fleet Operating Experience Assessment	PWROG
#3 – Repair/Replacement	PWROG
#4 – Inspection/NDE	MRP
#5 – Irradiated Testing Support	MRP
#6 – Aging Management Assessment	MRP

Industry BFB FG Charter

- The purpose of the BFB Focus Group is to coordinate industry activities relative to
 - understanding issues associated with recent baffle former bolts operating experiences to prevent unnecessary duplication of time and effort
 - to coordinate an agreed upon industry approach to resolving issues.
- It will act to coordinate industry activities to resolve outstanding issues relative to the potential degradation of baffle former bolts and its impact to plant operations
- Vendors, MRP, PWROG and utility staff will work together to define a unified approach and will give regular updates to the Joint MRP/PWROG Reactor Vessel Internals Planning Team

Industry BFB FG Charter

- The Focus Group is NOT going to involve itself in other issues related to reactor internal components directly
 - The focus will be only dealing with issues related to baffle former bolts
 - There may be some actions taken by the team that also facilitate a broader understanding of IASCC mechanisms which will be beneficial to reactor internals as a whole, but this will be a serendipity of the results obtained from activities coordinated by the focus group
- Primary members of the BFB Focus Group will consist of EPRI staff, PWROG, NSSS Vendor staffs, and utility personnel
 - It is desired to have a well-balanced focus group that can provide technical areas of expertise in irradiated materials degradation, structural design probabilistic fracture mechanics, and licensing

Industry BFB FG Charter

- **BFB Focus Group Chairman:** The BFB Focus Group will be headed by a Chairman appointed by the Joint PWROG and MRP RV Internals Planning Team leadership
 - Represent the Industry BFB Focus Group for reporting out activities to key stakeholders
 - Act as the industry representative for interactions with the regulator
- **Project Lead:** An EPRI staff member will be appointed as project lead to assist the Chairman in tracking and coordinating the activities of the Focus Group and the implementation of the Charter guidelines described here within
 - Coordinate all tele-conference and face to face meetings
 - Implement the Communication Plan
- **Primary Member:** It is expected that primary members will participate in all calls and meetings to the best of their ability and to participate in various focus group activities at a high level

Industry BFB FG Charter

- Communication to BFB Focus Group members will be through a combination of emails, tele-conferences and face to face meetings
 - A weekly email will be sent out summarizing team activities accomplished during the week along with upcoming short term activities
 - Email updates will also be distributed to members of the Joint PWROG/MRP Reactor Vessel Internals Planning Team to keep them abreast of this specific issue and actions being taken by this team
 - Updates will be given to the MRP Assessment/IC TAC and the PWROG MSC (that govern the RV Internals Planning Team's work) at their respective meetings held throughout the year
 - Monthly updates will be provided to the PMMP/MAPC EOC
 - Updates will be given to the CNOs upon request

Industry BFB Focus Area Objectives

- Cause and Extent of Condition, Interim Guidance (*Focus Area #1*)
 - Develop BFB OE database and verify data
 - Evaluate/trend BFB OE
 - Develop Interim Guidance
 - Technical interactions with the NRC
- Plant and Fleet Operating Experience Assessment (*Focus Area #2*)
 - Westinghouse to complete the 10CFR21 evaluation
 - Westinghouse to complete an NSAL; AREVA to produce a similar document for B&W plants (Customer Service Bulletin)
- Repair and Replacement (*Focus Area #3*)
 - Work with vendors to develop a contingency plan for tooling and bolt inventory for the upcoming outage seasons (Fall 2016 / Spring 2017)

Industry BFB Focus Area Objectives

- Inspection / NDE (*Focus Area #4*)
 - Review bolt inspection protocols to see if lessons learned suggest modifications
 - Understand UT Probability of Detection as related to UT-acceptable bolts
- Irradiated Testing Support (*Focus Area #5*)
 - Establish an integrated testing plan to build upon the Indian Point 2 root cause evaluation/analysis and further advance IASCC susceptibility knowledge
 - Evaluate the need to include Salem 1 and Ginna BFBs into the integrated testing program
- Aging Management Assessment (*Focus Area #6*)
 - Review previous aging management assessments and compare to current OE experiences
 - Evaluate prediction models like the Weibull distribution in MRP-03 (which is based on French data)
 - Potential revisions to MRP-227

Industry Communications

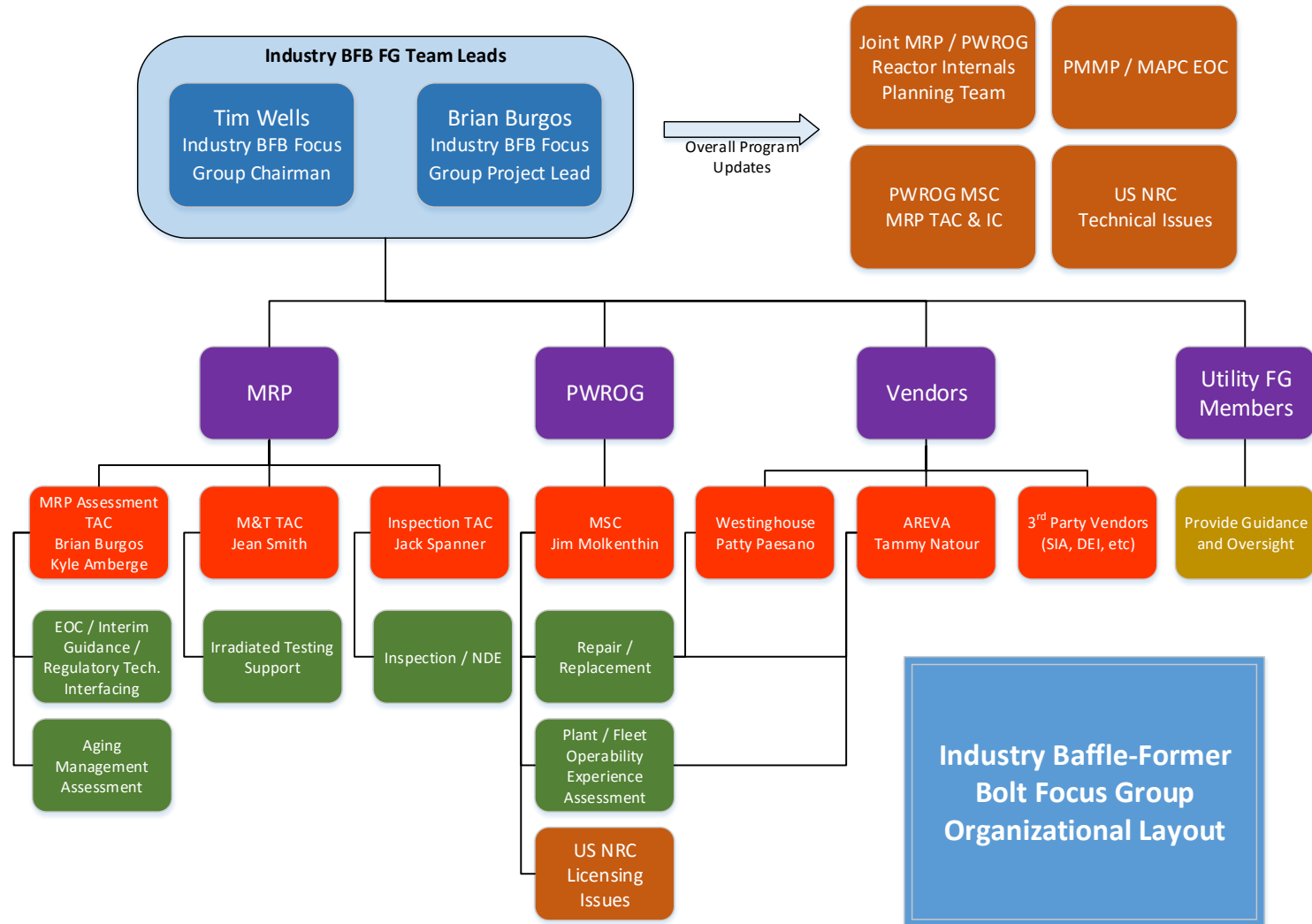
- Weekly updates to Industry BFB FG members
- Supported presentation to NSIAC on 5/23/16
 - Westinghouse Technical Bulletin TB-12-5 remains valid
- Provided Industry Alert Letter from the PMMP Chairman on 6/1/16
 - We fully expect that NEI 03-08 Interim Guidance will require the 4-loop plants identified in the Westinghouse TB-12-5 bulletin to perform UT inspections of all the BFBs or replace an acceptable pattern of bolts at their next outage.
 - Consideration should also be given to proceeding with procurement of replacement bolts prior to issuance of interim guidance due to potentially long manufacturing lead times.



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Backup slides

Industry BFB FG Charter – Org Chart



Industry BFB FG Charter - Participants

	Focus Area #1 Cause/Extent of Condition / Interim Guidance	Focus Area #2 Plant and Fleet Operating Experience Assessment	Focus Area #3 Repair and Replacement	Focus Area #4 Inspection / NDE	Focus Area #5 Irradiated Testing Support	Focus Area #6 Aging Management Assessment
Leads	Tim Wells Brian Burgos	Heather Malikowski Bryan Wilson	William Sims Greg Gontis Wade Markham	Rachel Doss Jack Spanner	Chris Koehler Jean Smith	Glenn Gardner Kyle Amberge
Additional Vendor / EPRI Support	Bryan Wilson Steve Fyfitch Mark Richter (NEI) Bruce Montgomery (NEI) Anne Demma Kyle Amberge Tim Griesbach Chris Lohse Jim Molkenthin	Kyle Amberge Greg Troyer Jim Andrachek Jim Molkenthin	Jim Molkenthin Kyle Amberge	Pat Minogue David Cislo Anne Demma	Mike Burke Steve Fyfitch Anne Demma	Josh McKinley Greg Troyer Anne Demma Randy Lott
Utility Participation	Nelson Azevedo	Nelson Azevedo	Heather Malikowski	William Sims	Nelson Azevedo	William Sims
	Tom Malota	Greg Kammerdeiner	Steve Petro	Greg Kammerdeiner	Tom Malota	Steve Petro
	Glenn Gardner	Tom Malota	Eric Brackeen	Kevin Hacker	Jim Cirilli	Mo Dingler
	Jim Cirilli	Glenn Gardner		Dave Mora	Ed Maloney / Kris Garg	Heather Malikowski
	Rachel Doss	Tim Wells				Tim Wells
	Mo Dingler	Rebecca Siegrist				
	Ed Maloney					
	Heather Malikowski					
	Gay Haliburton					
	Eric Brackeen					