



MRP Inspection TAC Research Activities

**Dan Nowakowski, Chairman – FP&L
NDE Issues Coordination Meeting**

**Juno Beach, FL
November 29, 2012**

Objectives of Inspection TAC

- Develop requirements for NDE Capability Studies and Performance Demonstrations
- Develop and evaluate NDE methods and techniques for PWRs
- NDE interfaces
 - MRP members
 - Other Issue Programs (NDE, BWRVIP, Materials)
 - MRP TACs (Assessment, Mitigation & Testing, and Technical Support)
 - NRC

Inspection TAC Projects

- Reactor Vessel Head Penetrations
 - Mockup fabrication
 - Capability Studies for ET and BMNs
 - Evaluate Lasers for surface examinations and profilometry
 - Performance Demonstrations for RPVUHPs
- WesDyne
 - Fully qualified with Open Housing Probe and Blade Probe in 2009
- AREVA, TECNATOM & Doosan
 - Fully qualified with Open Housing Probe and Blade Probe in 2010
- KPS & KIC (Korean vendor companies)
 - Fully qualified with Open Housing Probe and Blade Probe in 2011

Inspection TAC Projects

- PWR Internals
 - Inspection Standard for PWR Internals (MRP-228)
 - PWR Internal Vessel Inspection course
 - VT Round Robin
 - Lessons Learned, Nomenclature and Section XI components
 - Feasibility of measuring void swelling
- SS and DM Welds
 - Small bore piping
 - Support NDE for Mitigation
 - Alternative to RMSE sizing criteria

Future NDE Research Issues

- Volumetric examination of BMNs to characterize visual results
- Qualification activities and technology enhancements for Upper Head Penetrations
- Develop sizing criteria for ID UT of DM welds (alternate to RMSE),
- Examination of internal welds that are not readily accessible (Core barrel weld behind thermal shields)
- NDE of new mitigation techniques (i.e. peening, excavate & weld repair, magnetic stir welding, etc.)

Inspection TAC Members

- Dan Nowakowski, Chrmn – FPL
- Rachel Doss, V-Chrmn – Duke
- Danny Cordes – Southern Co.
- David Mora – PSEG
- Harry Smith – Exelon
- Frank Leonard – TVA
- John Facelo - Constellation
- Roy Hall – AEP
- Kevin Hacker – Dominion
- Ed Fernandez – APS
- Ward Colie – SCANA
- Mike Briley – Entergy
- Sam Volk – Progress Energy

Together...Shaping the Future of Electricity