An Industry Perspective

International Light Water Reactor Materials Reliability Conference

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The Nuclear Promise

- 3-year strategy to transform industry and ensure its viability
- About competing against market forces, preserving industry today and positioning us for the future
- “Business as usual” approach won’t successfully address rising costs and generating competition
- Identify ideas to implement quickly
- 37 improvement opportunities
- Achieve 30% reduction in cost
- Maintain safety and reliability
Objective: Re-base and reduce the cumulative impact of the corrective action program

Key Actions in 2016:
- Issue efficiency bulletin on CAP cumulative impact (DB 16-10) COMPLETE
- Develop efficiency bulletin on re-base CAP

Engineering

Key Actions in 2016:
- Review margin management program and develop a standard process for design modifications.
- Issue efficiency bulletin on margin management COMPLETE
- Develop efficiency bulletin on design modifications
- Develop Screening Criteria for Vessel Internal Inspection and Evaluation Guidelines

Work Management Preparation

Key Actions in 2016:
- Streamline processes for minor maintenance, FIN team, walk downs, work screening, work week scheduling and approval.
- Issue efficiency bulletin on PM planning COMPLETE
- Issue efficiency bulletin on graded approach to walk downs COMPLETE
- Issue efficiency bulletin on FIN team COMPLETE
- Issue efficiency bulletin on the work screening process COMPLETE
- Issue efficiency bulletin on the 7 week process
- Issue efficiency bulletin on work execution preapproval

Work Management Execution

Key Actions in 2016:
- Integrate maintenance support activities and reduce approvals required to start maintenance work.
- Issue efficiency bulletin on an integrated single team approach

Preventive Maintenance Process

Key Actions in 2016:
- Optimize PM tasks and frequencies, reduce high cost/non-critical PMs, and optimize FLEX PM strategies.
- Issue efficiency bulletin on reducing high cost non-critical PMs COMPLETE
- Issue efficiency bulletin on optimizing FLEX PM strategies COMPLETE
- Issue efficiency bulletin on embracing a value based equipment reliability strategy

Regulatory

Key Actions in 2016:
- Issue efficiency bulletin on streamlining internal/external licensing/organizational processes
- Issue efficiency bulletin on sharing industry resources associated with regulatory activities

Oversight and Assessment

Key Actions in 2016:
- Reduce the layers of oversight in assessing operational organizations COMPLETE
- Issue efficiency bulletin on department oversight COMPLETE
- Issue efficiency bulletin on plant oversight COMPLETE
- Issue efficiency bulletin on fleet oversight COMPLETE
- Issue efficiency bulletin on Senior Management Oversight COMPLETE
- Issue efficiency bulletin on Internal Audits COMPLETE
- Issue efficiency bulletin on External Oversight/NOBB COMPLETE

Supply Chain

Key Actions in 2016:
- Issue efficiency bulletin on contract forensics COMPLETE
- Issue efficiency bulletin on strategic sourcing COMPLETE
- Issue efficiency bulletin on material cost reduction COMPLETE
- Issue efficiency bulletin on supplemental supplier contracts/Use of EPR

Training

Key Actions in 2016:
- Issue efficiency bulletin on task list review COMPLETE
- Issue efficiency bulletin on NLO/Maintenance & Technical Continuing Training COMPLETE
- Issue efficiency bulletin on training cumulative impact strategies COMPLETE
- Issue efficiency bulletin on training cumulative impact strategies- Part 2 COMPLETE
- Issue efficiency bulletin on NLO/Maintenance & Technical initial training COMPLETE
- Develop efficiency bulletin on standardization of SAT COMPLETE
- Develop efficiency bulletin on Maintenance First Line Supervisor Leadership Training COMPLETE
- Develop efficiency bulletin on an Industry Exam Bank for Initial Licensed Operator exams COMPLETE
- Develop efficiency bulletin on Initial Licensed Operator training COMPLETE
- Develop efficiency bulletin on SUP000 DE training COMPLETE
- Develop efficiency bulletin on Engineering Support Personnel initial and continuing training COMPLETE
- Develop efficiency bulletin on standardizing in-processing training

Transform the Organization

Key Actions in 2016:
- Develop efficiency bulletin on standardizing system engineering core business
- Develop efficiency bulletin on design and program engineering
- Develop efficiency bulletin on maintaining the plant organization
- Develop efficiency bulletin on combining system engineering and maintenance

Component Classification

Key Actions in 2016:
- Issue efficiency bulletin on critical component reduction COMPLETE
- Issue efficiency bulletin on ERWG cost controls COMPLETE
- Issue efficiency bulletin on an aggressive approach to graded work COMPLETE
- Issue efficiency bulletin on implementing AP-912 rev 4/5 recommendations

Security

Key Actions in 2016:
- Issue efficiency bulletin on standardized search and seal process COMPLETE
- Issue efficiency bulletin on a standardized process for pre-drift brief COMPLETE
- Issue efficiency bulletin on N0 03-12- Security Plan Change Template for Compensatory Measures COMPLETE
- Issue efficiency bulletin on handgun elimination COMPLETE
- Issue efficiency bulletin on protective strategy modifications COMPLETE
- Develop efficiency bulletin on the Triennial Force on Force and IP 71130.03 program COMPLETE
- Develop efficiency bulletin on the threshold for changing security plans per 50.54(p) COMPLETE
- Develop efficiency bulletin on security credits for operator, FLEX, and local agency acts COMPLETE
- Develop efficiency bulletin on defining radiological subspace in SOP073

Corrective Action Program

Objective: Reduce the layers of oversight in assessing operational organizations

Key Actions in 2016:
- Issue efficiency bulletin on department oversight
- Issue efficiency bulletin on plant oversight
- Issue efficiency bulletin on fleet oversight
- Issue efficiency bulletin on Senior Management Oversight
- Issue efficiency bulletin on Internal Audits
- Issue efficiency bulletin on External Oversight/NOBB

Efficiency Bulletin Key:
- RED – N/A. Critical, full participation required for viability
- BLACK – Non-critical, full participation required for viability
- GREEN – Value based approach in establishing a culture of continuous improvement, consistent with its business environment
- ORANGE – Unknown

Rev. July 5, 2016

Delivering the Nuclear Promise

Delivering the Nuclear Promise: Estimated Value of Improvement Opportunities

July 2016

Exelon Generation®
Materials Program Screening Criteria – ENG-007

Vision

• Reduce the number of NEI 03-08 topical reports that require NRC review
• NRC review only required for impact on safety functions or if operating experience is eliminated
• Optimize inspection requirements based on “risk informed” operating history

Status

• Draft screening document submitted to NRC
• NRC evaluating timing for their review
Risk-Informed Engineering Programs (50.69)

- Relief from “special treatment” for low risk significant SSC’s
- Risk-informed Part 50 programs
  - Reduced in scope
  - Alternately treated
Target-rich Environment of Benefits

- ASME XI repair & replacements - 50.55a(g)
- In-service Testing [10 CFR 50.55a(f)]
- In-service Inspection [10 CFR 50.55a(g)]
- Maintenance Rule - 10 CFR 50.65
- Quality Requirements - 10 CFR 50 Appendix B
- Local Leak Rate Testing - 10 CFR 50 Appendix J
- Environmental Qualification (10 CFR 50.49)
- Seismic Qualification (Appendix A to Part 100)
Improving the nuclear track record ...

Risk-Informed is Good Business

• A risk-informed foundation makes good sense
• Regulatory resources focused on significant activities and equipment
• No compromise in plant safety, quality or reliability
• Maintains public trust and regulatory confidence ... everyone wins
Topical Report Revisions

• Reports Currently Under Review
  ✓ BWRVIP-62, Rev 1, Technical Basis for HWC Inspection Relief, Including OLNC, Submitted 03/07/2012
  ✓ BWRVIP-139-A License Renewal Appendix, LR Appendix for Steam Dryer Inspection and Evaluation Guidelines, Submitted 02/21/2014
  ✓ BWRVIP-241 License Renewal Appendix, Accepted for NRC review 08/27/2014
  ✓ BWRVIP-41, Rev 4, Optimized Jet Pump Inspection and Evaluation Guidelines, Submitted 09/24/2014
  ✓ MRP-227, Rev 1, Pressurized Water Reactor Internals Inspection and Evaluation Guidelines
  ✓ MRP-335 Rev 3, Topical Report for Primary Water Stress Corrosion Cracking Mitigation by Surface Stress Improvement

• Reports Planned for Review
  ✓ BWRVIP-25, Rev 1, Core Plate Inspection and Evaluation Guidelines (expected by 9/30/16)
  ✓ BWRVIP-TBD, Generic Loads and Loads Combinations Report (expected by 12/31/16)
EPRI – Supporting Advanced Engineering Training

• Organizing training for easier access
• 2016 training list is a great step (3002006532)
• Program cockpits show program related courses
• Many courses are in NANTeL
• Full NEI 03-08 course is on EPRI.com
EPRI – Supporting Advanced Engineering Training

• Large set of CBT modules: 19 SGMP & 11 WRTC
• Several recorded MRP classes
  ✓ Thermal fatigue
  ✓ Others being recorded at this conference
• New knowledge transfer approaches being evaluated for program owners
• Active EPRI project ongoing to decide the future of EPRI training
Questions?