COMMISSION BRIEFING SLIDES/EXHIBITS

BRIEFING ON STATUS OF DAVIS BESSE

LESSONS LEARNED TASK FORCE ISSUES

FEBRUARY 26, 2004

STATUS OF IMPLEMENTATION OF DAVIS-BESSE LESSONS LEARNED TASK FORCE RECOMMENDATIONS

Office of Nuclear Reactor Regulation (NRR)

Office of Nuclear Regulatory Research (RES)

Agenda

• Overview	J. Dyer
• Stress Corrosion Cracking	W. Bateman
• Operating Experience	W. Beckner
• Inspection Program Management	S. Richards
• Barrier Integrity	N. Chokshi
• Summary	J. Dyer

Overview

- **Action Plans developed for 21 High Priority items (3/03)**
  - **Responsible Office**
  - **Schedule**
  - **Resources**

Overview (cont.)

- Remaining items integrated into individual Office operational activities via Planning, Budgeting and Performance Management (PBPM) process
- Status reported semiannually to EDO and forwarded to Commission

Overview (cont.)

- 23 recommendations were scheduled for completion by 12/03
  - 16 were completed including all 7 scheduled high priority items
  - 7 lower priority rescheduled
- 22 recommendations are planned for completion by 12/04
- 5 recommendations are planned for completion by 12/05
- 6 recommendations TBD

Stress Corrosion Cracking (SCC)

- LLTF recommendations incorporated in Action Plan
  - SCC and Boric Acid Corrosion database
  - SCC susceptibility model evaluation
  - ASME Code changes
  - 10 CFR 50.55a revision
  - Inspection Program Guidance

Stress Corrosion Cracking (cont.)

- LLTF recommendations have been combined with previously initiated actions
- Progress being made on activities
- Industry response has been generally positive

Stress Corrosion Cracking (cont.)

- Activities completed and ongoing since Davis-Besse
  - Bulletin and follow-up questions on licensees' boric acid corrosion control programs (BL 2002-01)
  - Regulatory Issues Summary (RIS 2002-13) summarizing staff review of responses to BL 2002-01

Stress Corrosion Cracking (cont.)

- Bulletin 2002-02 on upper head penetration inspections
- Order EA-03-009 plus revision on upper head inspections

Stress Corrosion Cracking (cont.)

- Bulletin 2003-02 on lower vessel head penetration inspections
- Pressurizer Generic Communication

Stress Corrosion Cracking (cont.)

- Staff completed review and evaluation of responses to Bulletin 2002-01 regarding Boric Acid Corrosion Control programs and published results in RIS 2003-13 (8/03)

Stress Corrosion Cracking (cont.)

- Bulletin 2002-02 on upper vessel head penetration inspection was precursor to the Order
- Interim requirements for Reactor Pressure Vessel head inspection issued through Order EA-03-009 (2/03)

Stress Corrosion Cracking (cont.)

- Staff reviewing inspection results and processing requests for alternatives to Order (Ongoing)
- Temporary Inspection Procedure TI 2515/150 was issued for regional inspector guidance (8/03)

Stress Corrosion Cracking (cont.)

- Bulletin 2003-02 issued after discovery of leakage on bottom head penetrations at South Texas Project (8/03)
  - TI 2515/152 issued (11/03)
  - No additional cracking found in inspections to date

Stress Corrosion Cracking (cont.)

- Staff and industry responding to pressurizer heater sleeve leaks
  - Staff developing generic communication
  - Westinghouse Owners Group letter on inspection of Combustion Engineering pressurizer heater sleeves

Stress Corrosion Cracking (cont.)

- RES activities related to SCC
  - Integrated assessment to support regulatory decisions/actions
  - Components of research programs

Stress Corrosion Cracking (cont.)

- Cooperative programs
- Results used to support review and confirmation of industry programs

Stress Corrosion Cracking (cont.)

- **Challenge: Replace interim guidelines in Orders and Bulletins with Rulemaking**
  - **Endorsement of revised ASME code**
  - **Industry working on alternative guidelines and technical justification**

Stress Corrosion Cracking (cont.)

- Current plan
  - Incorporate Order into 10CFR50.55a
    - Develop a rulemaking plan
  - Also considering developing a performance-based rule
    - Needs detailed evaluation

Operating Experience

- Interoffice task force defined the objectives and attributes of an effective Operating Experience program
  - Report documenting specific program improvement proposals issued in 11/03

Operating Experience (cont.)

- Line management to develop implementation plan (4/04)
- Framework to be established by 12/04
  - Program will be dynamic and continuous improvements will occur

Operating Experience (cont.)

- **Key Findings/Recommendations**
  - **Agency's current activities contain necessary functions**
  - **Clear vision lacking of how activities should function together to support licensing, inspection and research**

Operating Experience (cont.)

- Recommends establishment of clearinghouse within single organization

Operating Experience (cont.)

- Improvements to date:
  - Organizational alignment of inspection and Operating Experience programs
  - Significant enhancement in web-based access
  - Improved communications to end users

Operating Experience (cont.)

- Separately reviewing previous generic communications to assess effectiveness of commitments
  - Initial screening completed (7/03)
  - Selection of focus areas completed with management review and input (11/03)
  - Verification Plan (3/04)

Operating Experience (cont.)

- Implementation Challenges
  - Resource intensive
  - Effectiveness of interoffice coordination

Inspection & Program Management

- The LLTF recommended several changes including:
  - More focused inspections and follow-up to longstanding equipment issues
  - Enhanced inspector training
  - Enhanced oversight structure for plants in extended outages (IMC 0350)

Inspection & Program Management (cont.)

- Inspection guidance was revised to require resident inspector screening of all corrective action items
- A new requirement was added to inspection program to perform a semi-annual trend review focused on recurring equipment issues

Inspection & Program Management (cont.)

- Program guidance was enhanced regarding NRC oversight of plants in extended shutdowns

Inspection & Program Management (cont.)

- A new "read and sign" training program has been developed and implemented
- Training modules completed include boric acid corrosion, stress corrosion cracking, and the importance of maintaining a questioning attitude

Inspection & Program Management (cont.)

- Guidelines were issued for ensuring a more complete documentation of important staff decisions (3/03)
  - Follow up effectiveness review in progress

Inspection & Program Management (cont.)

- Challenges
  - Need to enhance process for timely incorporation of operating experience into inspection program

Barrier Integrity

- The LLTF recommended that the requirements for Reactor Coolant System (RCS) leakage be improved
  - Assure that plants do not operate with Reactor Coolant Pressure Boundary (RCPB) leakage
  - Plants can discriminate between unidentified leakage and RCPB leakage

Barrier Integrity (cont.)

- Initiated research program at Argonne National Laboratory (ANL) to develop technical basis for RCS leakage requirements (7/04)
- Identified units with nonstandard RCPB leakage requirements (7/03)

Barrier Integrity (cont.)

- Identified improvements to existing Performance Indicators (PI) (6/04)
  - All leakage Technical Specifications (TS) could be monitored by PIs and compared to the allowable limits

Barrier Integrity (cont.)

- **Barrier Integrity Program at ANL**
  - **Evaluate leak rates associated with degradation of various RCPB components (3/04)**
  - **Develop database of leakage events (4/04)**
  - **Evaluate capabilities of leakage detection systems (5/04)**

Barrier Integrity (cont.)

- Assess adequacy of plant alarm response procedures (3/04)
- Develop recommendations for inspection guidance and RCS leakage requirements (3/05)
- Develop and, if feasible, implement PI capable of tracking number, duration, and rate of primary system leaks (12/05)

Barrier Integrity (cont.)

- Completed preliminary scoping study of risk assessments involving passive component degradation
- Recommend multi-discipline review to identify potential risk from combination of failure mechanisms and RCPB locations

Barrier Integrity (cont.)

- **Technical basis will be used to support potential revisions to requirements using appropriate regulatory processes**

Summary

- Significant progress on implementing recommendations
- Effort is integrated with other activities
  - Ensures efficient and effective use of resources
  - Maximizes safety benefit
- Activities have resulted in significant positive outcomes for the agency and nuclear industry