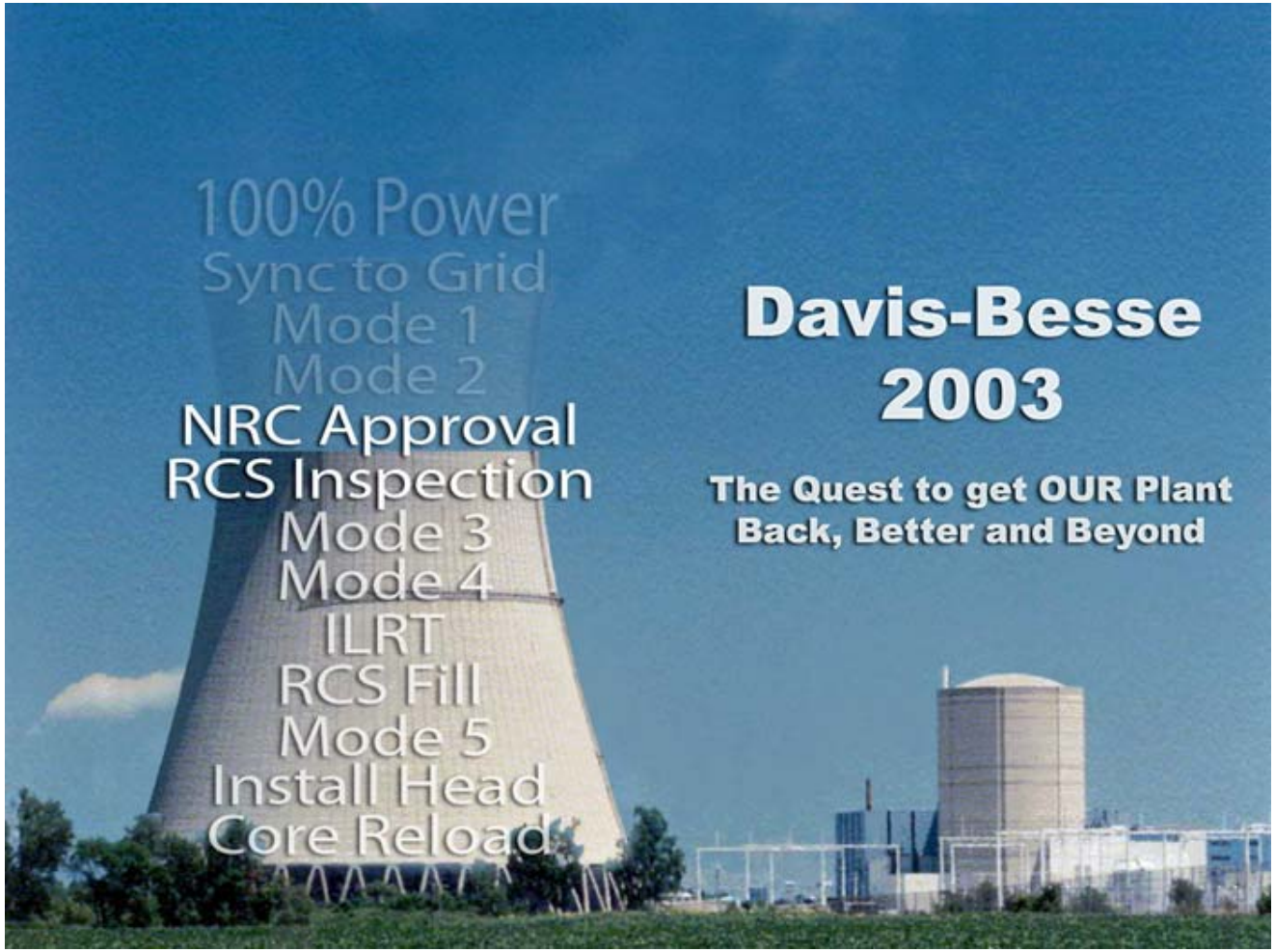
Davis-Besse Nuclear Power Station



Engineering and Corrective Action Improvements

Desired Outcomes

- Demonstrate our Corrective Action Process and Engineering Quality supports restart
- Provide you the future initiatives to improve overall Corrective Action Program and Engineering Performance

Lew Myers
Chief Operating Officer - FENOC

Meeting Agenda

- Engineering Function Supports Restart.....Joe Hagan
- Engineering Improvement Initiatives.....Jim Powers
- Recent Corrective Action Program Improvements.....Bob Schrauder
- Corrective Action Program Improvements Details.....Bob Schrauder

Lew Myers
Chief Operating Officer - FENOC

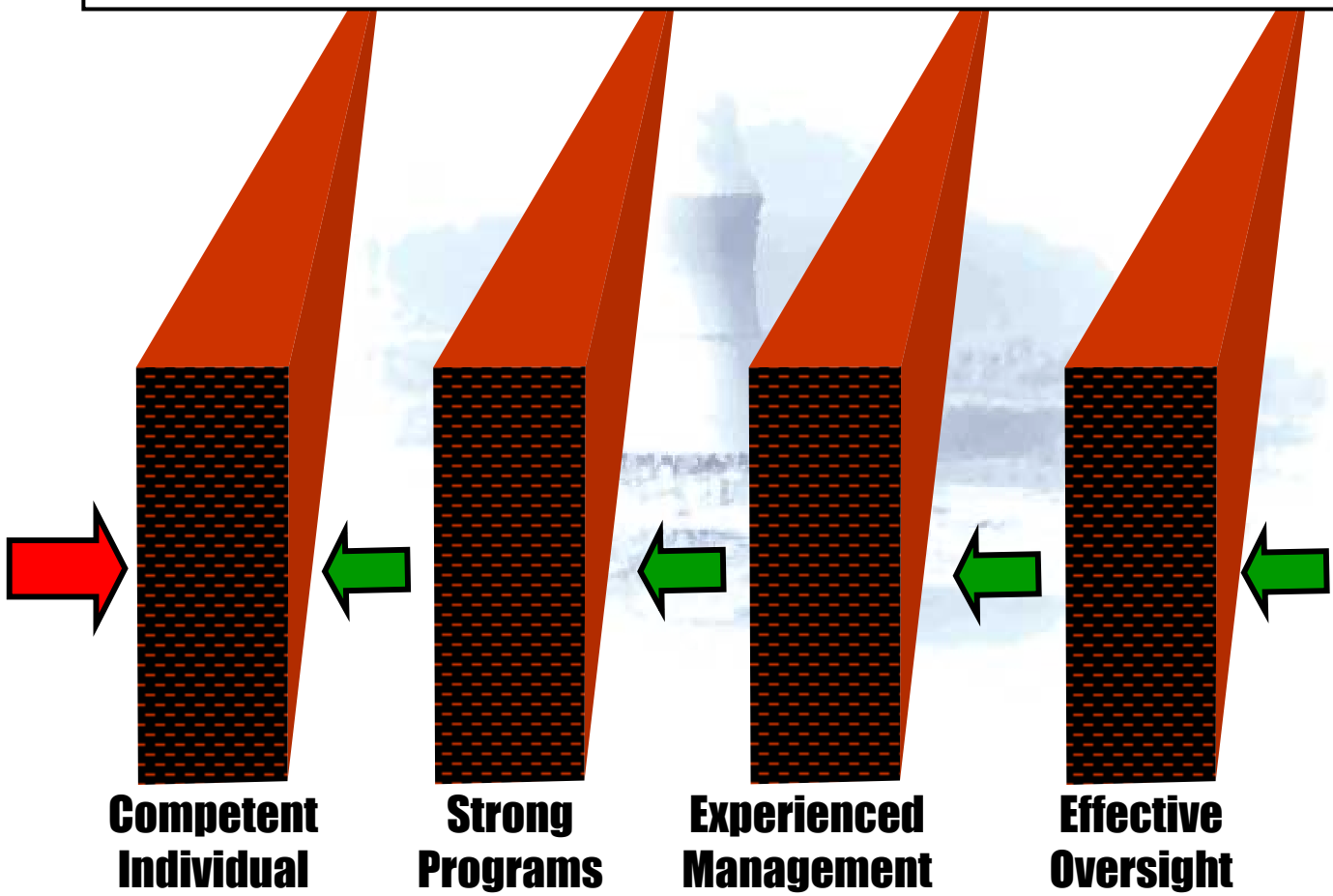
Operational Improvement Plan

- Operational Improvement Plan
  - Ensures continued improvements and sustained performance
  - Provides for a managed transition from the organizational and programmatic actions taken to support the Davis-Besse Return to Service Plan and Building Block Plans to that of normal plant operations and refueling outages
  - Provided as part of Integrated Restart Report
  - Funded as currently planned

Cycle 14 - Operational Improvement Plan

Barriers Demonstrating FENOC's Strong Safety Focus

CHALLENGE



FENOC Vision:

'People with a strong safety focus delivering top fleet operating performance'

Engineering Functions Support Restart

Joe Hagan

FENOC- Senior Vice President

Engineering Function Supports Restart

- Competent Individual
  - Standards
  - Accountability
  - Ownership
- Experienced Management
- Strong Programs
- Effective Oversight

Engineering Function Supports Restart

Competent Individual

- Engineering Principles and Expectations Reinforcement August, 2003
  - –Rigorous Application of Engineering Procedures and Methods
  - –Knowledge and Maintenance of Design and Licensing Basis
  - –10CFR50.9, Completeness and Accuracy
  - –Ownership
- Selection and hiring
- Training and qualification
- Coaching and development
- Continued prudent utilization of contract staff

Engineering Function Supports Restart

Experienced Management

- New experienced leadership
- Design Engineering Standards Alignment
- System Engineering Standards Alignment
- Engineering Work Management Plan
- Observation and engagement

Engineering Function Supports Restart

Strong Programs

- Transition to Fleet-wide Processes
  - Benchmarked to top industry performers
  - System Health Reporting and Plant Health Committee
  - Calculation/Program Improvement
    - Validate old calculations prior to use
  - Corrective Action Program
  - Project Review Committee (PRC)

Engineering Function Supports Restart

Effective Oversight

- Company Nuclear Review Board
- Engineering Assessment Board
  - Internal Quality Check
  - Independent of product
  - Critical review
- External Reviews
- Quality Oversight Organization
- Corporate-Driven Assessments
- Periodic Engineering performance review meeting

Engineering Function Supports Restart

- Summary
  - Integrated approach for improvement
  - Requires ownership and monitoring by management
    - Clear lines of accountability
  - Engineering approach to Corrective Action Program has improved
  - Demonstrated ability to perform fairly complex engineering projects satisfactorily
  - Critical assessment will drive continued improvement

Engineering Improvement Initiatives Details

Jim Powers
Director - Engineering

Engineering Improvement Initiatives Details

- Competent Individual
  - Engineering Assessment Board (EAB) feedback
  - Supervisor/Manager coaching and reinforcement of standards
  - Mentoring and development of incumbents and new hires
  - Training
    - TAP Root
    - Operability Evaluations
  - Hiring of new employees (20% replenishment)
    - Program Owner Qualification Card (OI Plan)
  - Managing of the Engineering Workload
    - Use of Contractors
  - Enhance System Engineering Ownership (OI Plan)
  - New Technical Issue Resolution process

Engineering Improvement Initiatives Details

- Engineering Assessment Board (EAB) with expanded focus
  - Comprised of highly experienced engineers
  - Perform high quality and timely assessments
  - Expanded role
    - Root Causes
    - Apparent Causes
    - Calculations

Engineering Improvement Initiatives Details

- Strong Programs
  - Corrective Action Program
  - Modification Process
    - Restricted use of At -Risk Changes (ARCs)
  - Calculation Control Program
    - Use of Checklists for ownership acceptance
  - Design Interface Evaluation (DIE)
  - System/ Plant Health Report (SHR)
  - Design Basis Assessment Report (DBAR)
  - Problem-solving/Decision-making Process
  - Program Compliance Reviews (OI Plan)

Engineering Improvement Initiatives Details

- Experienced Management
  - Actions
    - Implement actions to improve safety margin (OI Plan)
    - Implement Design Calculation Improvement Plan (OI Plan)
      - Independent Calculation Assessment performed
    - FENOC Equipment Reliability Program (OI Plan)
    - Engineering Change Request (ECR) Prioritization (OI Plan)
    - Implement ATLAS Design Basis Information System (OI Plan)

Engineering Improvement Initiatives Details

- Effective Oversight
  - Perform Additional Latent Issue Reviews (OI Plan)
  - Perform Program Compliance Reviews (OI Plan)
  - Perform effectiveness reviews of Problem-solving and Decision-making Process (OI Plan)
  - Perform independent external assessments of Engineering Improvement Actions (OI Plan)
  - EAB assessments (OI Plan)
  - Nuclear Quality Assessment (OI Plan)

Engineering Improvement Initiatives Details

- Engineering Workload Reduction
  - Total of ~ 8,500 engineering workload items identified
  - Post-Restart Existing Workload Categories

Category
Management Initiatives
Potential Modifications
Calculation Improvements
Drawings
Document Updates
Engineering Evaluations
Condition Reports
Equipment Reliability

Engineering Improvement Initiatives Details

- Engineering Work Plan and Schedule
  - Purpose is to provide overall direction to the Engineering organization during Cycle 14
    - Provide assurance that the Engineering organization has appropriate resources to effectively support plant operation and, at the same time, complete the Post-Restart workload in a timely manner
  - Schedule consists of ~ 240 activities

Engineering Improvement Initiatives Details

- Basic Work Completion Logic
  - Review the existing work
  - Prioritize these work items in accordance with the plant priority system as well as the System and Program Improvement priorities
  - Eliminate, with justification, work items of very low value
  - Develop overall work plans for each category
  - Obtain management approval of the plans and then,
  - Implement these plans

Engineering Improvement Initiatives Details

6. Engineering Improvement Initiative

DESIRED OUTCOME: ***Improved quality of Engineering products, increased access to Design Basis information, and continued improvement in Safety Margins of the Station***

Sponsor: J. Powers

Key Actions	Owner	Completion
1. Implement actions to improve Safety Margin:	J. Grabnar	
a. Determine the Safety Margin for the top 10 Risk Significan Systems and develop a plan to improve safety margins		2nd Qtr 2004
b. Electrical System coordination improvements		4th Qtr 2005
c. Masonry/block wall re-analyses and design changes		4th Qtr 2005
d. Service Water improvements		through Cycle 14
2. Perform additional Latent Issues Reviews	B. Boles	through Cycle 14
3. Implement the Design Calculation Improvement Plan	J. Grabnar	4th Qtr 2004
4. Enhance plant equipment performance through the FENOC Equipment Reliability Program	J. Rogers	through Cycle 14
5. Develop and implement the plan to enhance System Engineering ownership of plant systems in support of Operations	B. Boles	4th Qtr 2004

Engineering Improvement Initiatives Details

- Summary
  - Engineering quality supports restart
  - Continuous improvement is ensured through the Operational Improvement Plan
  - Resources are committed for the Work Plan
  - Calculations are being improved
  - Changing approach to problem solving

Corrective Action Program

Bob Schrauder

Director - Support Services

Corrective Action Program

- Apparent Cause areas for improvement
  - Evaluators sometimes had preconceived causes
  - Evaluators didn't always address problem statements
  - Evaluations and actions taken not always well documented
  - Some evaluations not technically accurate
  - Management involvement in evaluations and corrective actions

Corrective Action Program

- Other areas for improvement
  - Evaluations and corrective actions not always timely
  - Some corrective actions closed to other documents
  - Some corrective actions not completed as defined
  - Rollover process caused confusion
  - Trending of Condition Reports

Corrective Action Program

- Actions Taken to Support Restart
  - Phase II Program Review conducted
  - Revised FENOC procedure
  - Increased Management involvement
  - Lessons learned training conducted
  - Rollover process restricted and additional guidance provided
  - Corrective Action Review Board (CARB) review of apparent cause evaluations
  - Section managers attend CARB for section reviews

Corrective Action Program

- Actions Taken to Support Restart
  - Senior Leadership Team reviews root causes
  - Selected root cause analyses reviewed by Executive Leadership Team
  - Reduced number of apparent cause evaluators
  - Improved training of apparent cause evaluators
  - Dedicated team of apparent cause evaluators rotated to Support Services
  - Manager review of open CRs and corrective actions
  - Non-restart CRs recategorized using current process

Corrective Action Program

- Trending
  - Quarterly Trend Summary Reports resumed
  - System Health Reports resumed
  - FENOC Manager of Equipment Reliability
  - CREST Statistical Process Control interface created
  - Section assessments planned

Corrective Action Program

9. Corrective Action Program Improvement Initiative

DESIRED OUTCOME: ***Improved effectiveness and implementation of the Corrective Action Program demonstrated through improved Station performance***

Sponsor: R. Schrauder

Key Actions	Owner	Completion
1. Implement the Apparent Cause Improvement Plan:		
a. Create a Subcommittee to the Corrective Action Review Board for review of Apparent Cause Evaluations	L. Dohrmann	4th QTR 2003
b. Identify Apparent Cause Evaluators	Managers	4th QTR 2003
c. Develop Training Program and Expectations and provide training to the Apparent Cause Evaluators	J. Reddington	4th QTR 2003
d. Qualify the trained Apparent Cause Evaluators using the Systematic Approach to Training	J. Reddington	1st QTR 2004
e. On an interim basis apparent cause evaluators rotated to support services	L. Dohrmann	4th QTR 2003
f. Have CNRB review selected apparent causes	F. Von Alm	4th QTR 2003

Corrective Action Program

9. Corrective Action Program Improvement Initiative

DESIRED OUTCOME: ***Improved effectiveness and implementation of the Corrective Action Program demonstrated through improved Station performance***

Sponsor: R. Schrauder

Key Actions	Owner	Completion
2. Establish the appropriate level of workload for Condition Report Evaluations and Corrective Actions and develop a plan to reduce the backlogs to those levels	L. Dohrmann	1st QTR 2004
3. Perform FENOC focused self assessments using industry peers	L. Dohrmann	2nd QTR 2004
4. Reestablish trending process	L. Dohrmann	4th QTR 2003
5. Provide management training on apparent causes	L. Dohrmann	4th QTR 2003

Corrective Action Program

- Summary
  - FENOC has a strong industry standard program
  - The improvements we've made and continuing enhancements assure improved implementation of the program
  - The CAP supports restart and safe operation.

Closing Comments

Lew Myers
Chief Operating Officer - FENOC