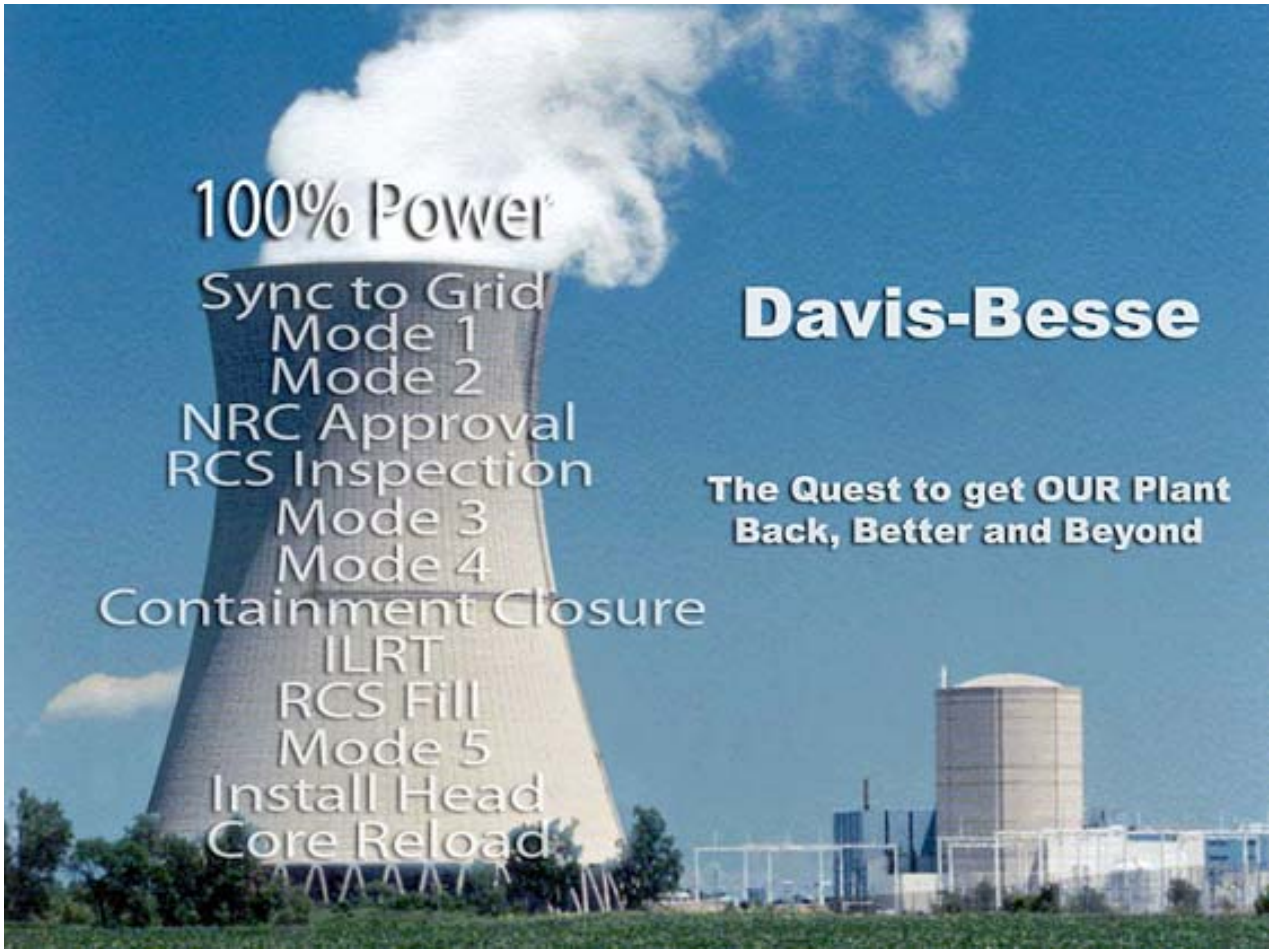
Davis-Besse Nuclear Power Station



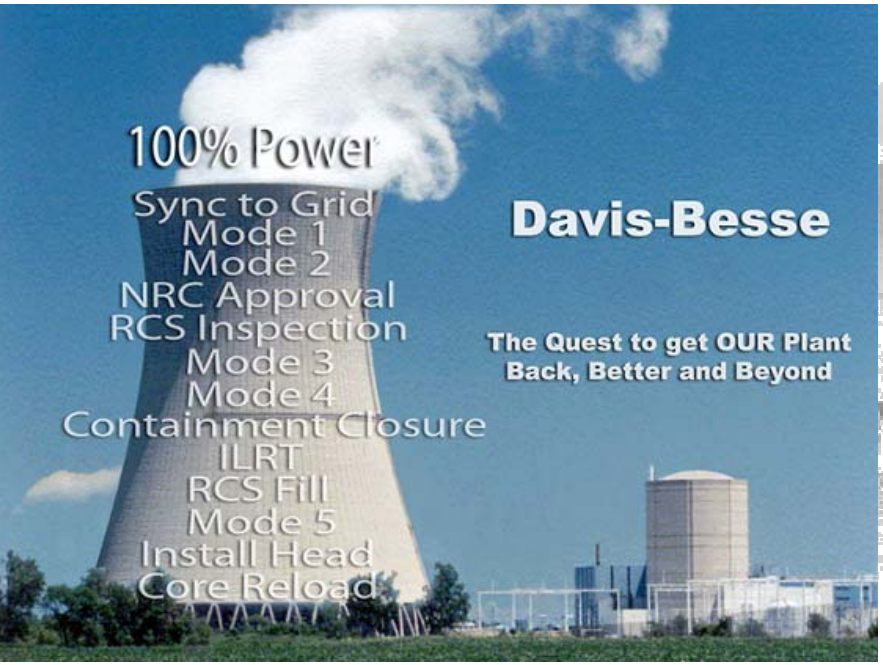
IMC 0350 Meeting

Desired Outcomes

- Demonstrate that the steps taken to return Davis-Besse to service have been safe and conservative
- Provide a timeline of startup activities since the last public meeting
- Provide status on the Cycle 14 Operational Improvement Plan, post-restart actions, and Confirmatory Order

Lew Myers
Chief Operating Officer - FENOC

Back, Better, and Beyond



- Milestones
  - –March 8 - NRC Restart Authorization
  - –March 9 - Mode 3
  - –March 11 - Reactor critical (Mode 2)
  - –March 14 - Mode 1
  - –March 16 - Synchronized to Grid
  - –March 17 - Mode 3
  - –March 23 - Repaired Feedwater Valve 780
  - –March 24 - Mode 3
  - –March 26 - Mode 2 / Mode
  - –March 27- Final synchronization to grid (end of outage)
  - –April 4 -100% power

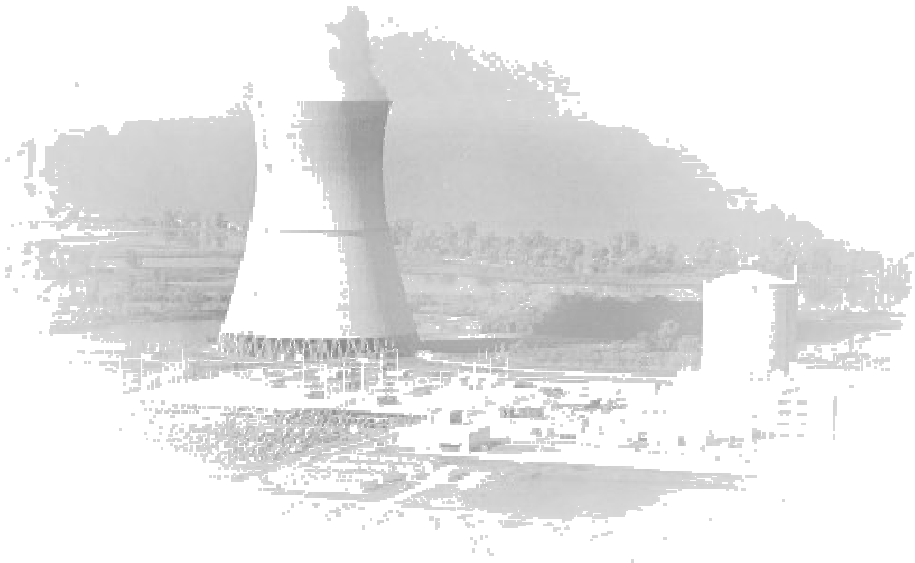
Back, Better, and Beyond

- Return to Service
  - Plant materiel condition
  - Reactor Coolant System leakrate
  - RCS activity
  - Primary/Secondary Chemistry
  - Operations Performance
  - Employees

FENOC Vision:

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

Plant Performance



Mark Bezilla
Vice President

Week of February 8

#1 Startup Transformer

- Accomplishments
  - –Successfully completed control rod insertion time testing (Group 1-7)
  - –February 12 - Request for Restart
  - –NRC Emergency Plan Inspection
  - –Plant in Mode 3
- Challenges
  - –Restoration of Startup Transformer

Week of February 15

Assembly of Containment Spray Pump

- Accomplishments
  - –#1 Containment Spray Pump maintenance
  - –Mode 2 Readiness Reviews
  - –#1 Decay Heat Pump Quarterly Test
  - –#1 Auxiliary Feedwater (AFW) Functional Test
  - –Plant in Mode 3
- Challenges
  - –Radiation Monitor RE-4597AA (new boards)

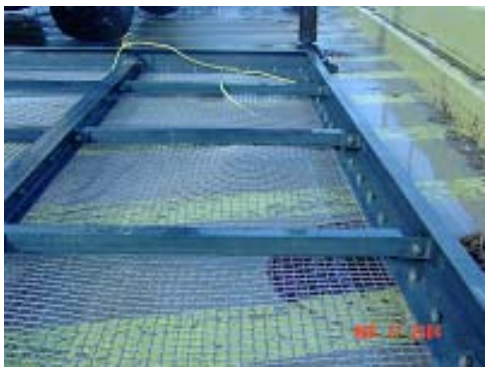
Week of February 22

FirstEnergy's CEO Tony Alexander tours Davis-Besse February 26

- Accomplishments
  - –Purged air and added hydrogen to Main Generator
  - –AFW #1 Monthly Test
  - –Received NRC Approval of License Amendment Request for Mid-cycle Steam Generator Inspection
  - –Emergency Diesel Generator #1 Monthly Test
  - –Steam and Feedwater Rupture Control System and Reactor Protection System Testing
  - –Received NRC Draft Order for Conditions of Restart
  - –Emergency Preparedness Media Tour
- Challenges
  - –No challenges of note

Week of February 29

Circulating Water intake screens



- Accomplishments
  - –Reduction of vibration on CRDM motor generator set
  - –Mode 2/1 restraints resolved
  - –Closed containment and conducted personnel airlock leakage surveillance
  - –Cleaned Circulating Water intake screens
- Challenges
  - –Reactor Coolant Pump 1-2 (low motor bearing oil level)
  - –Circulating Water pump suction screen (repairs)

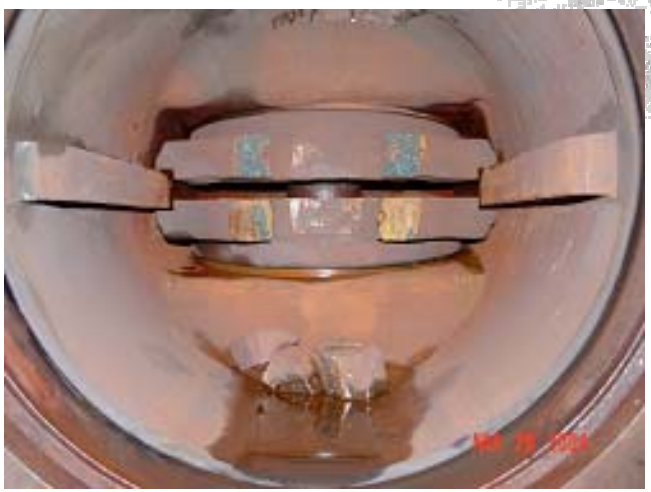
Week of March 7

Operators withdraw control rods

- Accomplishments
  - –March 8 - NRC resolved the issues and removed restrictions for restart
  - –Final Restart Readiness Review for Mode 2
  - –March 11 - entered Mode 2 (reactor critical)
  - –Zero power physics testing (ZPPT)
  - –Conducted senior leadership team (SLT) review of ZPPT
- Challenges
  - –Operations concern ~ "estimated critical boron" concentration
    - –Operating crew reinserted control rods

Week of March 14

Feedwater Valve 780



- Accomplishments
  - –March 14 - Mode 1
  - –Power increased to ~14%
  - –Effectiveness assessment and readiness review prior to generator synchronization
  - –March 16 - Synchronized Turbine to Grid (~20% Power)
  - –March 17 - Completed Overspeed Turbine Trip Testing
- Challenges
  - –Feedwater Valve 780 (disk/stem separation)
  - –Return to Mode 4

Week of March 21

Turbine Bypass Valve

- Accomplishments
  - –Root Cause Team Assessment (Problem-solving and Decision-making) on Feedwater (FW) Valve 780
  - –March 23 - Repaired FW Valve 780
  - –Restart Readiness Meeting
  - –March 26 - entered Mode 1
  - –March 27 - Turbine synchronized to grid
- Challenges
  - –Reworked Turbine Bypass Valves

Week of March 28

Reactor Engineers monitor reactivity

- Accomplishments
  - –Effectiveness assessment and readiness review prior to 100%
  - –Nuclear Instruments and Reactor Protection System calibrations
  - –Maintained plant chemistry within limits (iron and silica)
  - –INPO Visits
    - –Site Pre-visit
    - –Simulator Observation
    - –AFW Assist Visit
- Challenges
  - –Integrated Control System Response
  - –Nuclear Instrument Gain Adjustments

Week of April 4

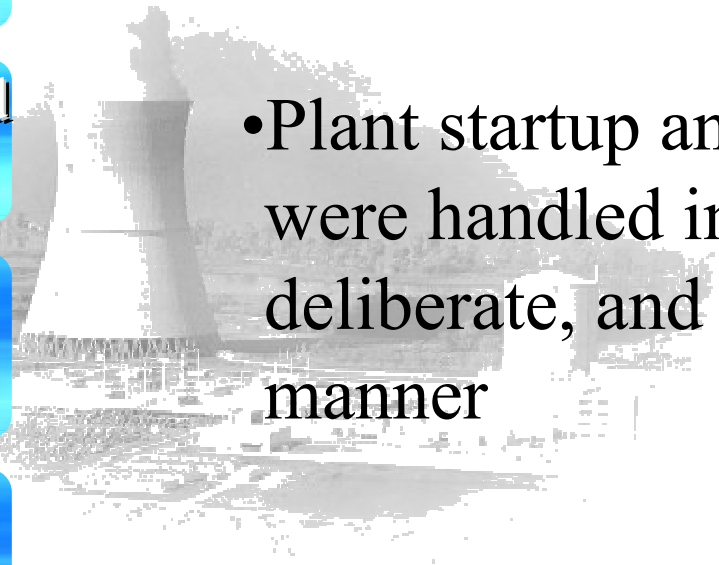
April 4, 2004
Davis-Besse at 100% power
(~ 900 MWE)

- Accomplishments
  - –Nuclear Instruments and Reactor Protection System calibrations and adjustments
  - –Maintained plant chemistry within limits (iron and silica)
- Challenges
  - –D2 Normal Supply Breaker

Conclusion

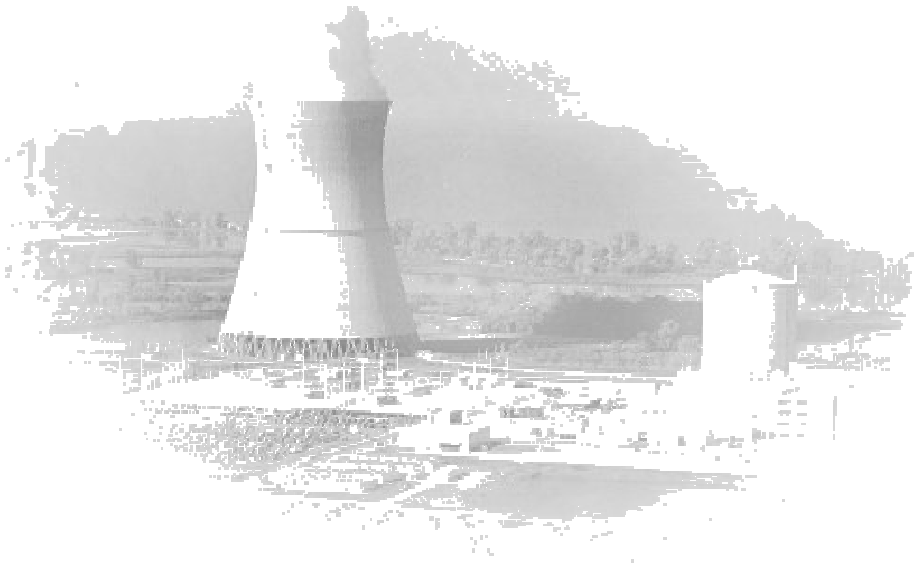
FENOC Objectives

- Safe Plant Operations
- People Development and Effectiveness
- Improved Outage Performance
- Excellent Materiel Condition
- Fleet Efficiency and Effectiveness



- Plant startup and challenges were handled in a safe, deliberate, and conservative manner

Operational Improvement Plan and Confirmatory Order

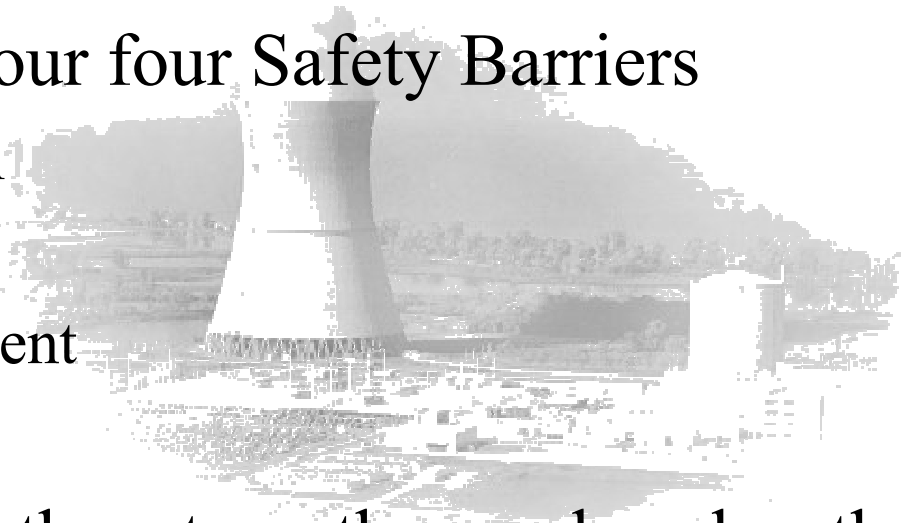


Clark Price

Manager - Business Services

Cycle 14 Operational Improvement Plan

- Continuation of the Management & Human Performance Improvement Plan
- Focuses on our four Safety Barriers
  - Individual
  - Programs
  - Management
  - Oversight
- Serves to further strengthen and anchor the lessons learned and the corrective actions taken



Cycle 14 Operational Improvement Plan

- 10 Improvement Initiatives
- 88 Individual Key Actions
- Performance Indicators designed to monitor our performance in the four Safety Barriers

Monthly Management Review Meetings

- Attendees
  - –Senior Leadership Team
  - –Site Managers
  - –Other owners of key actions
- Cycle 14 Operational Improvement Plan
  - –Key Initiative Action Plans
  - –Safety Barrier Performance Indicators
- Integrated Restart Report Commitments
  - –Action Plans
- Safety Culture Monitoring Business Practice

Actions for Continuous Improvement

- Integrated Restart Report dated November 23, 2003 & Supplement to report dated February 6, 2004
  - –Appendix A Commitments 36
  - –Closed to date 11
- Cycle 14 Operational Improvement Plan
  - –Appendix D Commitments 94
  - –Closed to date 29
- Confirmatory Order
  - –Commitments 6
  - –Closed to date 0

Operational Improvement Plan
1st Quarter Accomplishments

- Completed several Operations improvement actions
- Developed Forced Outage Schedule template
- Completed SCWE training to expanded population
- Completed SCWE refresher training for supervisors
- Completed qualification of Apparent Cause Evaluators
- Completed Apparent Cause Training to Managers

Operational Improvement Plan
2nd Quarter Highlights

- Improvements to the Management Observation Program
- Benchmark Conduct of Operations
- Improvements in Work Management processes
- Develop plans
  - Improve safety margins for the Top 10 Risk Significant Systems
  - Reduce and maintain Engineering backlogs
  - Reduce Condition Report and Corrective Action backlogs
- Effectiveness assessment of corrective actions taken in response to November 2003 SCWE survey (May)

Confirmatory Order Requirements
(March 8, 2004)

- Independent annual assessments for 5 years
- Written plan due to NRC 90 days prior to assessment
- Assessment report due to NRC within 45 days of completion
- Mid-cycle inspection of Reactor Pressure Vessel upper and lower head, penetrations, and Control Rod Drive mechanism flanges

Confirmatory Order Action Plan
(March 8, 2004)

- Clark Price - Project Manager
- Fred von Ahn, FENOC Vice-President of Oversight - Executive Sponsor
- Developing a Business Practice to manage the process
- Approach and Team Composition
- Tentative Independent Assessments for 2004
  - –Operations Performance (August)
  - –Corrective Action Program Implementation (September)
  - –Engineering Program Effectiveness (October)
  - –Organizational Safety Culture, including SCWE (November)

Closing Comments

FENOC Vision:

People with a strong safety focus

delivering top fleet operating performance

Lew Myers
Chief Operating Officer - FENOC