

Davis-Besse Nuclear Power Station



Return to Service Plan Update

September 17, 2002

Introduction



Lew Myers
FENOC Chief Operating Officer



Desired Outcomes

- **Demonstrate that Davis-Besse is making progress toward restart.**
- **Discuss issues and our resolve to do the job correctly.**
- **Discuss the major restart milestones and the status of the Integrated Schedule.**
- **Discuss status of Technical Root Cause.**
- **Provide status of several Building Blocks.**
- **Demonstrate progress of activities through discussion of our Performance Indicators.**
- **Discuss our Restart Test Plan.**

Milestones and Scheduled Activities



Mike Stevens
Director - Work Management

Major Milestones

Major Restart Milestones

- Restore the Containment Vessel and Shield Building
- System Health Readiness Reviews
- System Health Latent Issues Reviews
- FENOC Decision Making procedure implemented
- Containment Extent of Condition Inspections and Evaluations
- Regulatory Compliance Program implemented
- Complete Program Reviews
- Conduct of Operations effectively implemented

Major Milestones

Major Restart Milestones

- Core Reload (October 30)
- Corrective Actions for Program and Systems Reviews implemented
- New Reactor Vessel Head on Reactor
- Enter Mode 5 (November 3)
- Reactor Coolant System Filled and Vented
- Management Restart Readiness Review
- Enter Mode 4 (November 19)

Major Milestones

Major Restart Milestones

- Enter Mode 3
- Full Pressure Containment Inspections
- Restart Overview Panel recommends restart
- NRC Approval for restart (November 18)
- Enter Mode 2 (December 4)
- Enter Mode 1
- Final Synchronization to Grid
- 100 % Power (December 7)

Major Activities

NRC Restart Checklist Items:

- Adequacy of Root Cause Determinations
- Adequacy of Safety Significant Structures, Systems, and Components
- Adequacy of Safety Significant Programs
- Adequacy of Organizational Effectiveness and Human Performance
- Readiness for Restart
- Licensing Issue Resolution
- Confirmatory Action Letter Resolution

Major Activities

Current Management Work Activities:

- Reactor Coolant System Hot Leg Thermowell
- Containment Emergency Sump
- Containment Coatings
- Safety System Design Performance Capability
 - Service Water System
 - High Pressure Injection System
 - 4160V Electrical Distribution System
- Condenser Coatings
- Emergency Diesel Generator Air Start

Major Activities

Current Management Work Activities:

- Feedwater Heater 1-6
- Reactor Coolant Pumps
- Polar Crane Reliability upgrades
- Reactor Cavity Permanent Seal
- Decay Heat Valve Pit
- Operator Work Arounds
- Temporary Modifications

Status of Technical Root Cause



Jim Powers

Director -- Technical Services

Status of Technical Root Cause



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Status of Technical Root Cause

Analysis Findings:

- A series of surface cracks found in lab
- Appears to be approximately 2-inches at weld pass
- Does not extend through the cladding
- Clad found thinner in lab measurements

Reactor Head Restoration



Bob Schrauder

Director -- Support Services

Reactor Head Resolution Plan

Replacement Head Activities

- Old head is removed and in storage
- New head is inside Containment and on its stand
- Service Structure ready for installation
- Containment Restoration underway

Reactor Head Resolution Plan

Difficulties Addressed

- Work delayed due to Polar Crane upgrades
- Stopped work while restoring containment to resolve work practice and quality issues
 - Work completed was not impacted
 - Recovery Plan approved and work was allowed to proceed

New Reactor Head

Old Reactor Head



New Head Moved into Containment



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New Head on Stand in Containment



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**Before Sponge
Jet-Blasting and Painting**



**After Sponge
Jet-Blasting and Painting**

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Pull Test



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Containment and System Health



Randy Fast
Plant Manager

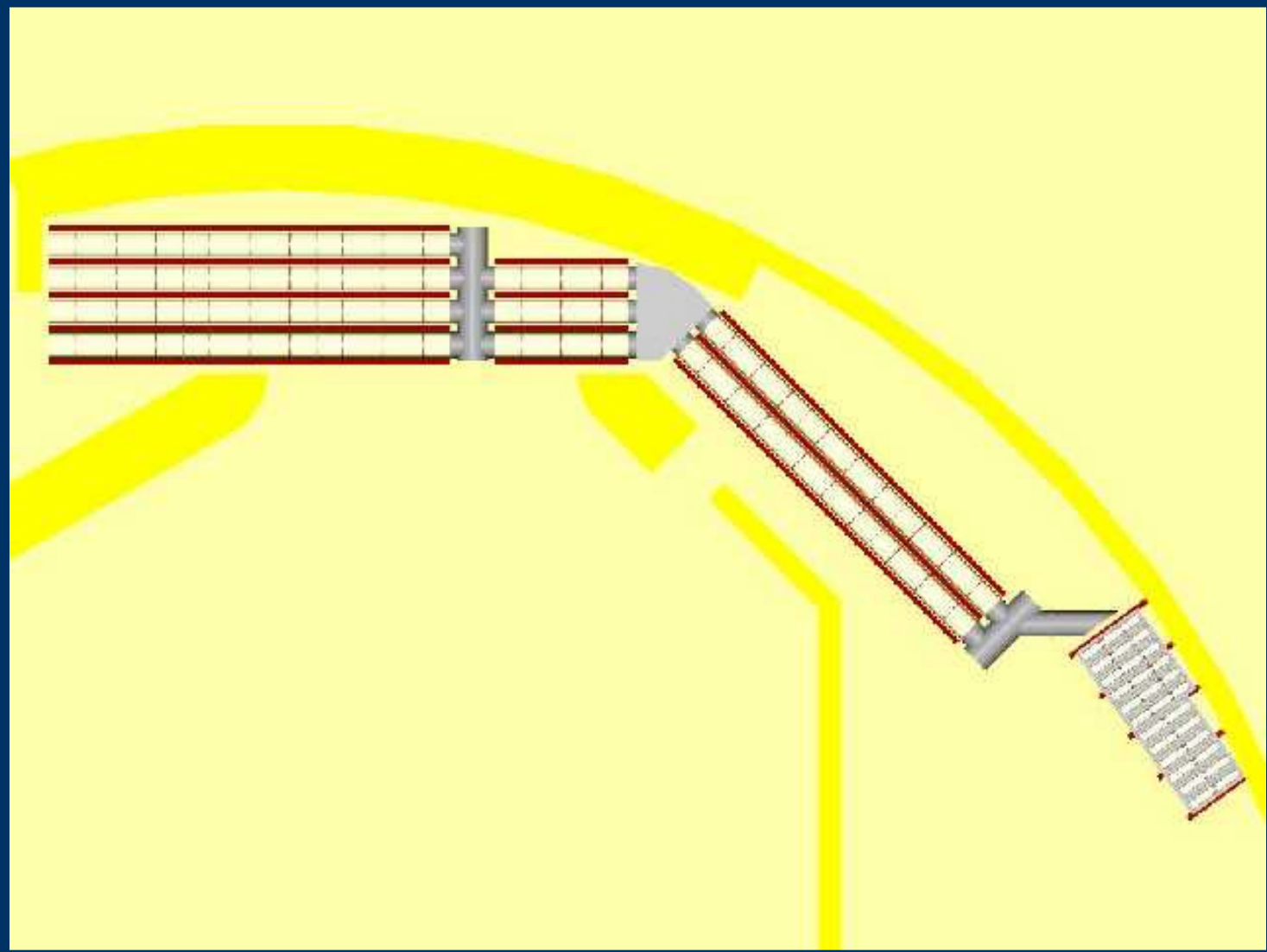
Jim Powers
***Director - Technical
Services***

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Containment Health Plan

- **Inspections in progress**
 - No significant issues found in Containment
 - Most issues are minor maintenance
- **Containment Sump**
 - Gaining margins for safety and operational excellence
 - Will put Davis-Besse on the leading edge of the industry Pressurized Water Reactors
- **Containment Coatings Walkdowns complete**
- **Insulation Removal complete**

New Containment Sump



System Health Plan

- **System Review Walkdowns complete**
- **31 System Health Reviews are on-going**
 - 500 Condition Reports initiated related to System Health Reviews as items requiring evaluation prior to restart
 - Past corrective actions reviewed
 - Low threshold for issues to be identified
 - 5 System Reviews completed by Responsible System Engineers
 - 4 reports presented to Engineering Assessment Board
 - 2 reviews approved; 3 scheduled to be presented

System Health Plan

- **31 System Health Reviews are on-going**
 - **Approximately 70% Overall Completion**
 - **Some important issues discovered, but nothing requiring a major project**
 - **Tornado Missile protection**

Emergency Diesel Generator Exhaust Stack with Missile Shield Installed



Emergency Diesel Generator Base Plate for Missile Shield

System Health Plan

- **Work on-track according to the plan**
- **Issues**
 - Several days behind the plan
 - Auxiliary Feedwater Strainer potential for clogging
 - HELB calculation quality collective significance
- **Restart activities can be accomplished within the plan**

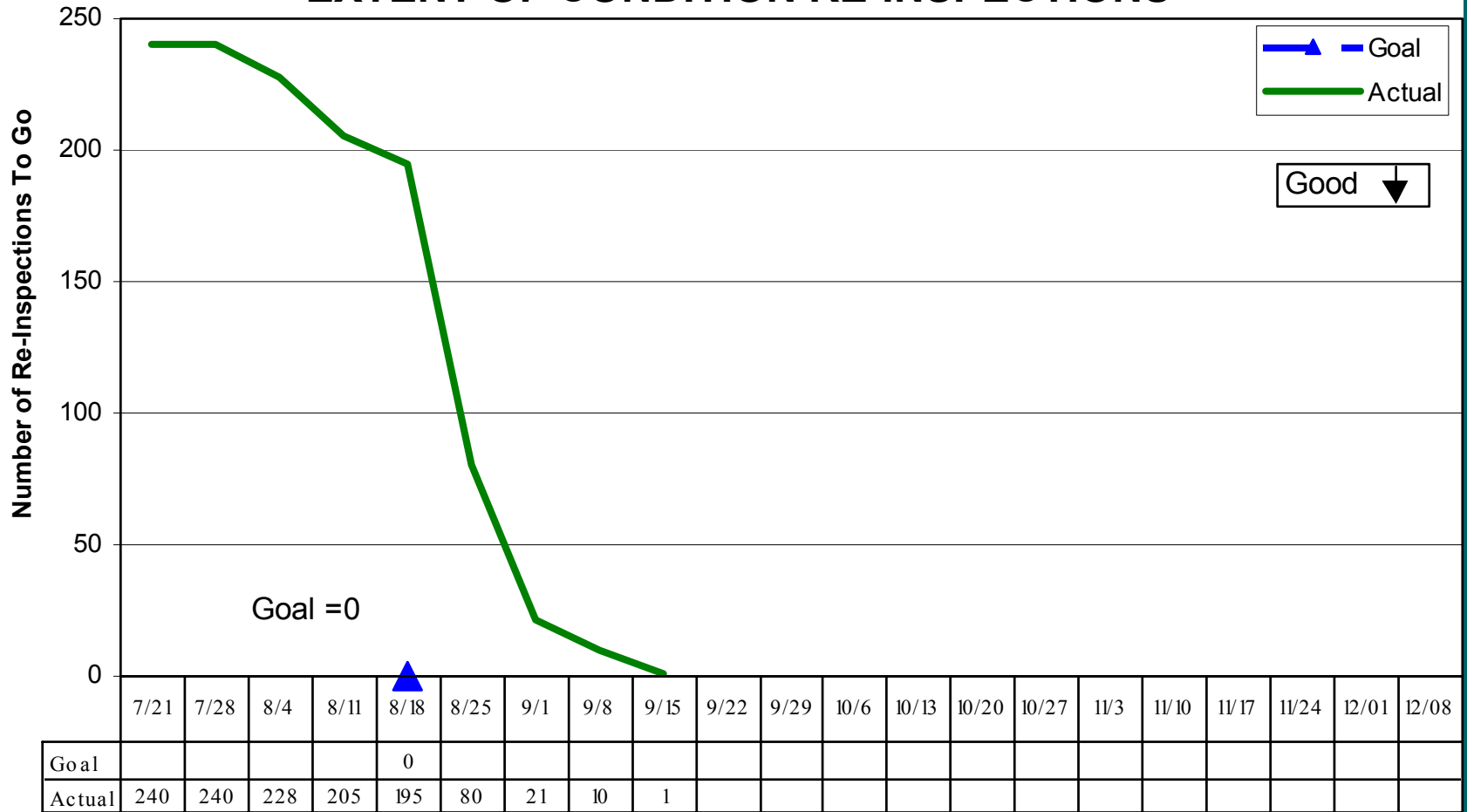
Performance Indicators



Clark Price
Manager - Business Services

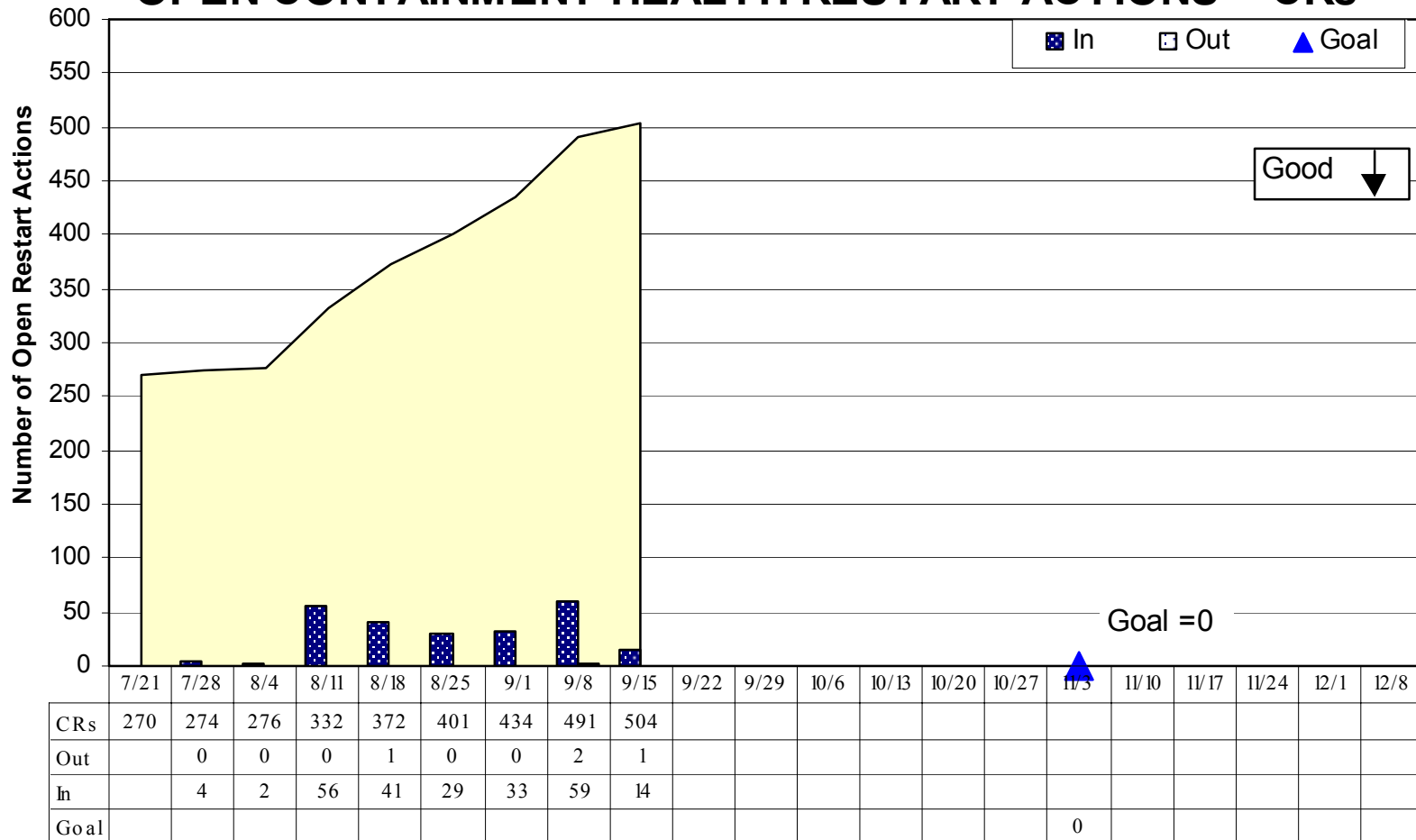
Performance Indicators

CONTAINMENT HEALTH ASSURANCE EXTENT OF CONDITION RE-INSPECTIONS



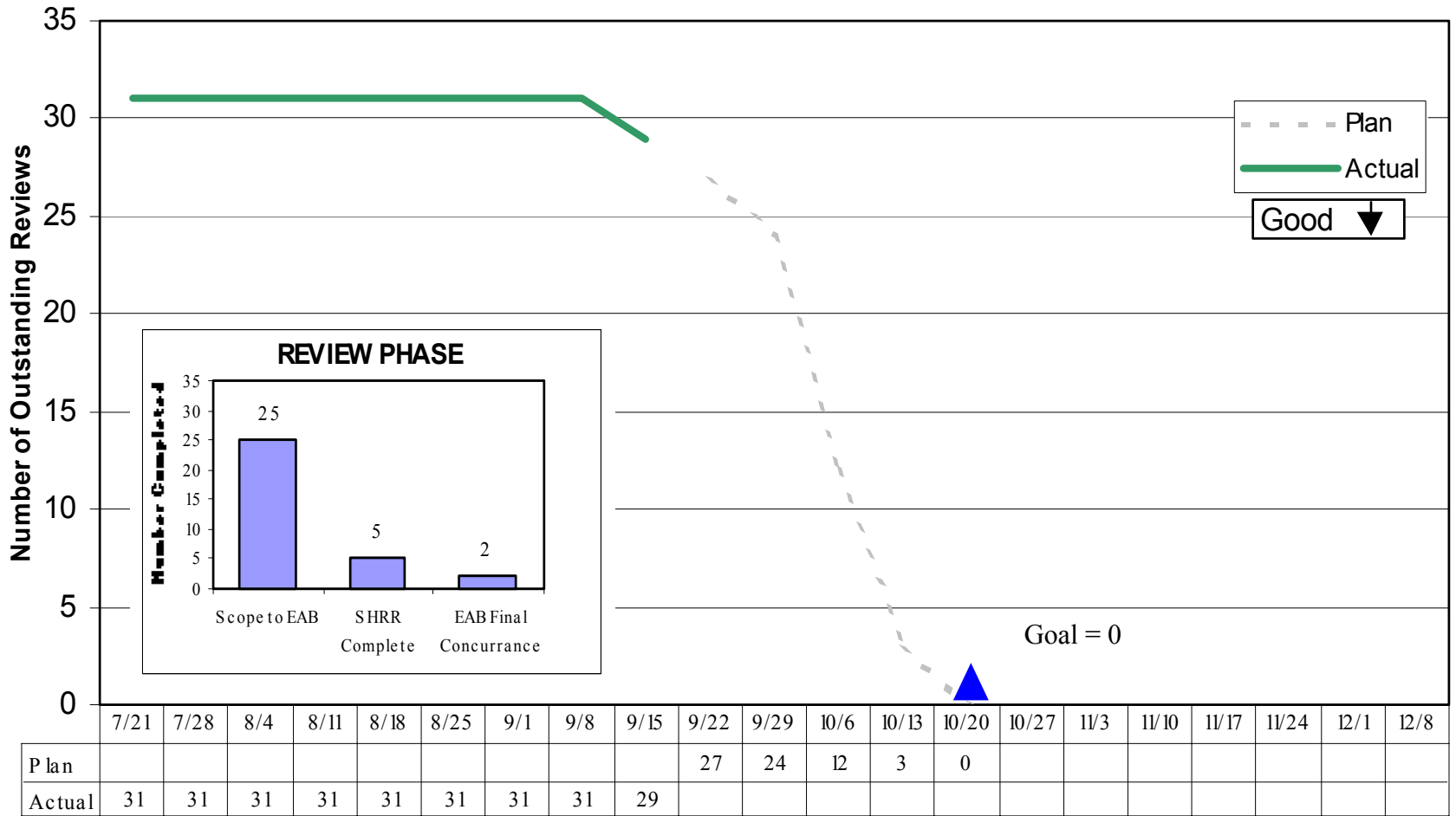
Performance Indicators

OPEN CONTAINMENT HEALTH RESTART ACTIONS -- CRs



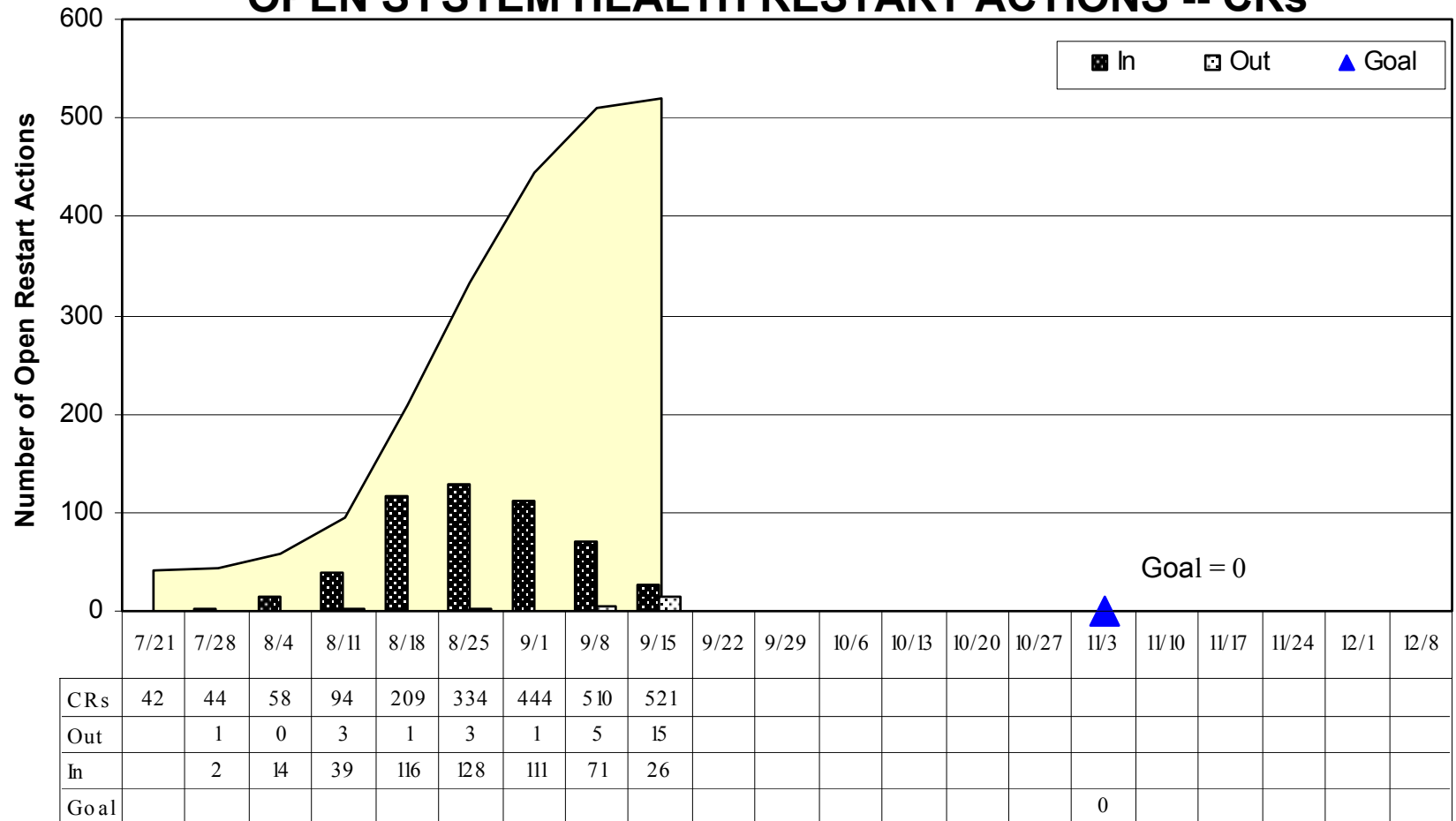
Performance Indicators

SYSTEM HEALTH READINESS REVIEWS



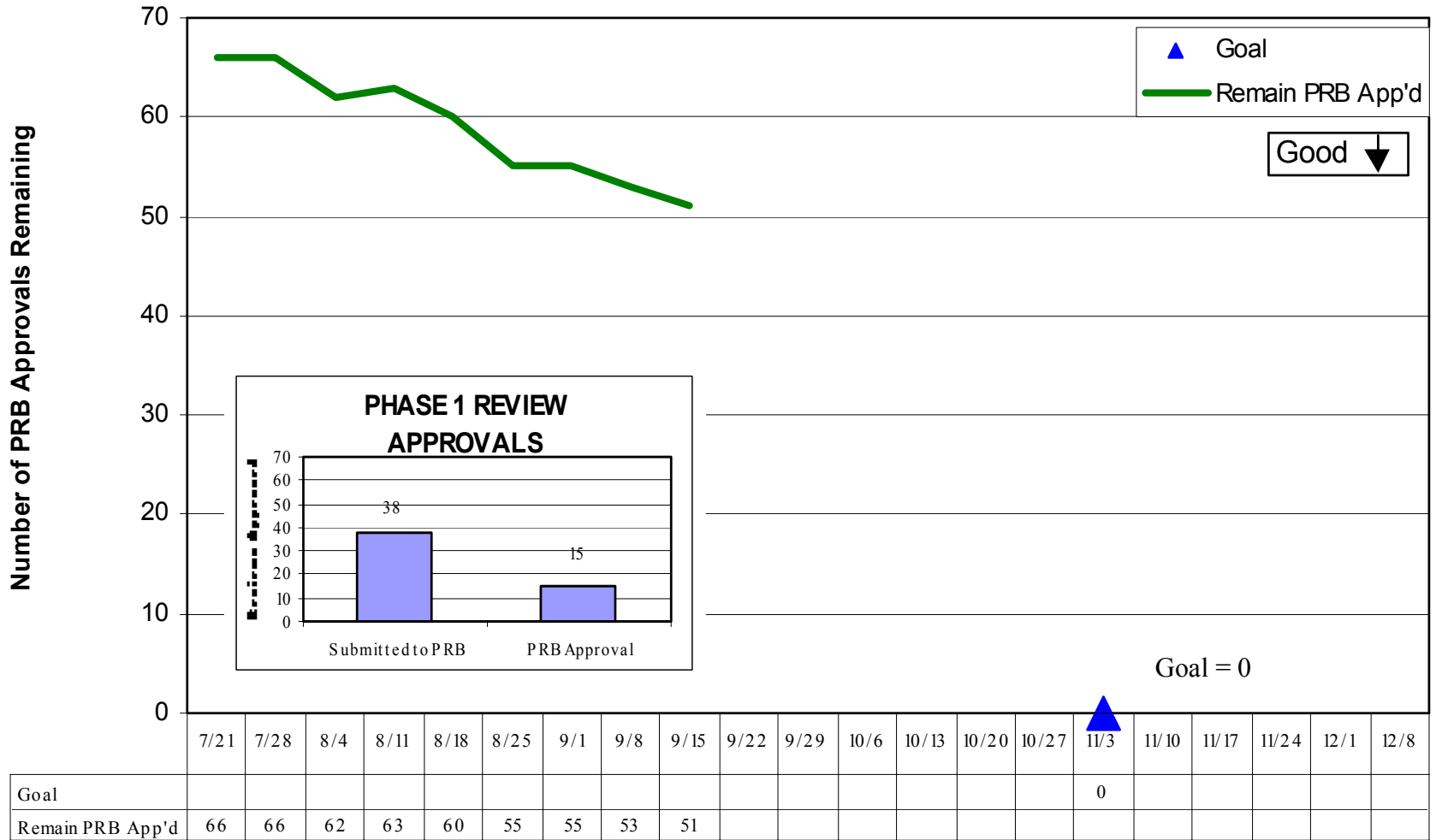
Performance Indicators

OPEN SYSTEM HEALTH RESTART ACTIONS -- CRs



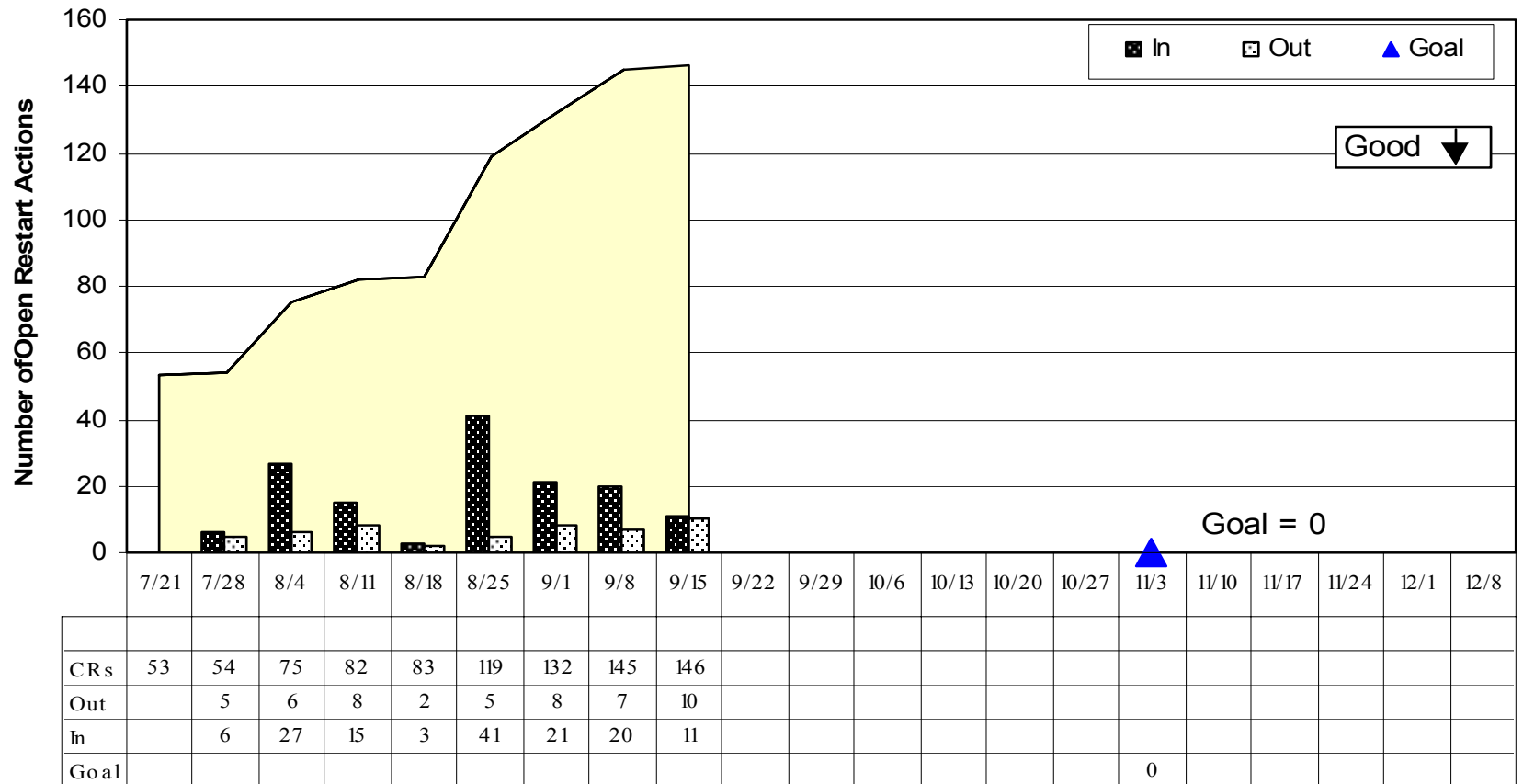
Performance Indicators

PHASE 1 PROGRAM REVIEWS



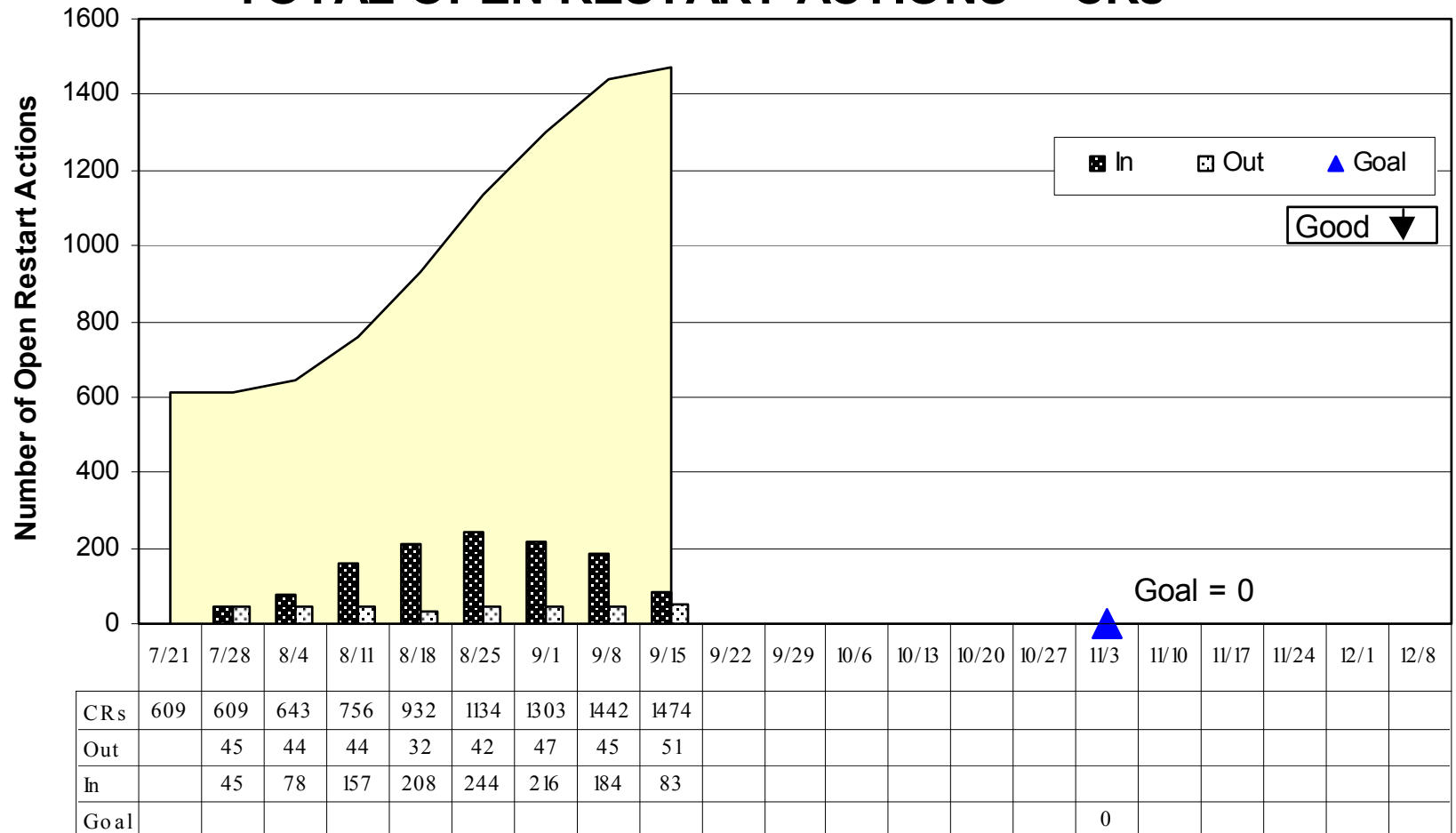
Performance Indicators

OPEN PROGRAM COMPLIANCE RESTART ACTIONS -- CRs



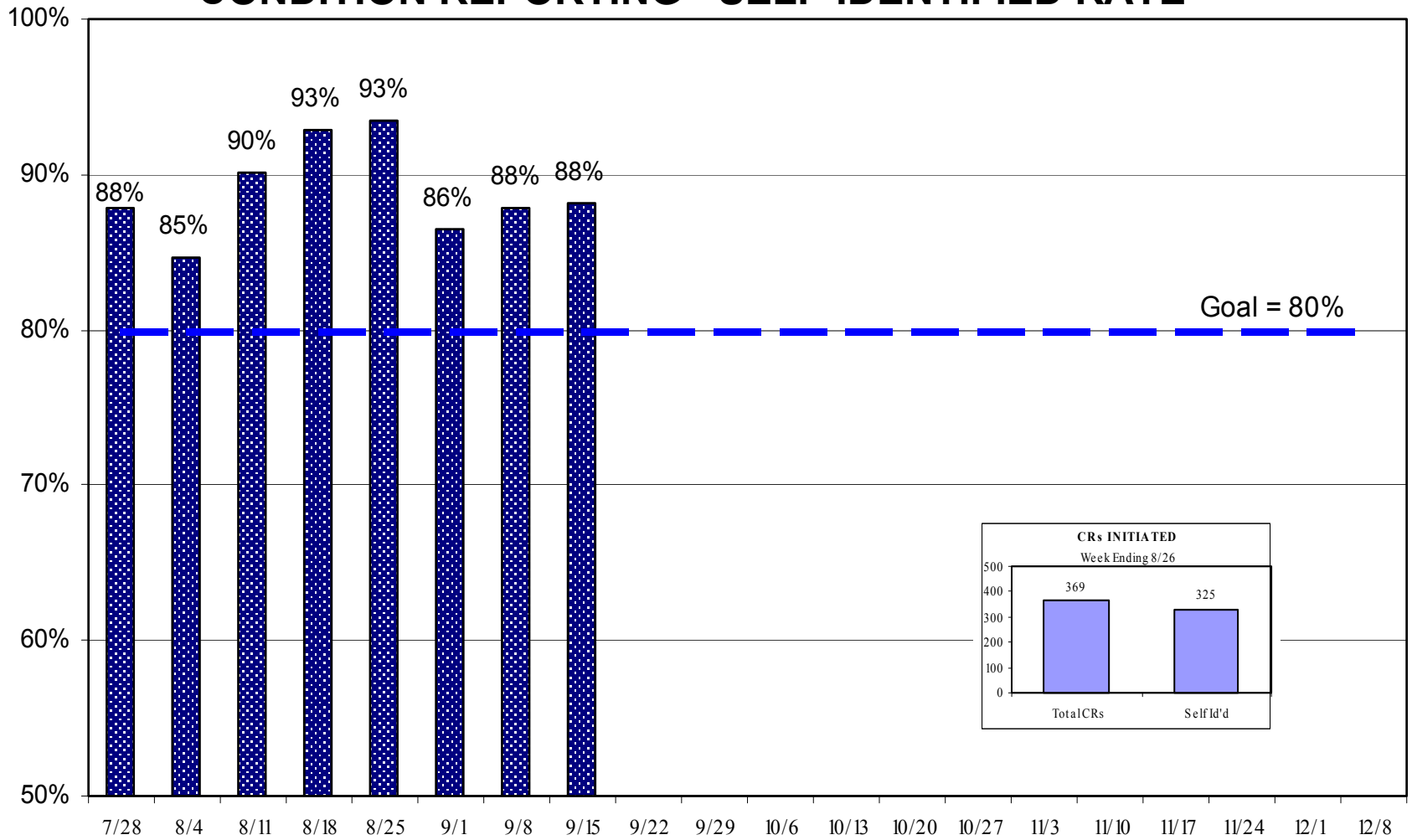
Performance Indicators

TOTAL OPEN RESTART ACTIONS -- CRs



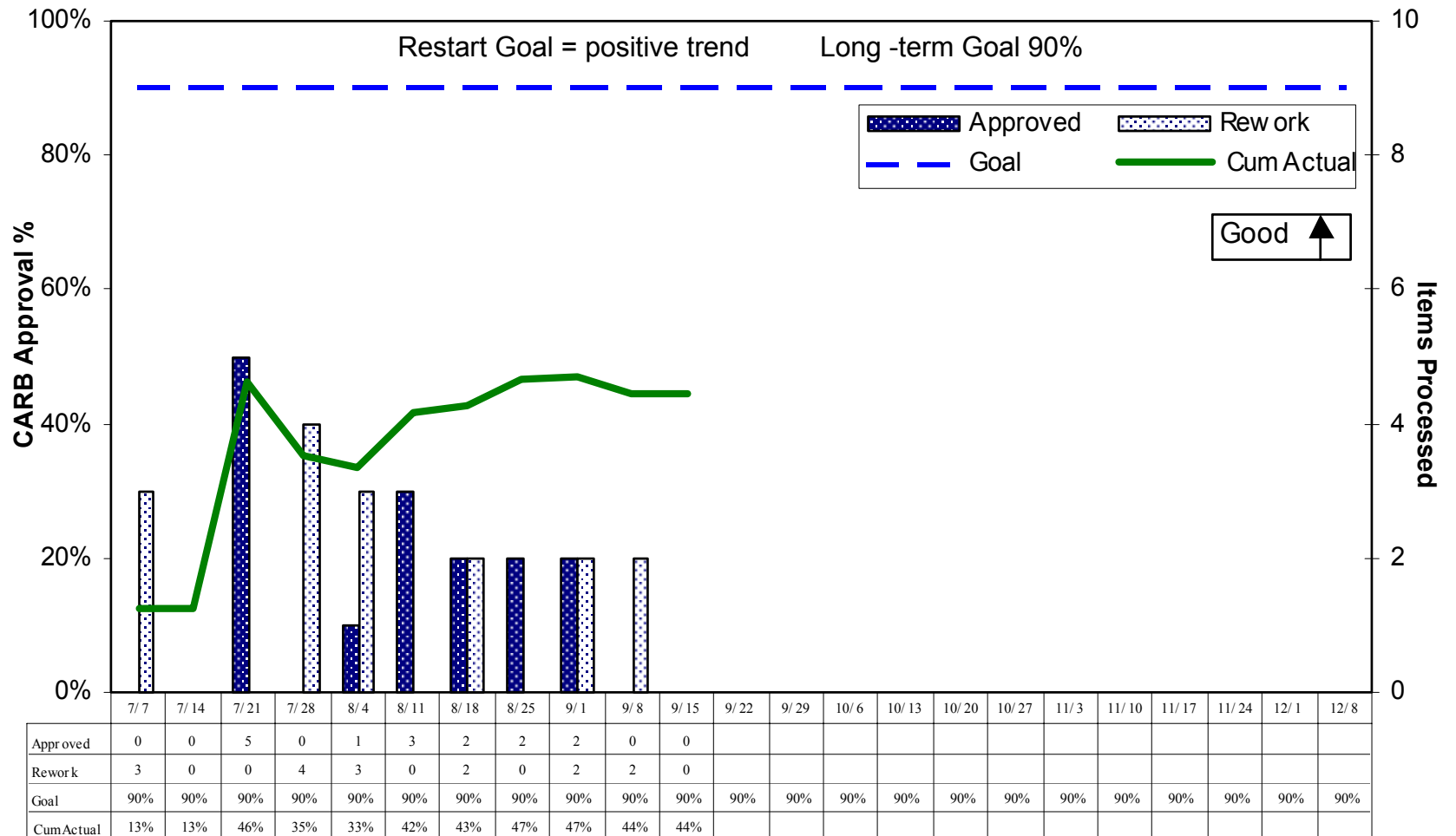
Performance Indicators

CONDITION REPORTING - SELF-IDENTIFIED RATE

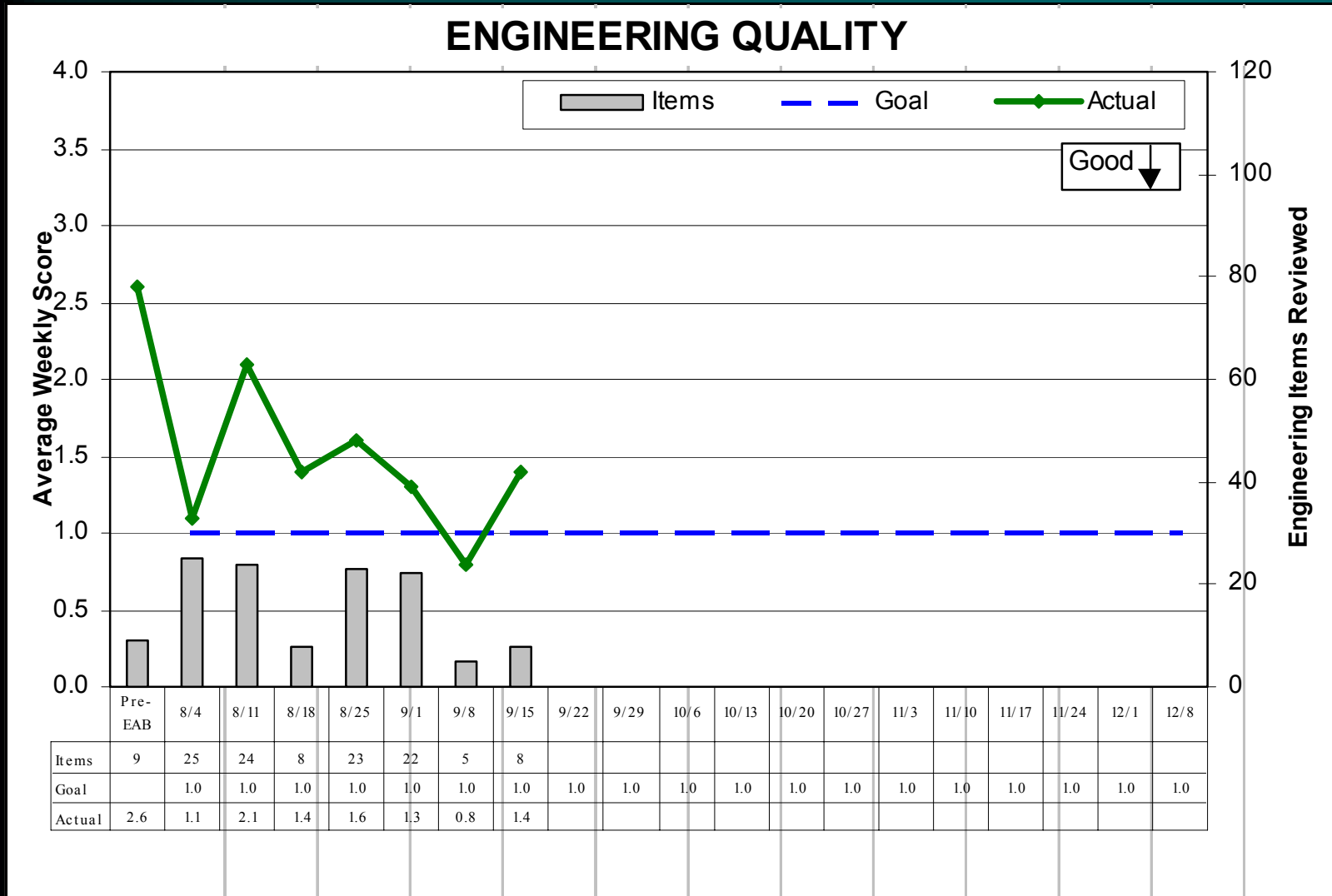


Performance Indicators

ROOT CAUSE QUALITY



Performance Indicators



Restart Test Plan



Mike Roder
Manager - Operations

Restart Test Plan

- **Comprehensive plan designed to ensure that our systems, structures, components, and operators are ready to support the safe operations of the station.**
- **Key components of the plan include:**
 - **Reviewing the proposed post-maintenance and post-modification testing for adequacy**
 - **Creating an integrated startup test procedure**
 - **Verifying operator readiness for sustained safe and reliable operation.**

Restart Test Plan

- **Test Procedure Prior to Restart**
 - Integrates plant startup evolutions with key activities to verify system, structure, and component readiness
 - Integrated Leak Rate Testing to prove Containment Vessel integrity
 - Holds at low pressure and high pressure to verify high standards of Reactor Coolant System integrity
 - Key management reviews at designated milestones
 - Prior to Mode 4
 - Prior to Mode 2
 - At approximately 50% power

Restart Test Plan

- **Operator Readiness**
 - Train Operators on the Startup Test Procedure utilizing our site-specific simulator facility
 - Evaluate Operator performance during simulated startup evolutions

Operations Team



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Closing Remarks



Lew Myers
FENOC Chief Operating Officer



Mission: People providing safe, reliable and cost effective nuclear generation



DAVIS-BESSE

SENIOR MANAGEMENT TEAM STANDARDS

We are committed to implementing the FENOC Mission, Vision and Values.

We will demonstrate our commitment to safety; demonstrate leadership courage with safety first and foremost.

We will recognize the Value of our people.

We pledge to uphold the Leadership in Action Principles.

We will earn the right to lead through our behaviors and actions.

