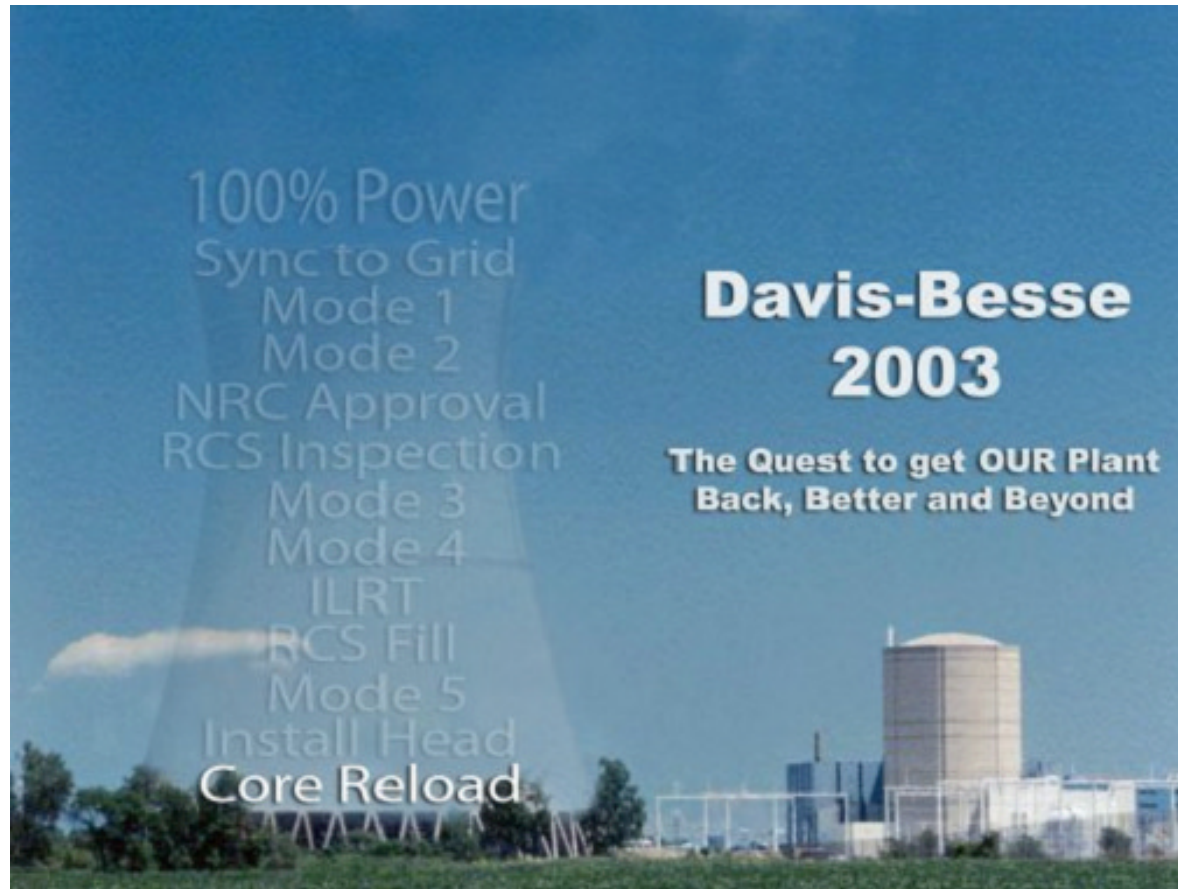


Davis-Besse Nuclear Power Station



IMC 0350 Meeting

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Opening Remarks



Lew Myers
Chief Operating Officer - FENOC

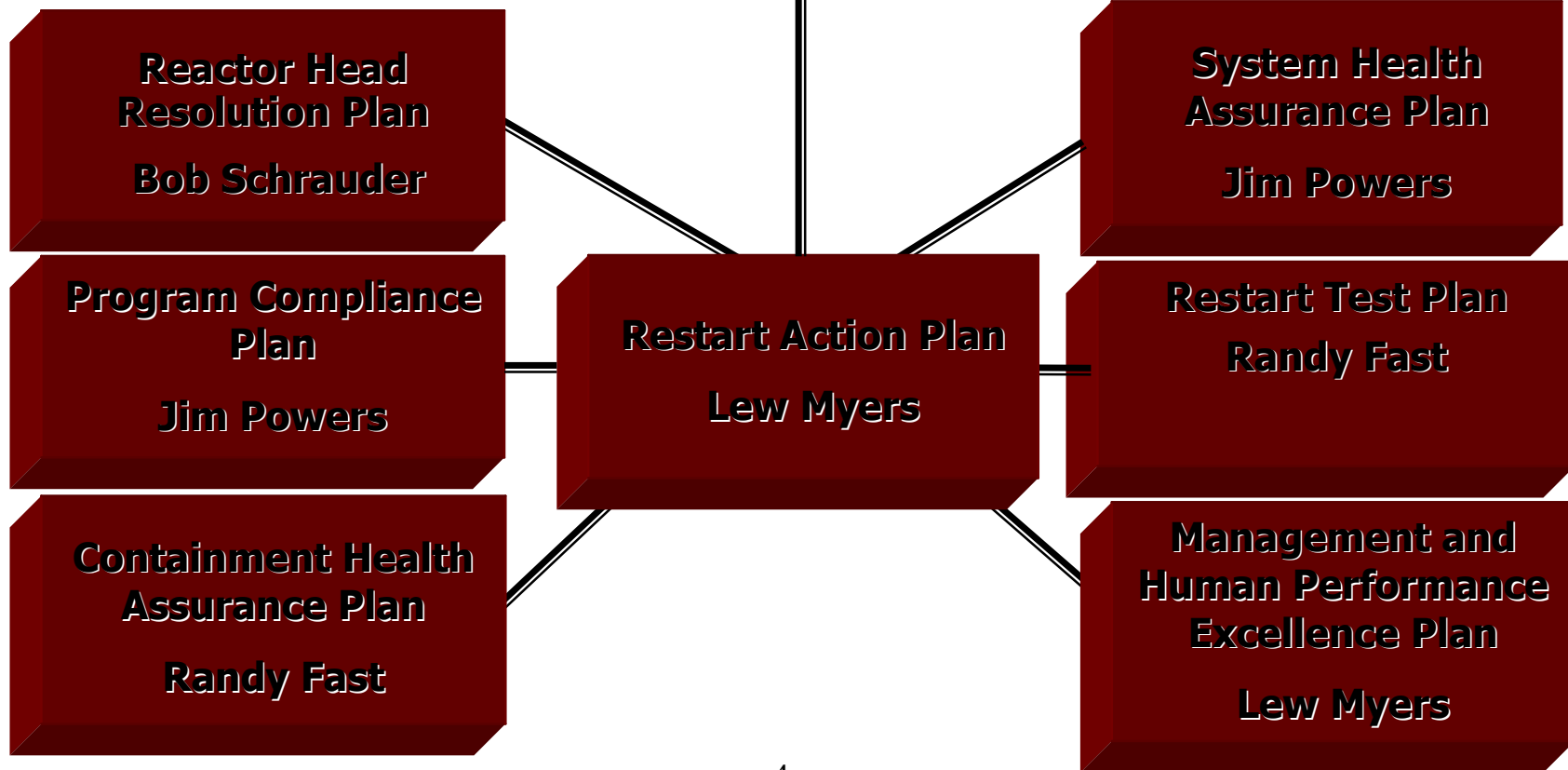
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Desired Outcomes

- Update Progress Made Toward Readiness
 - Restart Readiness.....Randy Fast
 - Containment Integrated Leak Rate Test.....Jim Powers
- System Health Assurance Building Blocks
 - Safety Functional Validation Project.....Bob Schrauder
- Management Reviews for Reload
 - Restart Readiness and Safety Culture.....Lew Myers
 - Nuclear Quality Assessments.....Steve Loehlein
- Schedule Update/Upcoming Activities
 - Integrated Schedule Progress.....Mike Stevens

Return to Service Plan

Restart Overview Panel



Restart Readiness



Randy Fast

Plant Manager

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Restart Readiness

- Fuel

- Inspections and corrective actions
- Re-manufactured assembly
- Fuel handling bridge modification/readiness
- Experienced team (Operations and Framatome)
- Training completed



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Restart Readiness

- Plant
 - Reactor Coolant Pumps



Restart Readiness

- Plant
 - Upper portion of the Containment Emergency Sump



Restart Readiness

- Plant
 - Decay Heat Pit



Restart Readiness

- Plant
 - Containment Air Coolers



Restart Readiness

- Plant
 - Plenum for Containment Air Coolers (Inside)



Restart Readiness

- Plant
 - Containment Dome



Restart Readiness

- Process
 - Readiness Reviews
 - Management Oversight
 - Refuel Director Roles & Responsibility
- Observations



Containment Integrated Leak Rate Test



Jim Powers

Director- Nuclear Engineering

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Containment Integrated Leak Rate Test



- Integrated Leak Rate Test (ILRT):
Containment is pressurized to test conditions that would occur in a 'design base accident.'
- Leakage Test Required by ASME Code
- Test Performed per 10 CFR 50, Appendix J
- Test Performed in 1991 and 2000
- Local leak rate test of repair of containment
- Scheduled Completion: Early March, 2003
- Containment Pressure: > 38 psig
- Length of Test: ~ 43 hours

System Health Assurance



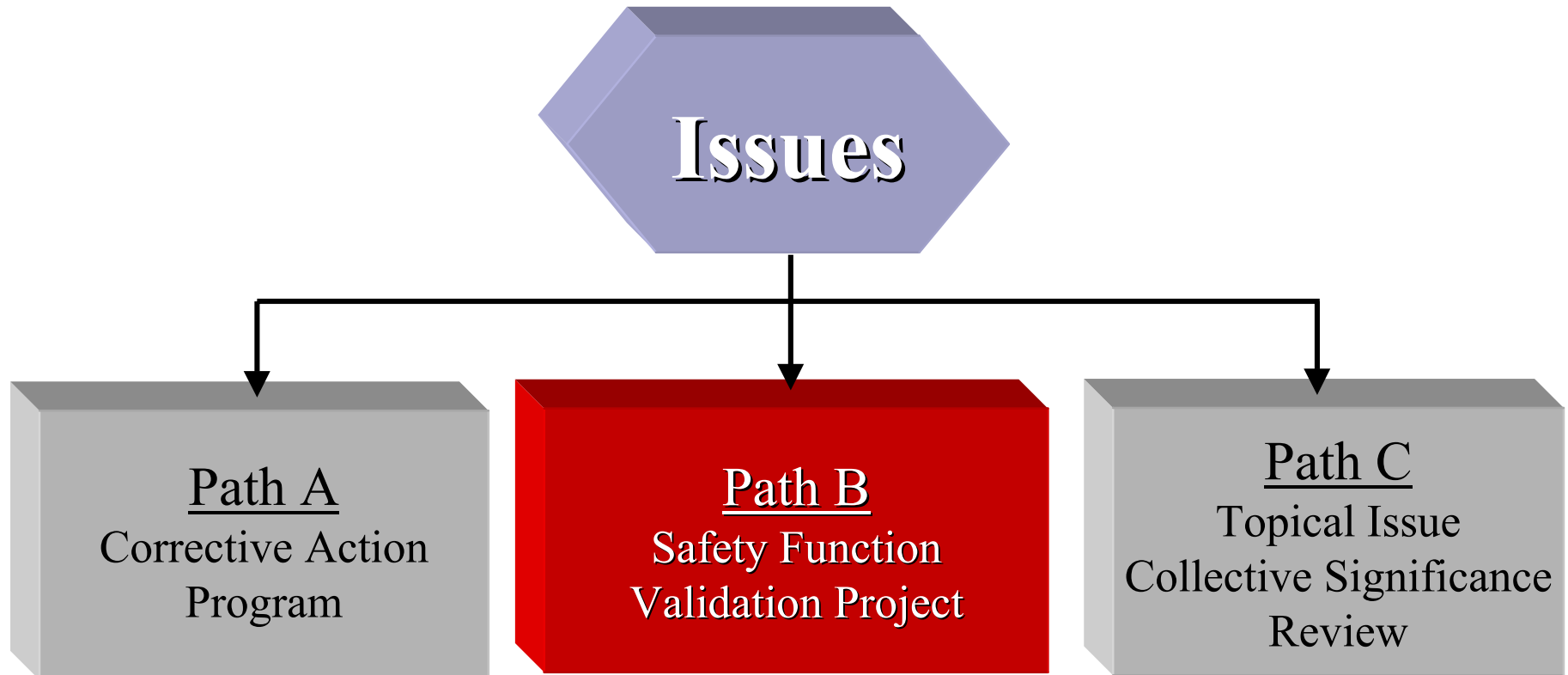
Bob Schrauder
Director - Support Services

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Background

- System Health Assurance Plan
 - Operational Readiness Reviews
 - System Health Readiness Reviews
 - Latent Issues Reviews
- Additional Reviews
 - Self Assessments
 - NRC Inspections
- Potential Issues Documented in Corrective Action Program

Issue Resolution



Safety Consequence Review

- Identify Potential Safety Issues

- Restart required Condition Reports
- Sources
 - Latent Issues Reviews (LIR)
 - Self Assessments
 - NRC Safety-System Design and Performance Capability Inspection

- Categorization Based on Potential Impact on Plant Safety

- > 600 Condition Reports (CRs) reviewed
- ~ 8% (51 CRs) with potential impact on plant design basis
- 51 CRs represent 28 individual issues

- Majority of Potential Issues Related to Calculations

Safety Function Validation Project

- Purpose
 - To provide assurance that safety functions that provide significant contributions to Core Damage Frequency (CDF) can be performed
 - Assess extent of condition for calculation issues
- Evaluate Safety Functions Contributing $> 1\%$ of CDF
- Safety Functions are Provided by 15 Safety Systems
 - 5 evaluated by Latent Issues Review
 - 2 partially evaluated by Self-Assessment
 - 8 additional systems added to review

Safety Function Validation Project

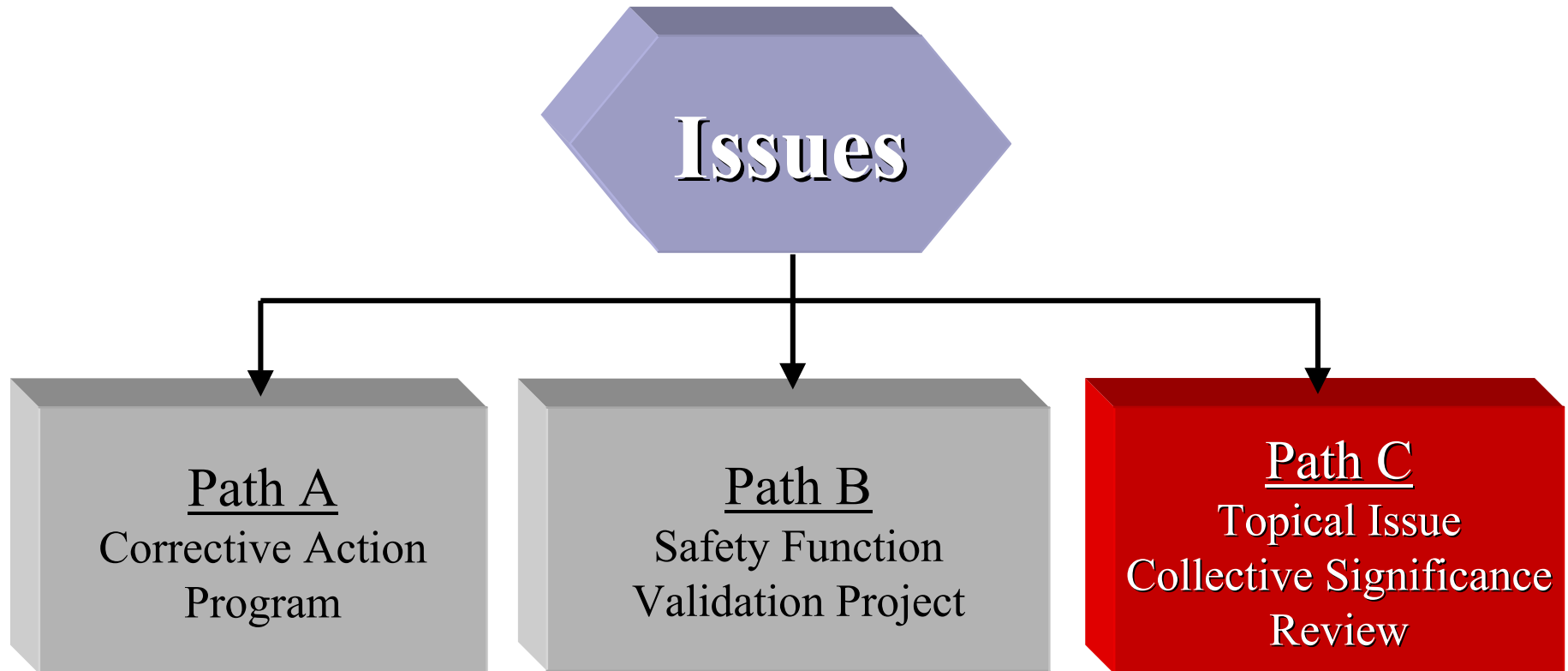
- Review Methodology
 - Defined safety functions and attributes to be validated
 - Identified available calculations and testing that demonstrate system capability to perform function
 - Reviewed calculations and testing to validate safety function/attribute
- For Functions/Attributes Not Fully Validated
 - Performed technical evaluations
 - Determined effect on system capability
 - Supported Operability Determinations (if required)
- Non-Conformances Entered into Corrective Action Program

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Project Results

- Systems Fully Validated
 - High Pressure Injection
 - Main Steam
 - Steam Generator
 - Safety Features Actuation System
- Systems Requiring Additional Analysis
 - Low Pressure Injection System
 - Emergency Core Cooling System-HVAC
 - Steam Feed Rupture Control System
 - Electrical Distribution Systems

Issue Resolution



Collective Significance Reviews

- System Health Assurance Plan Reviews Identified Potential Cross Cutting Issues
- Collective Significance Review Identified Five Programmatic Areas Warranting Evaluation
 - Seismic Qualification
 - High Energy Line Break (HELB)
 - Environmental Qualification (EQ)
 - Appendix R Safe Shutdown Analysis
 - Station Flooding

Review Process

- Nuclear Operating Business Procedure-LP-2006, “Collective Significance Review” Used
 - Consistent process
 - Consistent format
- Evaluation Process
 - Condition Report database provides population of issues to evaluate
 - Bin condition reports into common issue areas
 - Evaluate each issue area to determine programmatic impact
 - Conduct extent-of-condition evaluation where warranted
 - Determine and schedule corrective actions
- Engineering Assessment Board to Review Results

Summary

- Good Correlation with System Health Readiness Reviews
- More Analytical Work Necessary
- No Major Modifications Identified
- Some Rigor in Calculations Lacking

Restart Readiness and Safety Culture Assessment



Lew Myers
Chief Operating Officer - FENOC

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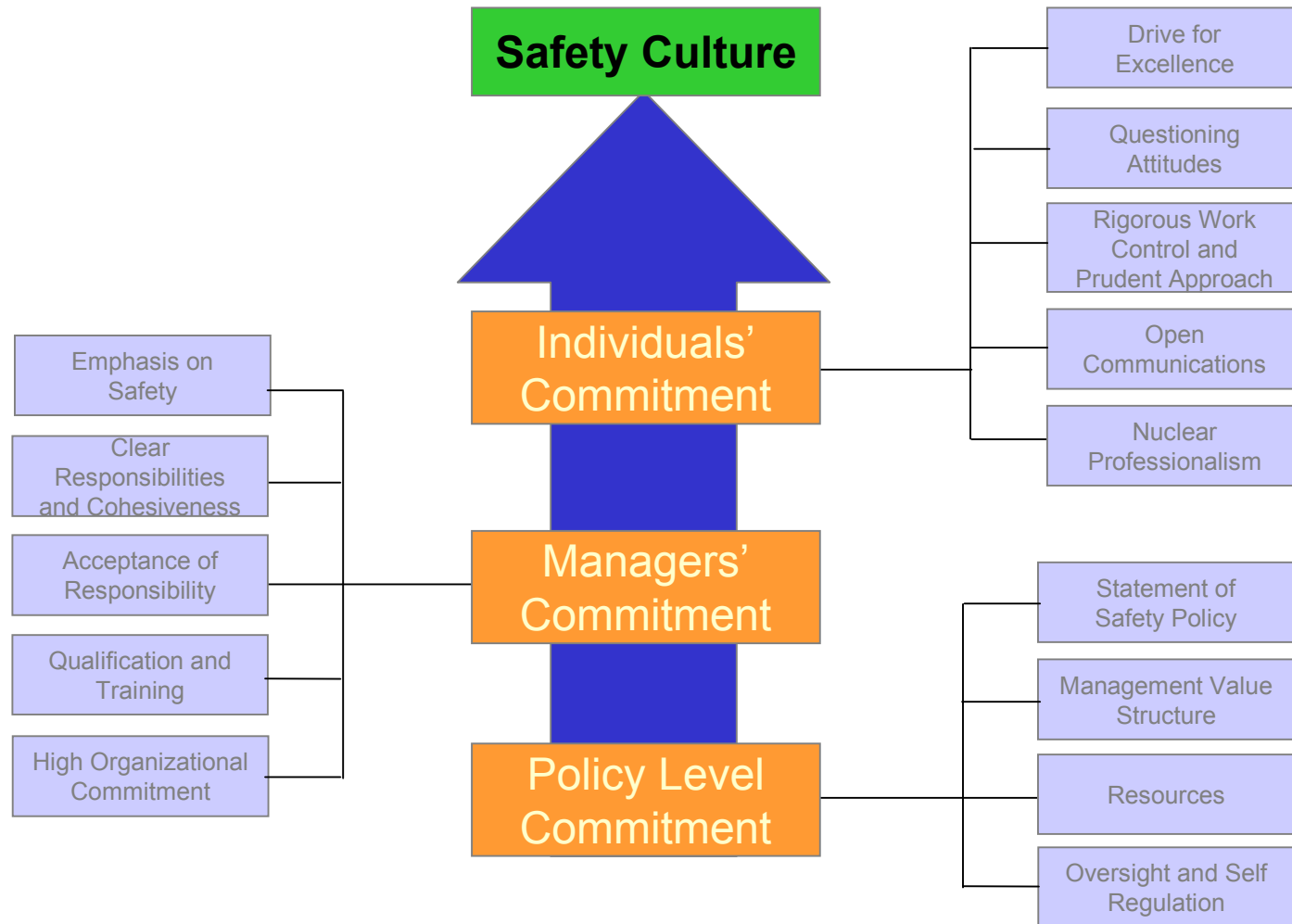
Background

- Root Cause Report on Reactor Pressure Vessel Head Degradation Found:
 - Production focus, established by management, combined with taking minimum actions to meet regulatory requirements, resulted in acceptance of degraded conditions
 - Davis-Besse was operated as a stand alone plant
 - Conditions were identified at relative low threshold, but not properly classified or evaluated by management
 - Quality Assurance findings were mixed quality
 - Operations not active in role of improvements in plant conditions

Definitions

- **Safety Culture:** “That assembly of characteristics and attitudes in organizations and individuals which establishes an overriding priority towards nuclear safety activities and ensures that issues receive the attention warranted by their significance.”
- **Safety Conscious Work Environment:** “That part of a Safety Culture addressing employee willingness to raise issues and management’s response to these issues.”

Safety Culture - - FENOC Model



Actions Taken

- Policy

- FirstEnergy Board of Directors passed and issued a resolution on Nuclear Safety
- FENOC Policy on Safety Culture and Safety Conscious Work Environment
- Strengthened Incentive Program to tie to safety
- Established Independent Executive - Level Quality Assurance, Executive VP Engineering and Chief Operating Officer
- Strengthened Employee Concerns Program

- Management

- Strong technically competent management team
- Strengthened Corrective Action Program/Corrective Action Review Board
- Improved leadership competencies
- Strengthened problem-solving and decision-making Nuclear Operating Procedure
- Engineering Assessment Board to monitor engineering products

- Individual

- Reactor Vessel Head group training
- Town Hall meetings
- 4C's meetings with small groups with site Vice-President
- Operability training
- Requalified all Root Cause Evaluators

Restart Readiness Review



- Purpose
 - To determine why we should load fuel
- Group Review Readiness
- Assured Plant and Staff is Ready for fuel load
- Key Review Programs
 - Corrective Action Program
 - Management Observation Program
 - Radiological Control Program
 - Reactor Coolant System Leakage Program
 - Employee Concerns Program
- System Engineering Reviewed Key Systems
- Safety Culture of Employees was Assessed

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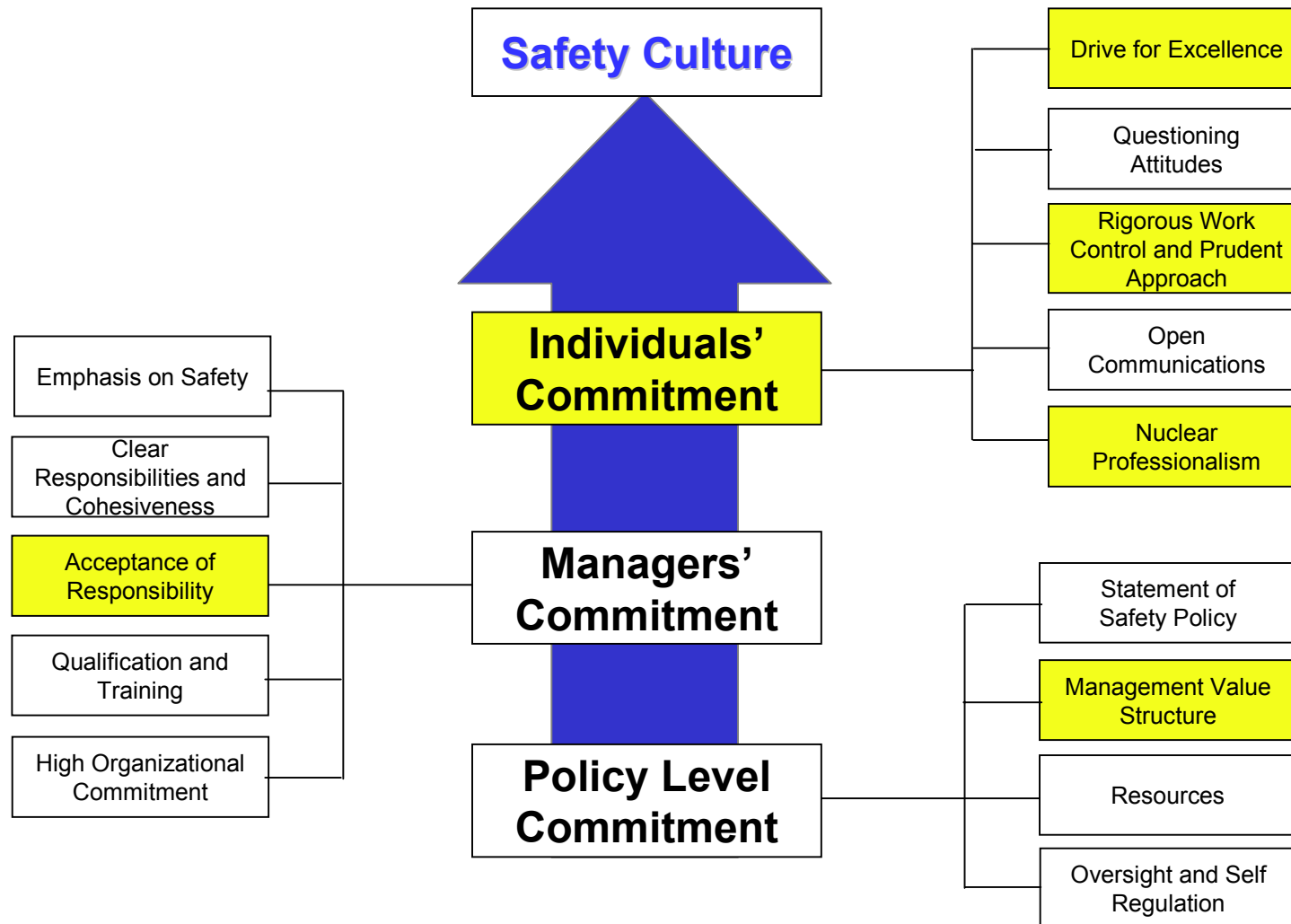
Monitoring Safety Culture for Fuel Load

- Safety Culture Commitments Rating
 - Individual group assessment
 - **Green:** All major areas are acceptable with a few minor deviations
 - **White:** All major areas are acceptable with a few indicators requiring management action
 - **Yellow:** All major areas are acceptable with several indicators requiring management action
 - **Red:** Several major commitment areas do not meet acceptable standards and require immediate management action

Monitoring Safety Culture for Fuel Load

- Ratings Based on Convergent Assessment
 - Performance Indicators (e.g., Risk Index, Backlogs)
 - Management Observations
 - Demonstrated Performance During Critical Plant Conditions (e.g., Fuel Load)
 - Feedback from Independent Safety Culture Review and Nuclear Quality Assurance Assessments
 - Performance, Safety and Health Associates
 - Sonja B. Haber, Ph.D.

Fuel Load Safety Culture Assessment



Summary

- Safety Culture Model is Unique and State of the Art
- Safety Culture Assessment is Innovative
 - Under refinement
 - Provides fair assessment of status
 - Contains areas that are qualitative and quantitative
 - Useful tool for management focus
- Assessment is a Fair Representation of Our Readiness for Fuel Load

Nuclear Quality Assessments



Steve Loehlein
Manager - Quality Assessments

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Nuclear Quality Assessments

- Past/Recent Observations and Assessments
 - Safety Function Validation Project
 - Fuel Spacer Grid Damage and Associated 'Stop Work'
 - Restart Readiness Meetings
 - Restart Station Review Board Decision-Making
 - Operations Readiness for Mode Ascension
 - Integrated Safety Features Actuation System Test Preparation and Completion
 - Reactor Coolant Pump and Vessel Head Heavy Lifts

Nuclear Quality Assessments

- Current/Ongoing Activities
 - System Health Readiness Reviews
 - Program Reviews
 - Radiation Protection Phase II Program Review
 - Safety Culture and Safety Conscious Work Environment Independent Survey
 - Corrective Action Program Implementation Plan
 - Implementation of Corrective Actions
 - Safety Function Validation Project

Nuclear Quality Assessments

- Upcoming Observations and Assessments
 - Restart Test Plan and Associated Procedures
 - Fuel Movement Activities
 - Radiation Protection Activities
 - Evaluation and Integration of Results from Safety Function Validation Project
 - Effectiveness of Actions Taken in Corrective Action Program

Integrated Schedule Progress



Mike Stevens
Director- Work Management

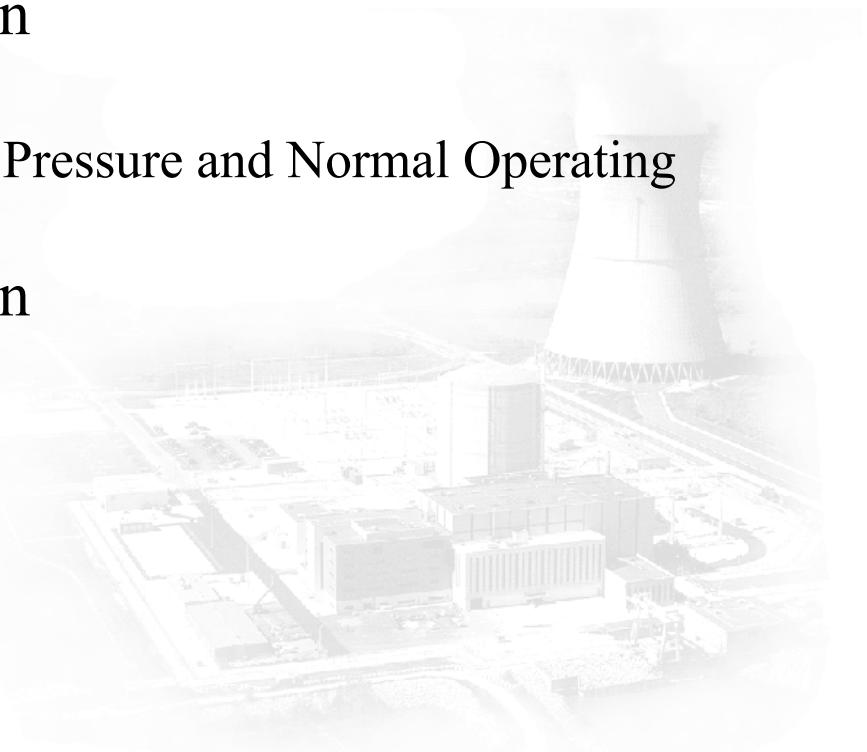
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Integrated Schedule Progress

- Critical Path Milestones for Containment Testing
 - Install and Bolt the Reactor Head
 - Complete Lower Portion of Emergency Sump Strainer
 - Perform Integrated Safety Features Actuation System Test/Train #2
 - Complete Decay Heat Valve Tank
 - Fill and Vent the Reactor Coolant System
 - Perform Integrated Leak Rate Test on Containment Vessel

Integrated Schedule Progress

- Critical Path Milestones for Reactor Coolant System Testing
 - Readiness Review for Reactor Coolant System Pressure Test
 - Reactor Coolant System Inspection
 - Non-Nuclear Heat-up
 - Operate 7 days at Normal Operating Pressure and Normal Operating Temperature
 - Reactor Coolant System Inspection
 - Under Vessel Nozzle Inspection



Performance Measures



Clark Price Owner - Restart Action Plan

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Closing Remarks



Lew Myers
Chief Operating Officer - FENOC

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