

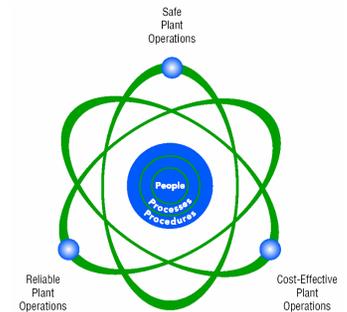


Perry Nuclear Power Plant

January 10, 2007
Public Meeting

Perry Nuclear Power Plant

Joe Hagan
FENOC Chief Operating Officer



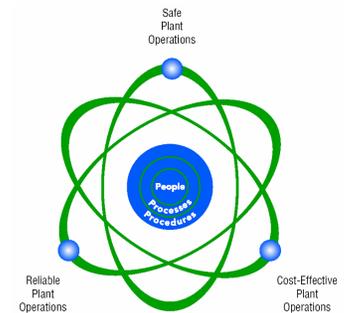
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People with a strong safety focus
delivering top fleet operating performance.

Introduction

- Key Observations and Sustained Results Achieved in Corrective Action Program– *Fred Cayia*
- Sustained Results Achieved in Human Performance – *Barry Allen*
- Continuous Improvement in Operations – *Dewey Evans*
- Continuous Improvement in Maintenance – *Tony Mueller*
- Structure for Continuous Improvement– *Greg Halnon*
- Closure of Regulatory Actions – *Jeff Lausberg*
- Closing Remarks – *Bill Pearce*

Key Observations and Sustained Results Achieved in CAP

Fred Cayia Director, *Performance Improvement*



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Key Observations – NRC Observations (~2 yrs Ago)

- NRC IP 95003 Inspection concluded, “Overall, while some limited improvements may have been realized, the NRC concluded that there has been no substantial improvement in human performance or your implementation of corrective action program (CAP) since Perry entered the Multiple/Repetitive Degraded Cornerstone column of the NRC’s Action Matrix in August 2004.”
- NRC observed that performance issues occurring prior to and during IP 95003 inspection were often the result of inadequate implementation of CAP and Human Performance errors

Our Assessments and Root Cause Analyses

- Common Cause Analysis (CR 03-05995)
 - Evaluated events that resulted in White Findings (e.g. RHR/LPCS Waterleg Pump venting, ESW Pump Shaft Coupling)
 - Weaknesses identified
 - Implementation in Program / Processes
 - Accountability and Expectations
 - Procedure Content

- Corrective Action Program Root Cause (CR 05-03986)
 - Management team did not demonstrate ownership
 - Management had not established adequate expectations to effectively implement CAP at all levels in the organization

- Human Performance Root Cause (CR 05-02517)
 - Management ownership was less than adequate
 - Performance monitoring and trending was less than adequate

Fundamental Issues Identified

- NRC observations and our assessments told us:
 - Management did not provide appropriate leadership and demonstrate ownership of key programs (e.g., CAP, Human Performance)
 - Management oversight lacked leadership (e.g., CARB, MRB, SLT)
 - Management observations not critical
 - Roles and responsibilities in CAP and Human Performance
 - Not clearly established and communicated
 - Some expectations were not enforced or reinforced
 - Technical rigor in problem solving was weak
 - Effective monitoring tools were not available (i.e., KPIs)

First Steps

What We Did in 2003 ~ Early 2005

- Procedures established to ensure venting of RHR System
- Modifications of Emergency Service Water Pumps resulting in more robust design than original
- Improved plant system/equipment reliability
 - Upgraded Feedwater Control System
 - System Health reviews
 - Latent Issues reviews
- Strengthened key site programs by performing program/process reviews
 - Emergency Preparedness
 - Corrective Action Program
 - Human Performance
 - Work Management
 - Fuel Reliability
 - Motor Operated Valve Reliability Program

Next Step – *What We Did in Mid-2005*

- Transitioned to Performance Improvement Initiative (PII) Phase 2, focusing on interdependent issues
 - CAP Implementation
 - Human Performance
 - Training
 - Work Management
 - Employee Engagement
 - Operational Focus
- Line organization engaged in development of PII Phase 2
- Oversight provided by FENOC executives and Performance Overview Panel

Corrective Action Program – Key Learnings – Improved Oversight Needed

- Increased Oversight of CAP
 - Corrective Action Review Board (CARB)
 - Management Review Board (MRB)
 - Senior Leadership Team (SLT)
 - Monthly Performance Review (MPR)
- Outcome was improved management ownership and accountability
- Standards and expectations reinforced

Corrective Action Program –

Key Learnings – Site Involvement and Better Investigation

- Increased involvement and ownership in CAP with focus on expectations
 - Trained site personnel to CAP implementation expectations
 - Conducted interactive training to site employees
 - Performance Appraisal Process revised to include expectations and accountability

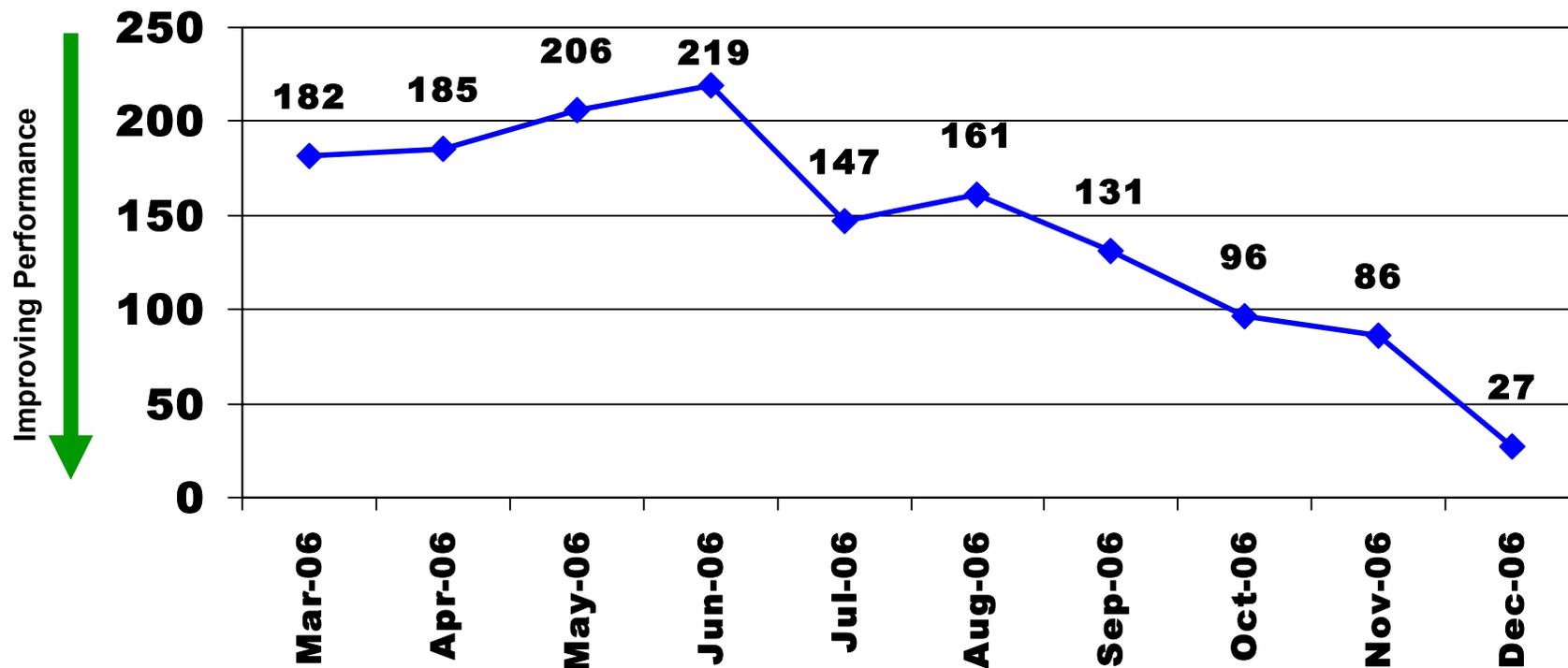
- Improved quality of evaluations and corrective actions
 - Trained root cause evaluators
 - Established pre-job briefs for apparent/root cause evaluations

- CAP performance monitoring

Corrective Action Program

Improved Ability to Work Today's Issues Today

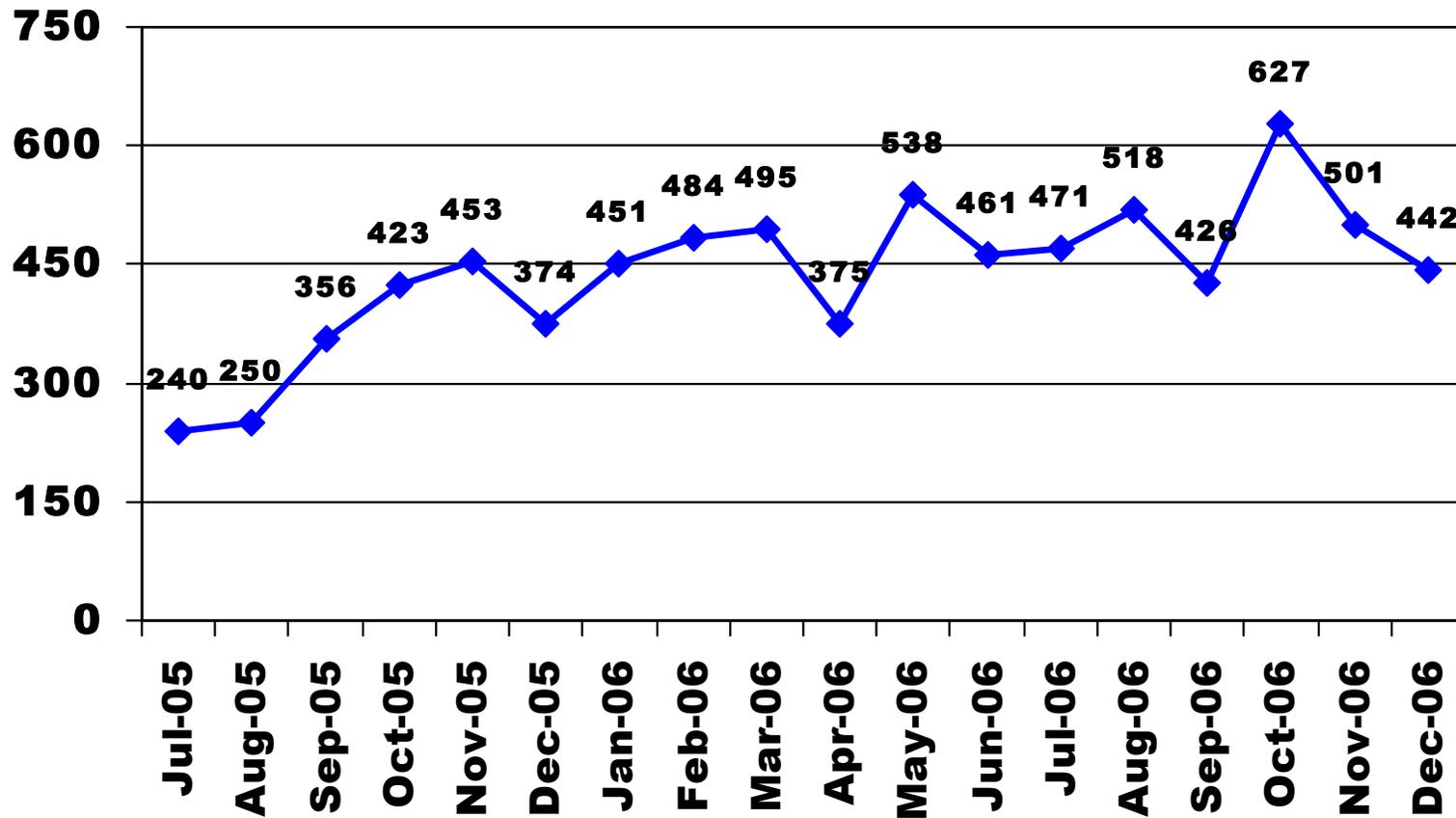
Condition Reports Open > 180 Days



Corrective Action Program

Improved Identification of Issues

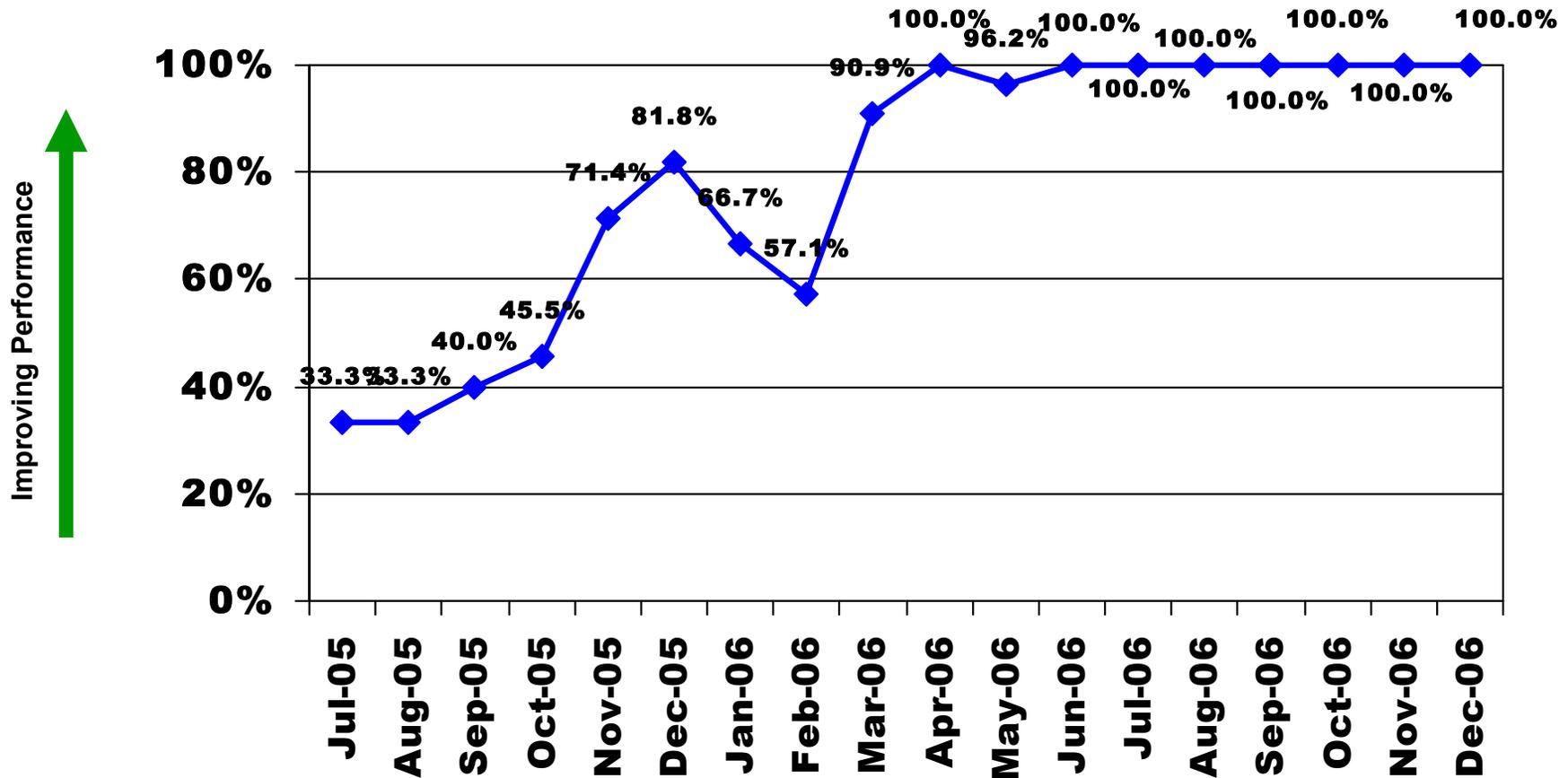
Adverse to Quality CRs Initiated Per Month



Corrective Action Program

Improved Timeliness of Investigations

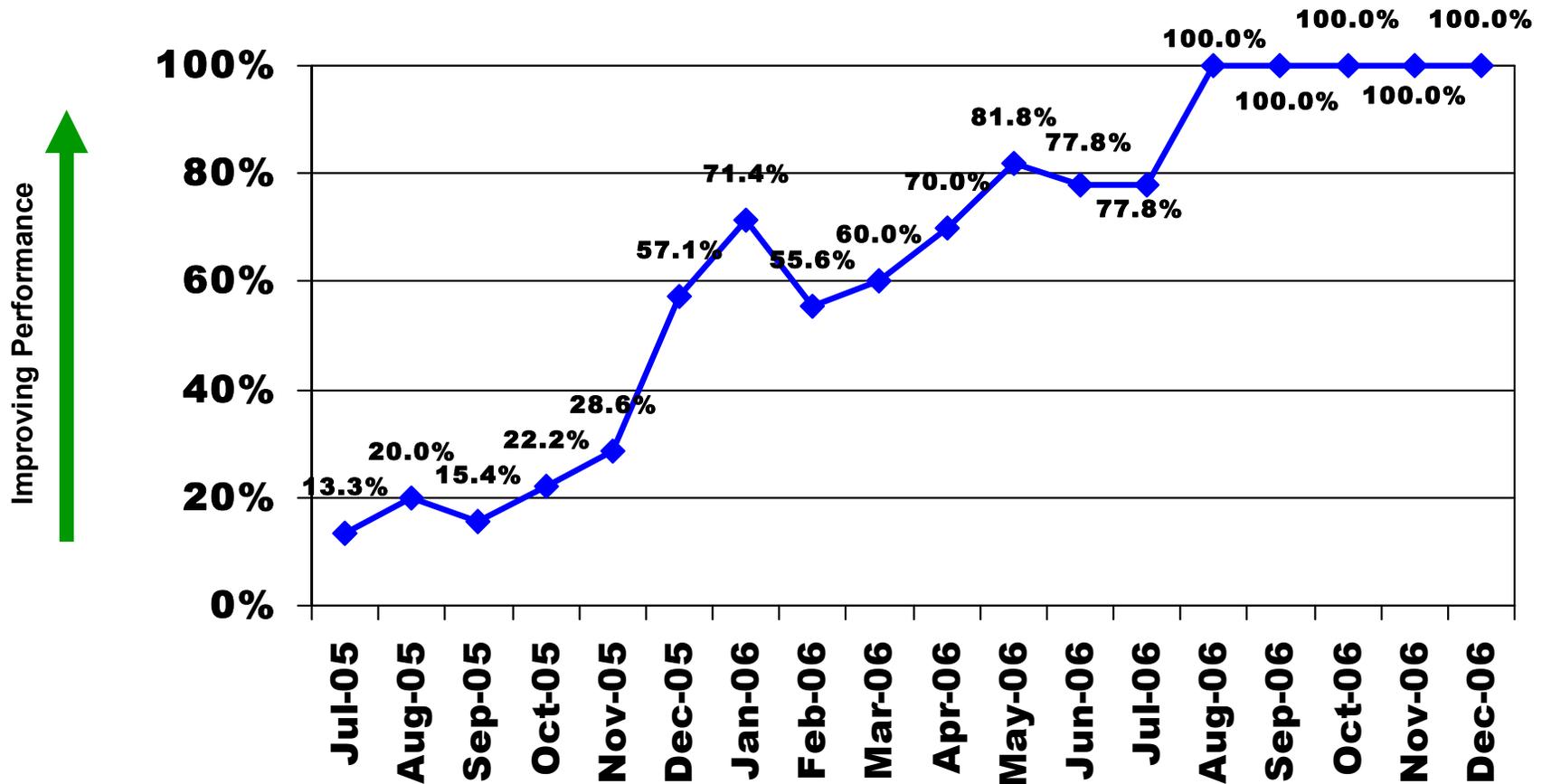
Percent Apparent Causes Completed on Time



Corrective Action Program

Improved Timeliness of Investigations

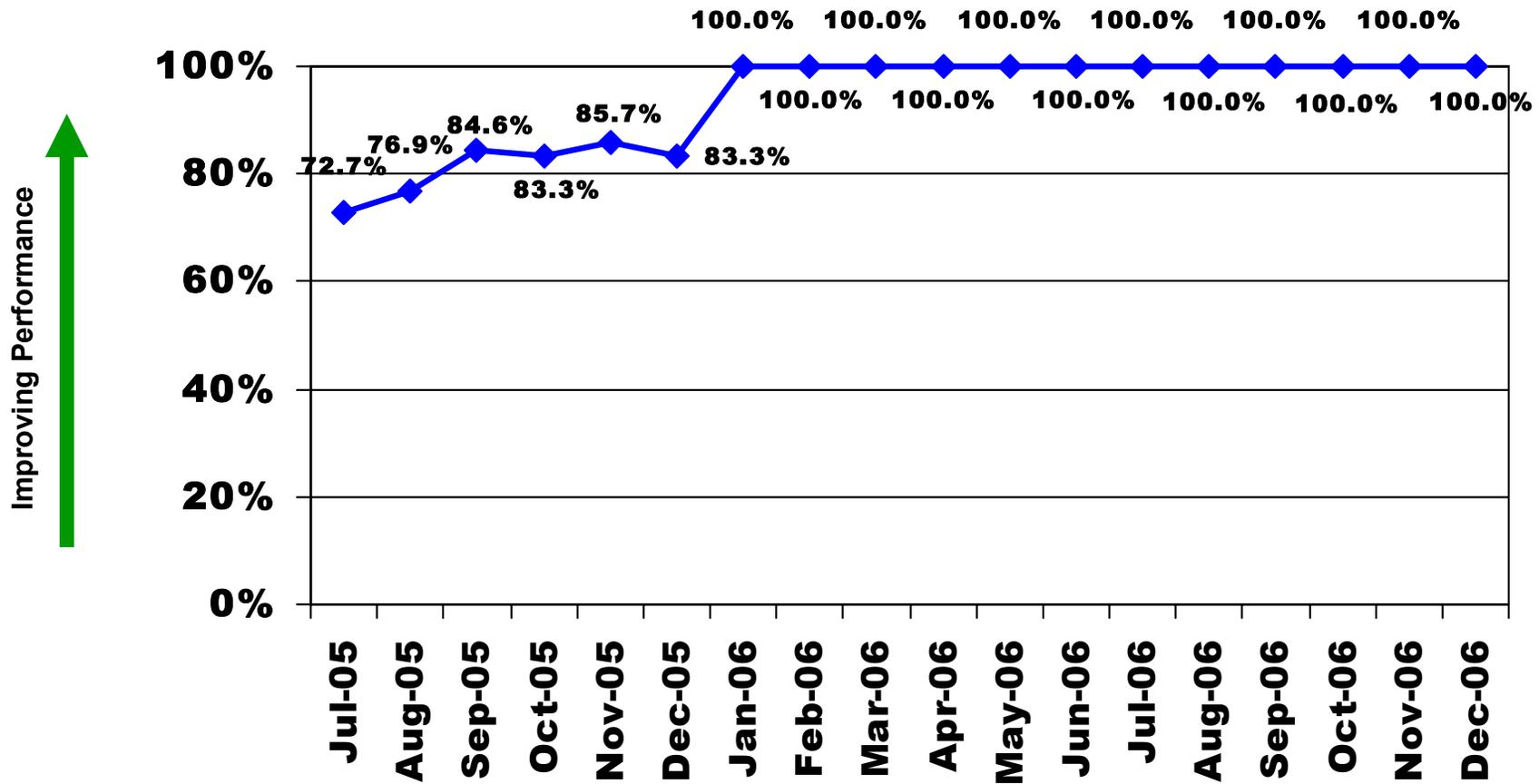
Percent Root Causes Completed on Time (6MonthRollingAvg)



Corrective Action Program

Root Causes Quality

% Root Causes Approved by CARB (6MonthRollingAvg)



Sustained Results Achieved – Critical Self-Assessment

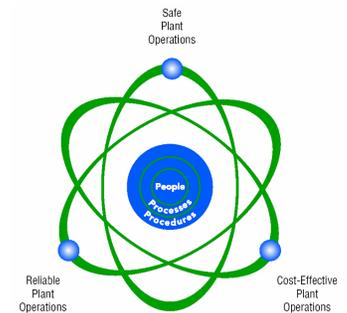
- Completed CAP PII self-assessment in fall 2006
- Conclusions
 - Substantial improvement has been made in the station’s ownership and implementation of the CAP
 - Improvements are sustainable
 - Opportunities for improvement identified
- Condition Reports generated for Areas for Improvement
 - Owner manager attendance at CARB
 - Standard of 24 hrs for root cause evaluation team assembly
 - Standard of supervisory review of new CRs in less than 24 hrs
 - Standard for preparation of trend reports
 - Additional training on extent of condition and cause

Continuous Improvement – *Excellence Plan in CAP*

- Continuous improvement through self-assessments and benchmarking
- Actions to close gaps identified from the self-assessments and benchmarking will be integrated into the Excellence Plan

Sustained Results Achieved in Human Performance

Barry Allen
Director,
Site Operations



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Human Performance –

Key Learnings – Management Engagement Needed

- Management roles and responsibilities defined in Human Performance Policy and Program
 - FENOC Nuclear Operating Policy NOPL-LP-2008, “Human Performance”
 - Procedure NOBP-LP-2601, “Human Performance Program”
- Training focused on leadership roles
- Affirmation of Human Performance Program

Human Performance –

Key Learnings – Engagement by Site Personnel Needed

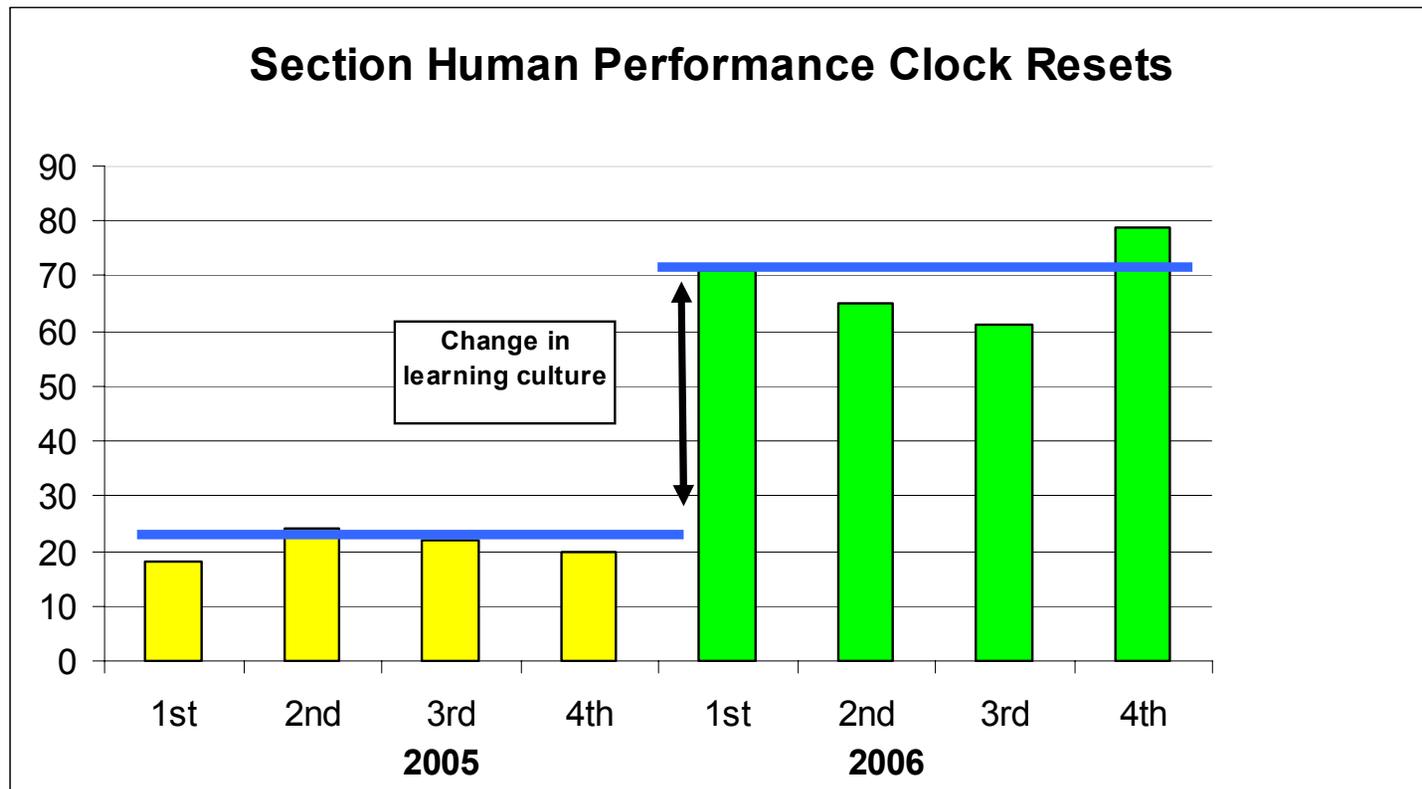
- Training Committee developed training needs
 - “Group-specific Needs Analysis” used to identify gaps and training actions
- Training implementation
 - Fundamentals of Human Performance and Event Free Tools
 - Addressed individual behaviors, leadership behavior, and organizational behaviors
- Institutionalized the training material for new employees and supplemental personnel (contractors)
- Ongoing “Needs Analysis” in continuing training programs

Human Performance –

Key Learnings – Oversight was lacking

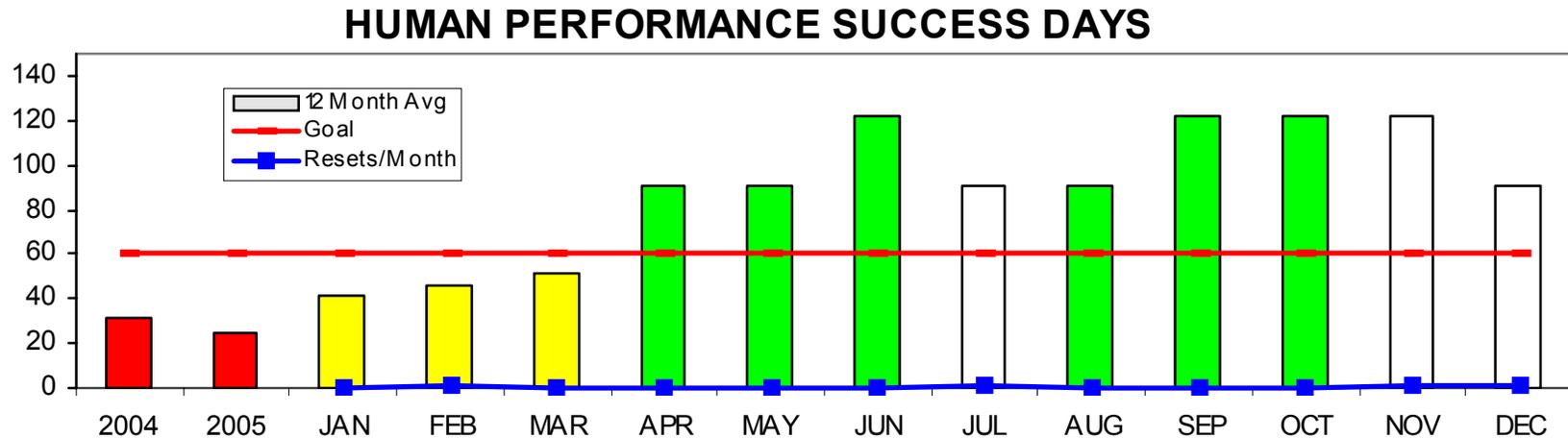
- Improved observation and coaching skills of supervisors and managers
 - Simulated plant job site conditions (Flow-Loop Training Center)
 - Paired observations between supervisors and managers
 - Increased focus by duty team on high impact work
- Use of Key Performance Indicators (KPIs)
 - Section Clock Reset
 - Human Performance Success Days
- Review of KPIs
 - Management Alignment and Ownership Meetings (MAOM)
 - Section manager review of their own department
 - Monthly Performance Review (MPR)

Sustained Results Achieved – Section Clock Resets



- Focus on lower level errors

Sustained Results Achieved – Site Human Performance Success Days



- 2006 average days: 90.1
- Results driven by behavior changes of the plant employees.

Sustained Results Achieved – Critical Assessment

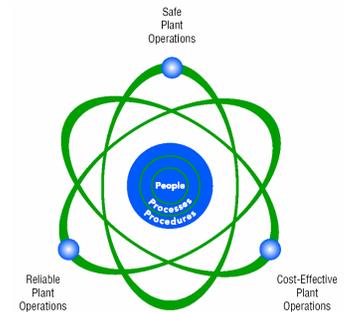
- Completed Human Performance PII self-assessment in fall 2006
- Conclusions
 - Significant progress has been achieved
 - Reasonable evidence that improvements are continuous and sustainable
- Condition Reports generated for areas for improvement
 - Feedback and coaching during field observations
 - Management of procedure backlogs
 - Consistency in placekeeping
 - Ownership of high priority emergent work

Continuous Improvement – Excellence in Human Performance

- Safety Culture Assessment
- Continuous improvement through self-assessments and benchmarking
- Actions to close gaps identified from the self-assessments and benchmarking will be integrated into the Excellence Plan

Continuous Improvement in Operations

Dewey Evans
Manager, Operations



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Operations Manager - Perspective

- Participated - Root cause evaluation
- Assumed - Operations manager in September 2006
- Reviewed - Assessment reports, both internal and external
- Observed – Operator actions (Field and Control Room) and training activities

Conclusions:

***Perry is being operated safely and reliably.
Improvement opportunities exist.***

Key Learnings

- Strengths:
 - Staff technical knowledge
 - Event prevention mindset
- Gaps to Excellence:
 - Operations ownership of training
 - Tolerance of operator challenges

Focus:
Continuous improvement in Operations

Excellence in Operations

- Operational Decision-Making Process
- Operator fundamentals
- Partnership between Operations and Training departments
- Operations staffing & succession plan
- Teamwork - support groups

Continuous improvement through self-assessment and benchmarking

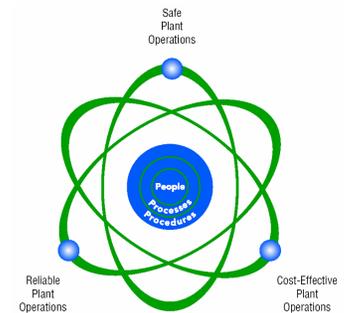
Operational Focus Assessment

- Peer-assisted focused self-assessment currently in progress
- Strong and experienced team – FENOC and industry peers
- Incorporate continuous improvement opportunities
- Additional self-assessments and benchmarking scheduled

***Goal: Relentless pursuit
of Operational Excellence at Perry***

Continuous Improvement in Maintenance

Tony Mueller
Manager, Maintenance



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Challenges in Maintenance - 2004

- Procedures
- Human Performance
- Corrective Action Program
- Work preparation/scheduling
- Supervisory oversight and coaching

Substantial Improvement Recognized- ***What we did in 2005 ~ 2006***

- Procedure use and adherence
- Procedure quality
- Use of Human Performance tools
- Corrective Action Program ownership
- Critical observations
- Work package preparation

Sustained Results Achieved - Key Learnings

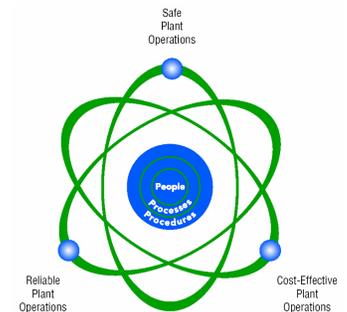
- Assessments and benchmarking in 2006
- Strengths
 - Craft engagement and ownership
 - Use of Human Performance tools
 - Management involvement in Work Management
- Gaps to Excellence
 - Worker practices
 - Maintenance efficiency
 - Supervisory effectiveness
 - Backlogs

Continuous Improvement - Excellence in Maintenance

- Excellence Plan provides actions to drive continuous improvement
- Self-assessments and benchmarking
- Actions to close gaps identified from the self-assessments and benchmarking will be integrated into the Excellence Plan

Structure for Continuous Improvement

Greg Halnon
Director,
Fleet Regulatory Affairs



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Structure for Continuous Improvement

- Self-assessments/benchmarking
- Key Performance Indicators
- Management oversight
- Procedures/policies
- Corporate governance

Key Elements In Place for Continuous Improvement

- Effectiveness of supervision and oversight
 - Expectations and standards clear and routinely reinforced
- People
 - Implement the steps
 - Proficient and practiced
 - Assess feedback
- Process or instructions
 - Steps clearly written down to achieve success
 - Mechanism exists that initiates action to implement those steps
 - Feedback into the front end of the process

Infrastructure in Place for Continuous Improvement

Hierarchy of Continuous Improvement

- 1st Tier – Setting Objectives/Management Oversight
 - Fleet Business Plan/Excellence Plans
 - Fleet Management Model
 - Fleet Independent Oversight
 - Company Nuclear Review Board
- 2nd Tier – Focus on People’s Performance
 - Human Performance Program
 - Training Committee
 - Peer Groups
- 3rd Tier – Tools of Implementation
 - Corrective Action Program
 - Self-Assessment Program
 - Benchmarking Program
 - Field Observation Program

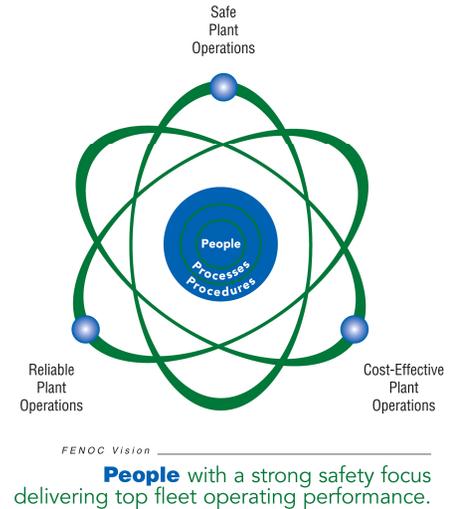
Business Planning - Aligning People, Processes, and Resources

Vision

People with a strong safety focus delivering top fleet operating performance

Strategies

- Safe Plant Operations
- Reliable Plant Operations
- Cost Effective Plant Operations
- Through People, Processes and Procedures



Business Planning Process

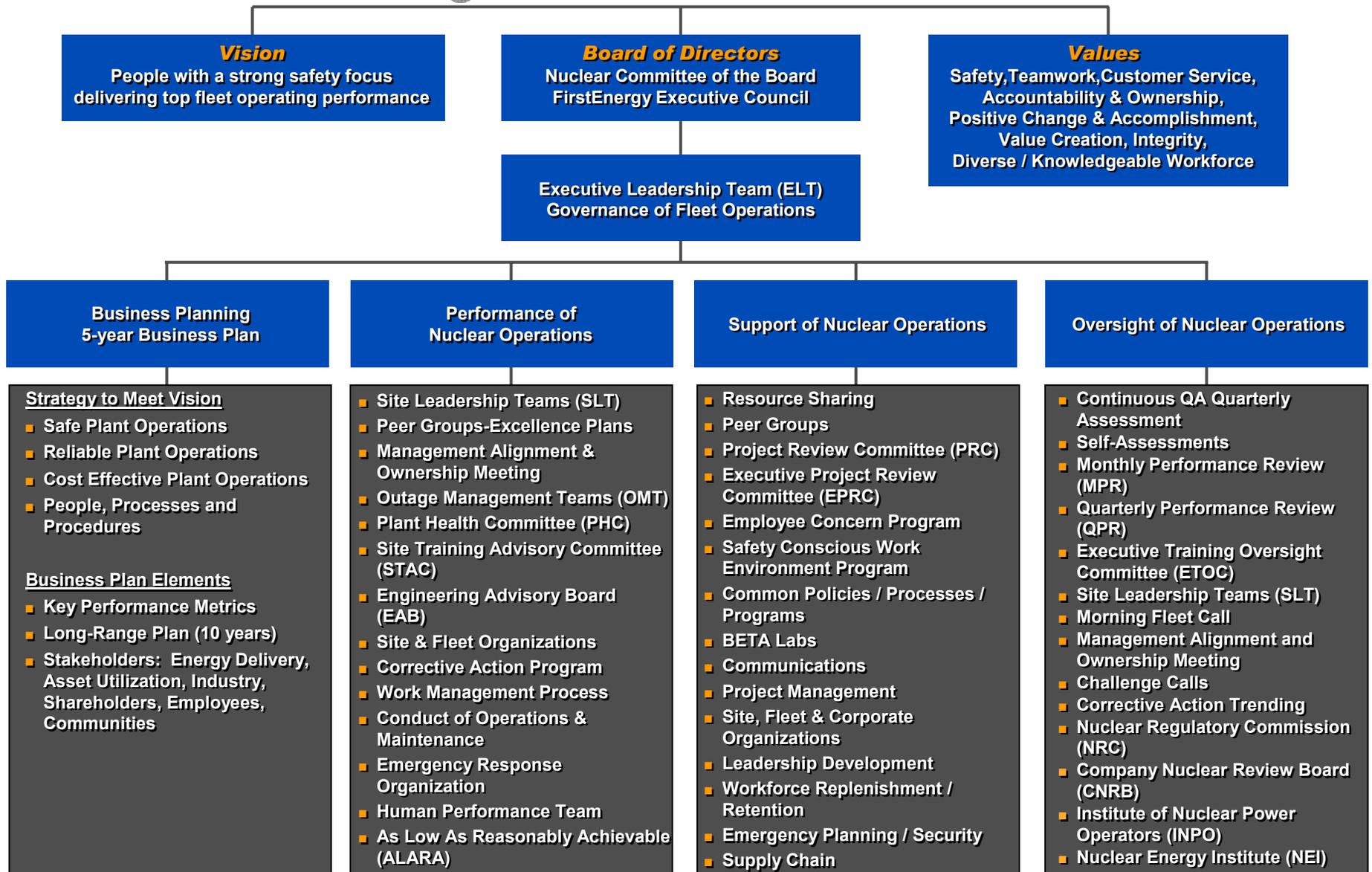
Five-year Business Plan focuses the organization on our priorities. Includes Vision, Values, Key Assumptions, Risks, Asset Improvements, Outage Plans, Metrics and Financials — all built around the strategies.

Transformation to Excellence

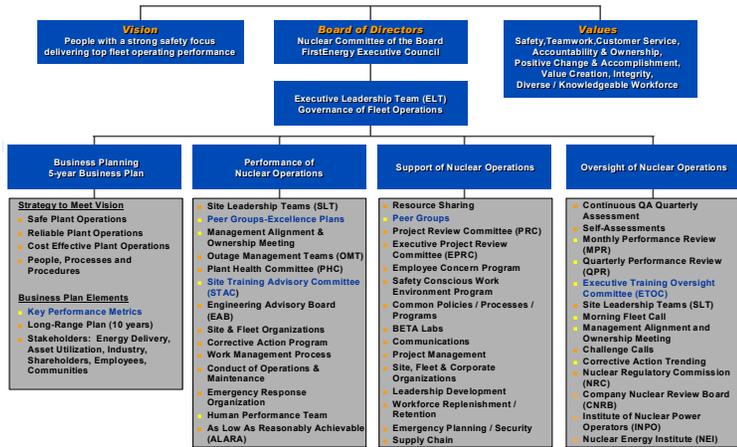
The philosophy of excellence will drive continuous improvement through the use of our standardized programs, processes and procedures in each of our functional areas. The Site Excellence Plans included in the Business Plan will be used to implement our strategies.

FENOC Management Model

1st Tier



FENOC Management Model



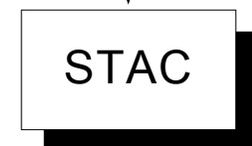
1st and 2nd Tier

NOBP-TR-1115
Executive Training Oversight
Committee Charter



Site Level Oversight

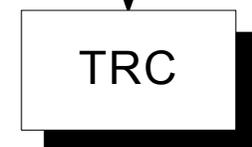
Perry
Beaver Valley
Davis Besse



NOBP-TR-1117
Training Team Charter

Organizational Level Oversight

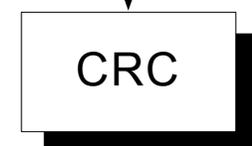
Operations,
Maintenance,
Chemistry,
Radiation Protection
Engineering
Training



NOBP-TR-1117
Training Team Charter

Program Level Oversight

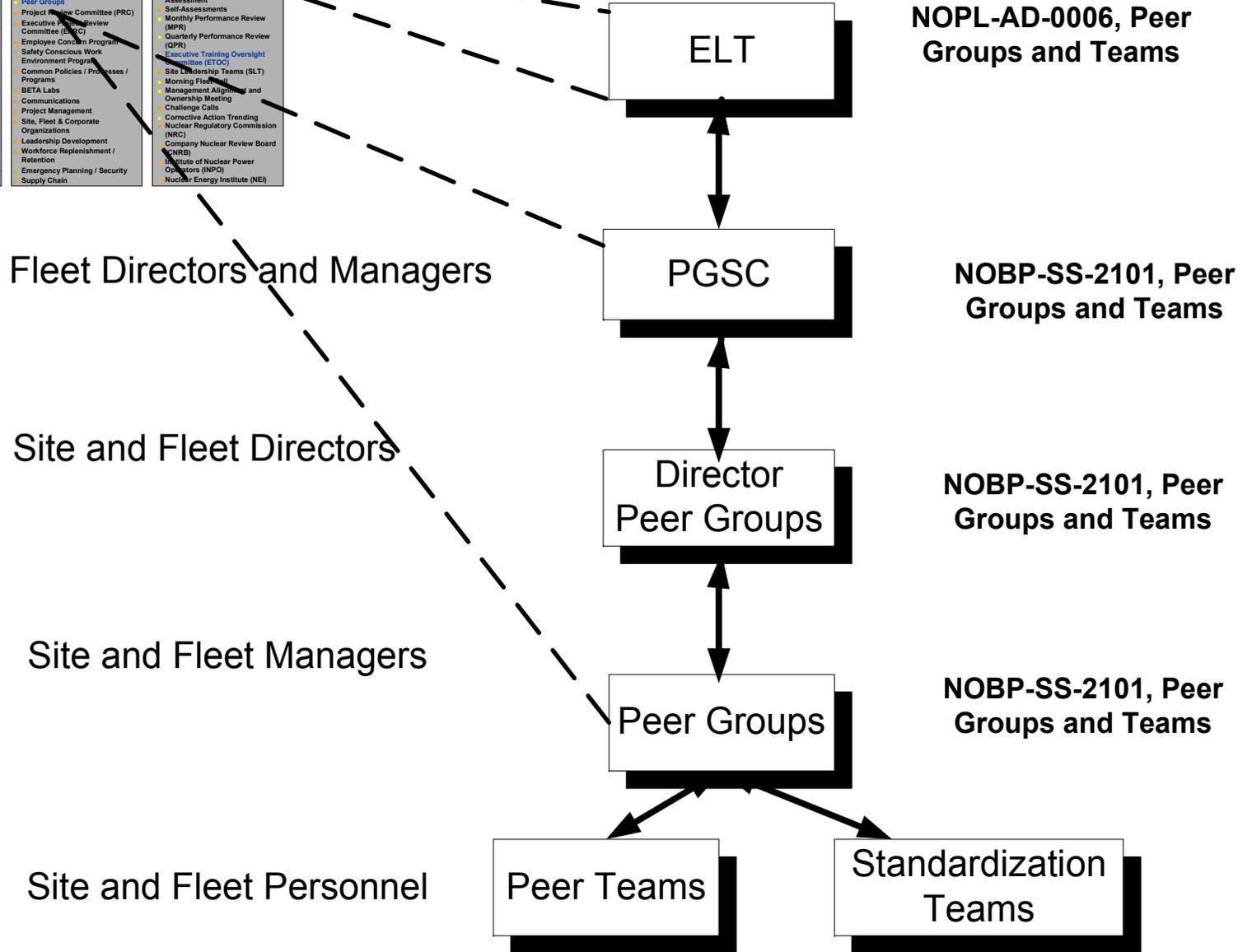
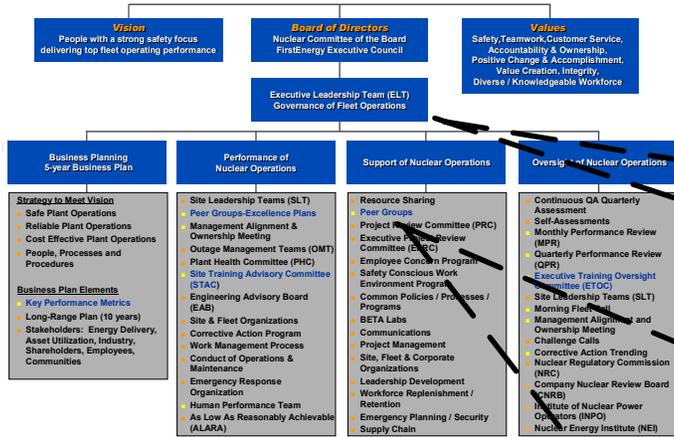
Chemistry	Maintenance Services
Contractor	Mechanical
Electrical	Non-Licensed Operator
Engineering Support	Radiation Protection
Instructor	Shift Engineer
Instrument & Control	Shift Manager
Licensed Operator Initial	
Licensed Operator Requal	



NOBP-TR-1117
Training Team Charter

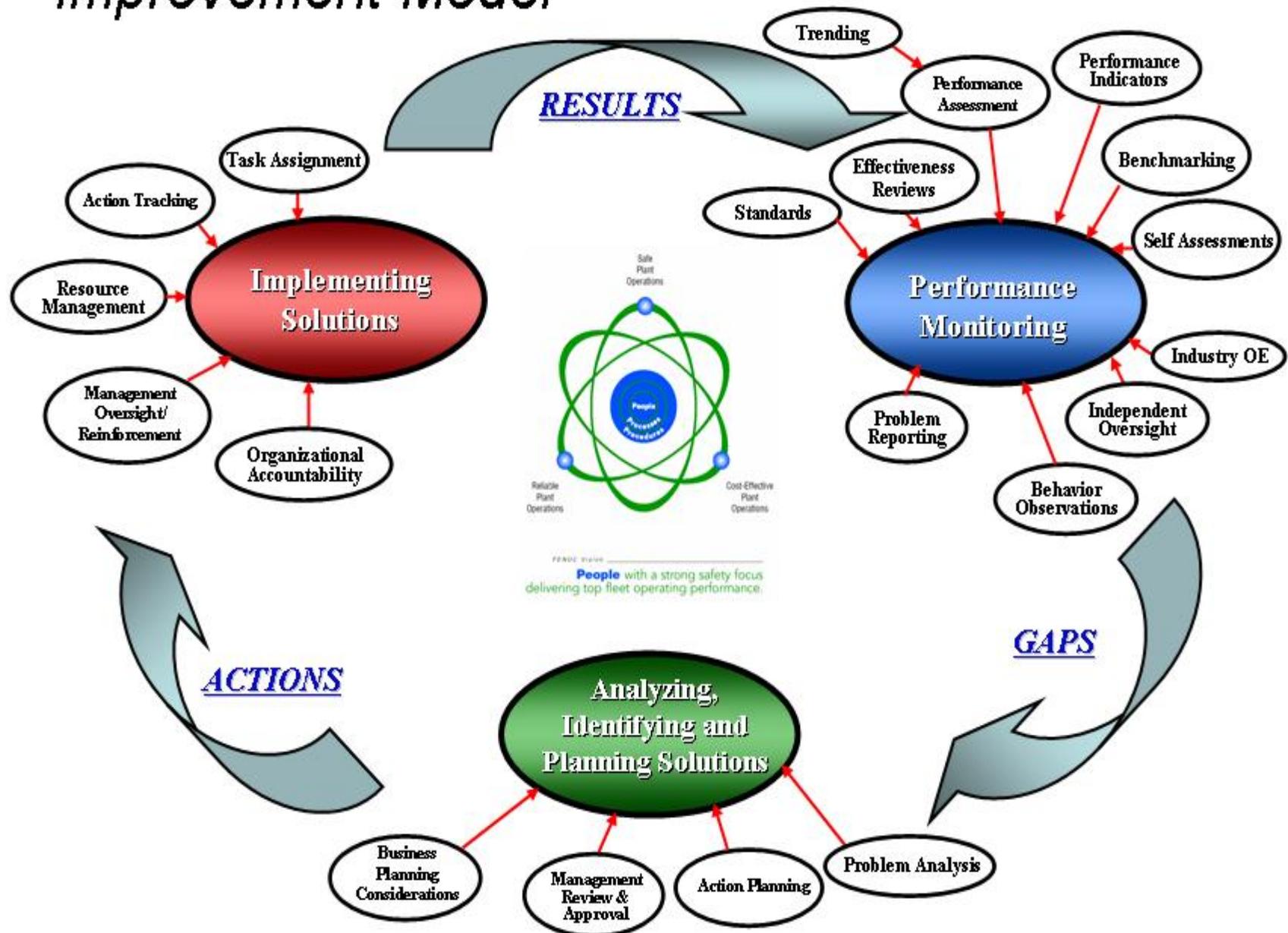
FENOC Management Model

1st and 2nd Tier



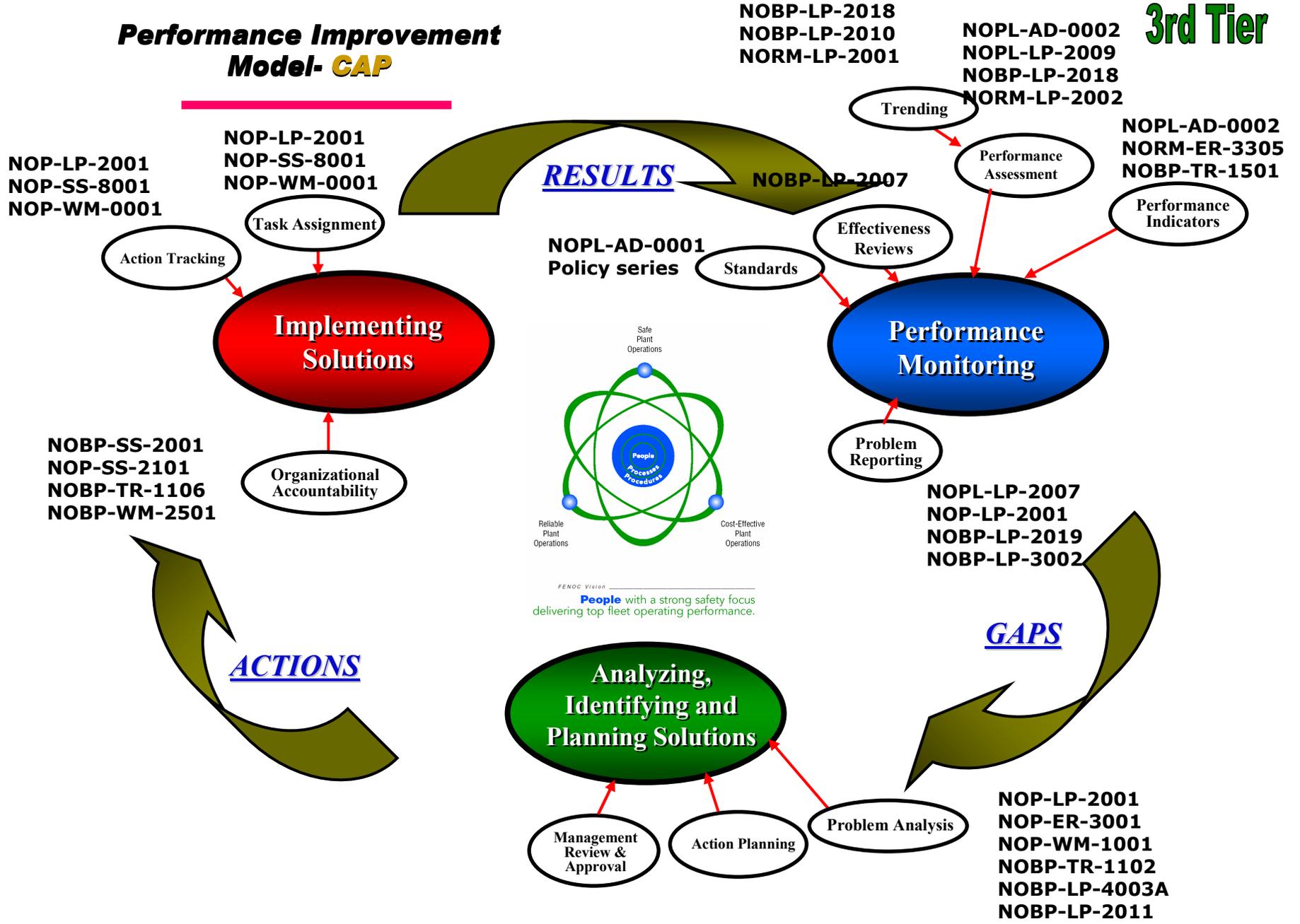
Performance Improvement Model

3rd Tier

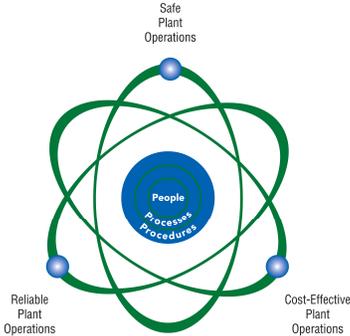
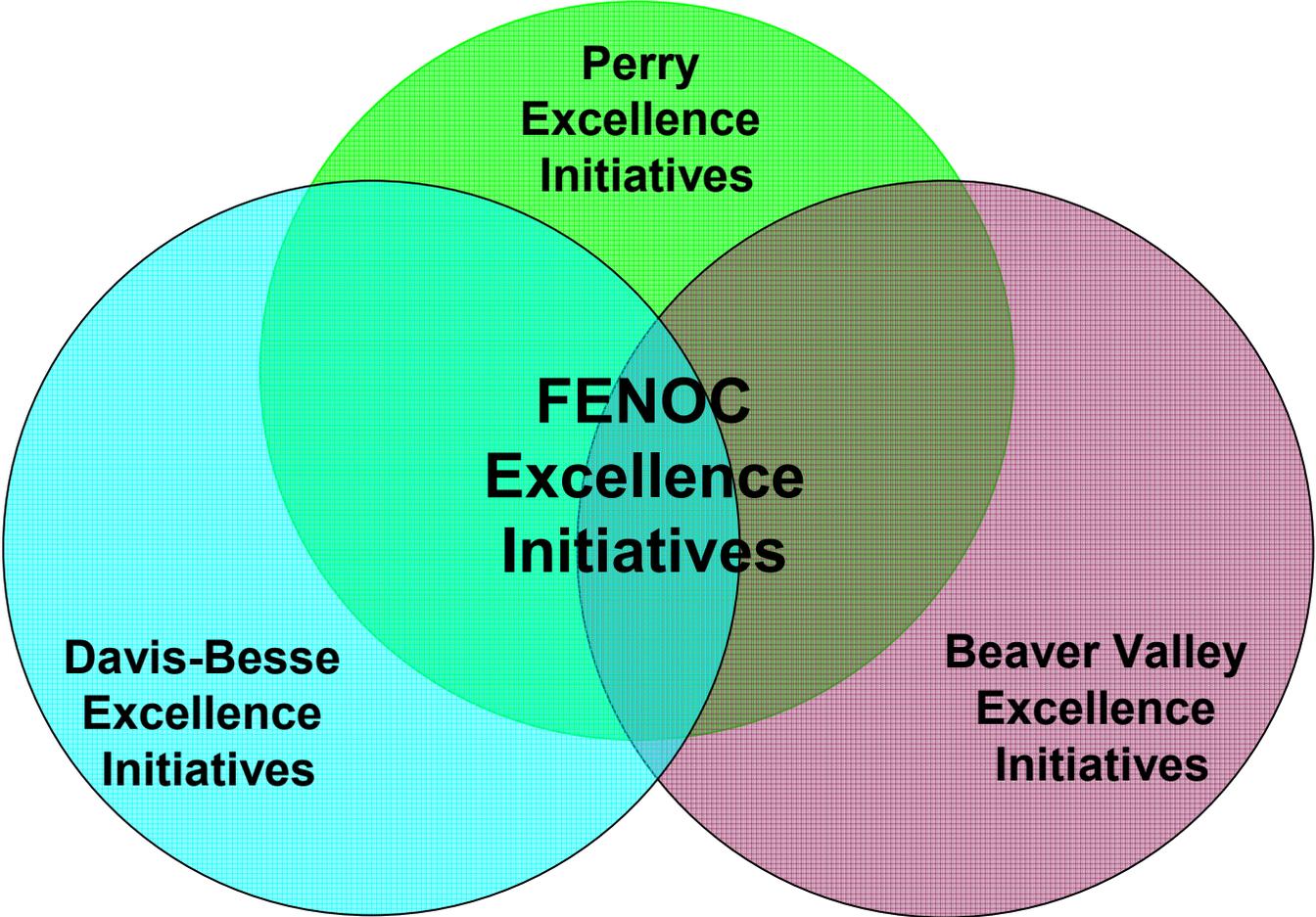


Performance Improvement Model- CAP

3rd Tier



Continuous Improvement – FENOC Excellence Plan



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Focus Areas for Excellence Plan

- Operate the plant safely, reliably and securely
- Improve equipment reliability
- Improve outage preparation and performance
- Improve Perry management team engagement and oversight
- Use training to improve performance

***Self-assessments and Benchmarking
integrated throughout the Excellence Plan***

Continuous Improvement for Sustaining Performance

- Performance to date has shown generally improving trends
- Programs and processes in place for continuous improvement
- People in place with right behaviors and ownership to implement programs
- Oversight provided on several levels to improve performance

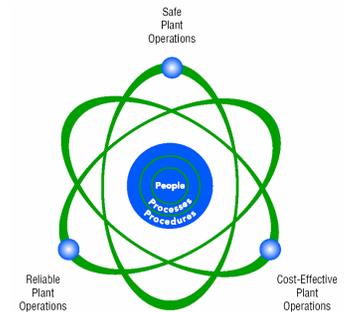
Oversight Structure for 2007

- Structured Peer Assistance
- Augmented Monthly Performance Review
- Additional focus by CNRB
- Status Perry performance with NRC

***The Improvements are anchored.
The Behaviors have taken root.
Strong Fleet organization now exists.***

Closure of Regulatory Actions

Jeff Lausberg
Manager,
Regulatory Compliance



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Closure of Regulatory Actions – IP 95002 Issues

- White Findings Addressed
 - Emergency Service Water Pump Failure and RHR/LPCS Water Leg Pump
 - Procedure adequacy and usage, including training addressed
 - Corrective actions for ESW pump failure addressed
 - NRC follow-up Inspections completed
- NRC follow-up inspections concluded measurable improvement realized

Closure of Regulatory Actions – IP 95003 Issues

- Key issues identified during the inspection were incorporated into Perry Performance Improvement Initiative (PII) Phase 2
- Identified Confirmatory Action Letter (CAL) Commitments
- Issues tracked to completion by use of Perry PII Detailed Action & Monitoring Plan (DAMP)
- Key observations/findings during IP 95003 inspection were addressed through our corrective action program
- NRC follow-up inspections concluded measurable improvement realized

Closure of Regulatory Actions – Substantive Cross-cutting Issues

- Substantive Cross-cutting Issues addressed
 - Problem Identification and Resolution
 - CR 05-03986 Root Cause Evaluation
 - Corrective Action Program Implementation PII
 - Human Performance
 - CR 05-02517 Root Cause Evaluation
 - Human Performance PII
- PII supported improvement in the two substantive cross-cutting areas
 - Training
 - Work Management
 - Employee Engagement
 - Operational Focus
- NRC follow-up inspections concluded measurable improvement realized

Closure of Regulatory Actions – Confirmatory Action Letter (CAL) Commitments

- CAL Commitments completed in 2005~2006
- December 20, 2006 letter provided NRC with basis for CAL closure
 - IP 95002 Follow-up issues, e.g., Procedure Quality (upgrade), QC Controls
 - Corrective Action Program implementation improvements
 - Human Performance program improvements
 - Emergency Preparedness
- NRC follow-up inspections concluded measurable improvement realized

Closure of Regulatory Actions – Manual Chapter 0305, Section 06.05b4

■ Expectations Met

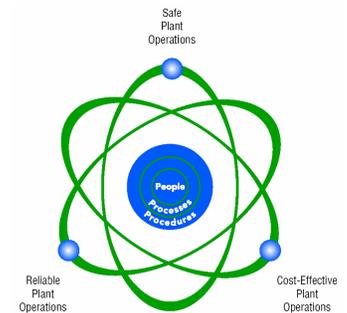
- ✓ All deficiencies addressed using the Corrective Action Program
- ✓ Performed Root Cause evaluations for:
 - ✓ White Findings
 - ✓ Corrective Action Program (CAP) and Human Performance (HU) Cross-cutting issues
- ✓ Identified Root and Common Causes
- ✓ Performed an assessment of Safety Culture
- ✓ Implemented Performance Improvement Initiatives (PII)

Closure of Regulatory Actions – Performance Criteria

- Criteria met for transition
 - ✓ Findings can be closed
 - ✓ Confirmatory Action Letter (CAL) commitments are completed
 - ✓ Performance improvements have been sustained
 - ✓ New plant events and findings do not reveal similar significant performance weaknesses
 - ✓ NRC and licensee performance indicators do not indicate similar significant performance weaknesses
 - ✓ Licensee performance improvement program has demonstrated sustained improvement
 - ✓ NRC supplemental inspections confirm improvement in the principal areas of weakness

Closing Remarks

Bill Pearce *Site Vice President*



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Closing Remarks

What We Have in Place

- Currently we have the:
 - Right team in place...
 - Right processes and procedures...
 - Right expectations, standards and vision...
 - Right Excellence Plan in place...
 - Right Management Model...

...To achieve top industry performance

Closing Remarks

Building on to Our Strengths

- Critical self-assessment culture
- Strong Safety Culture
- Low problem reporting threshold
- Root Cause evaluation rigor/depth and quality
- Improved Human Performance
- High expectations/standards