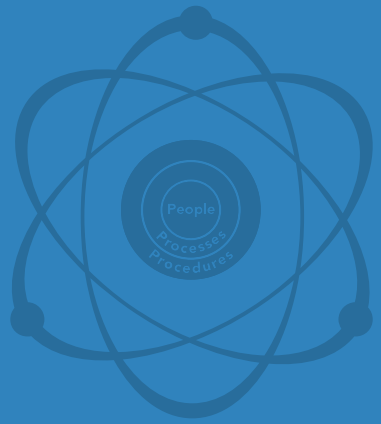
FirstEnergy Nuclear Operating Company

FENOC

FENOC Fleet Overview

NRC Senior Management Briefing



September 24, 2013

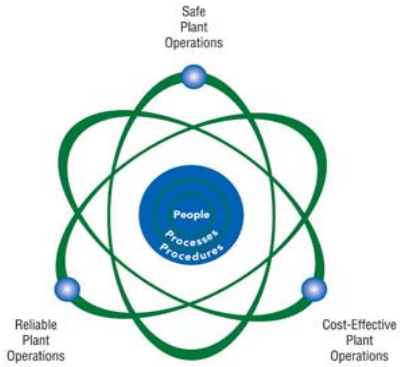
Agenda

- **Opening Remarks**
  Pete Sena – President FENOC and Chief Nuclear Officer
- **FENOC Overview and Perspective**
  Sam Belcher – Senior Vice President FENOC and Chief Operating Officer
- **Fleet Engineering and Projects**
  Paul Harden – Senior Vice President, Fleet Engineering
- **Site Performance Review**
  Beaver Valley: *Eric Larson – Vice President*
  Davis-Besse: *Ray Lieb – Vice President*
  Perry: *Ernest Harkness – Vice President*
- **Fleet Oversight and Assessment**
  Kevin Ostrowski – Vice President, Oversight
- **Closing Remarks**
  Pete Sena

Desired Outcome

Demonstrate that FENOC is:

- **Committed to the safety and protection of the public, employees, and the environment**
- **Committed to safe, secure, reliable, cost-effective operations**
- **Focused on fleet operations and is having positive effects on site performance**
- **Addressing challenges and adjusting actions where needed**
- **On track for top fleet industry operating performance**



FENOC Vision

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

FENOC Overview

Sam Belcher

FirstEnergy Nuclear Operating Company

Four nuclear units supply 20% of FirstEnergy's generating capacity and about a third of the company's actual generation output

Beaver Valley Power Station

- Located in Shippingport, Pennsylvania (NRC Region I)
- Two Westinghouse PWR units generate 1,815 megawatts

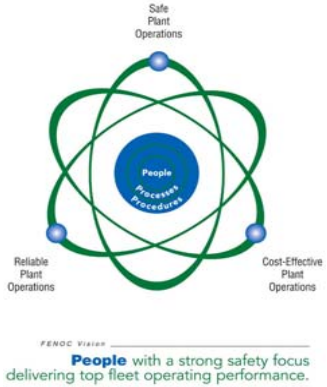
Davis-Besse Nuclear Power Station

- Located in Oak Harbor, Ohio (NRC Region III)
- One Babcock & Wilcox PWR unit generates 908 megawatts

Perry Nuclear Power Plant

- Located in Perry, Ohio (NRC Region III)
- One General Electric BWR unit generates 1,268 megawatts

FENOC Organization



Board of Directors
Nuclear Committee

Tony Alexander
President and CEO
FirstEnergy Corp.

Jim Lash
FE Generation President

Kevin Ostrowski
Vice President
Fleet Oversight

Pete Sena
FENOC President and
Chief Nuclear Officer

Ken Sturtecky
Executive Director
Fleet Outages

Peg Breetz
Director
Gen Human Res

Sam Belcher
Senior Vice President and
Chief Operating Officer

Greg Halnon
Director
Regulatory Affairs

Paul Harden
Senior Vice President
Fleet Engineering

Eric Larson
Vice President
Beaver Valley

- **Rich Bologna** — Director, Site Operations
- **Dan Murray** — Director, Perf Improvement
- **Dave Huff** — Director, Maintenance

Ray Lieb
Vice President
Davis-Besse

- **Brian Boles** — Director, Site Operations
- **Dave Imlay** — Director, Perf Improvement
- **John Dominy** — Director, Maintenance

Ernest Harkness
Vice President
Perry

- **Dave Hamilton** — Director, Site Operations
- **Terry Brown** — Acting Director, Perf Improvement
- **Jim Veglia** — Director, Maintenance
- **Jim Ellis** — Director, Recovery

TBD
Vice President
Nuclear Support

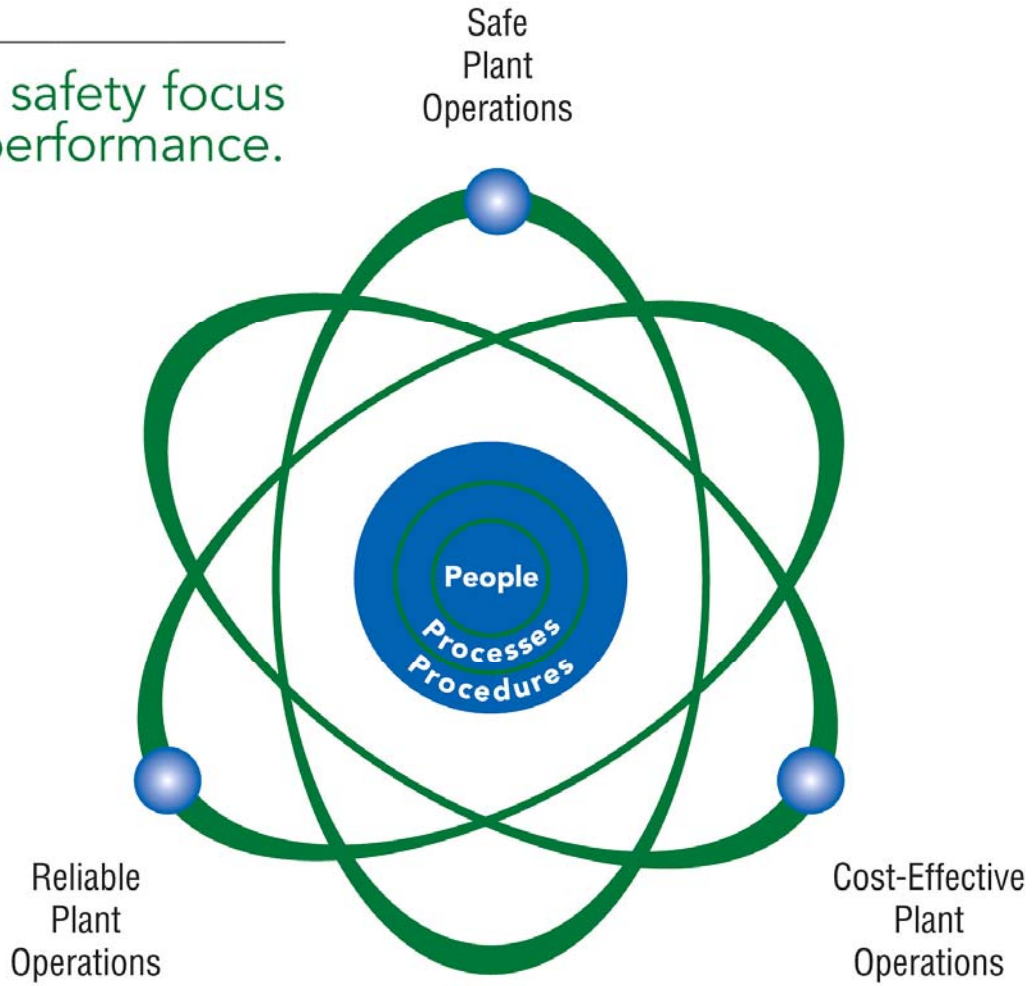
- **Darin Benyak** — Director, Nuclear Security
- **Rick Mende** — Director, Fleet Oper Support
- **Steve Braunfield** — Director, Technical & Lab Services
- **Roy Brosi** — Director, Industry Initiatives

- **Mark Manoleras** — Director Fleet Engineering
- **Mark Roelant** — Acting Director Fleet Project Management
- **Larry Rushing** — Director DB Special Projects
- **Robb Borland** — Director, Nuclear Fuels & Analysis
- **Chaz Mcfeaters** — Director, BV Site Engineering
- **Ken Byrd** — Director, DB Site Engineering
- **Doug Reeves** — Director, PY Site Engineering

FENOC Vision and Strategies

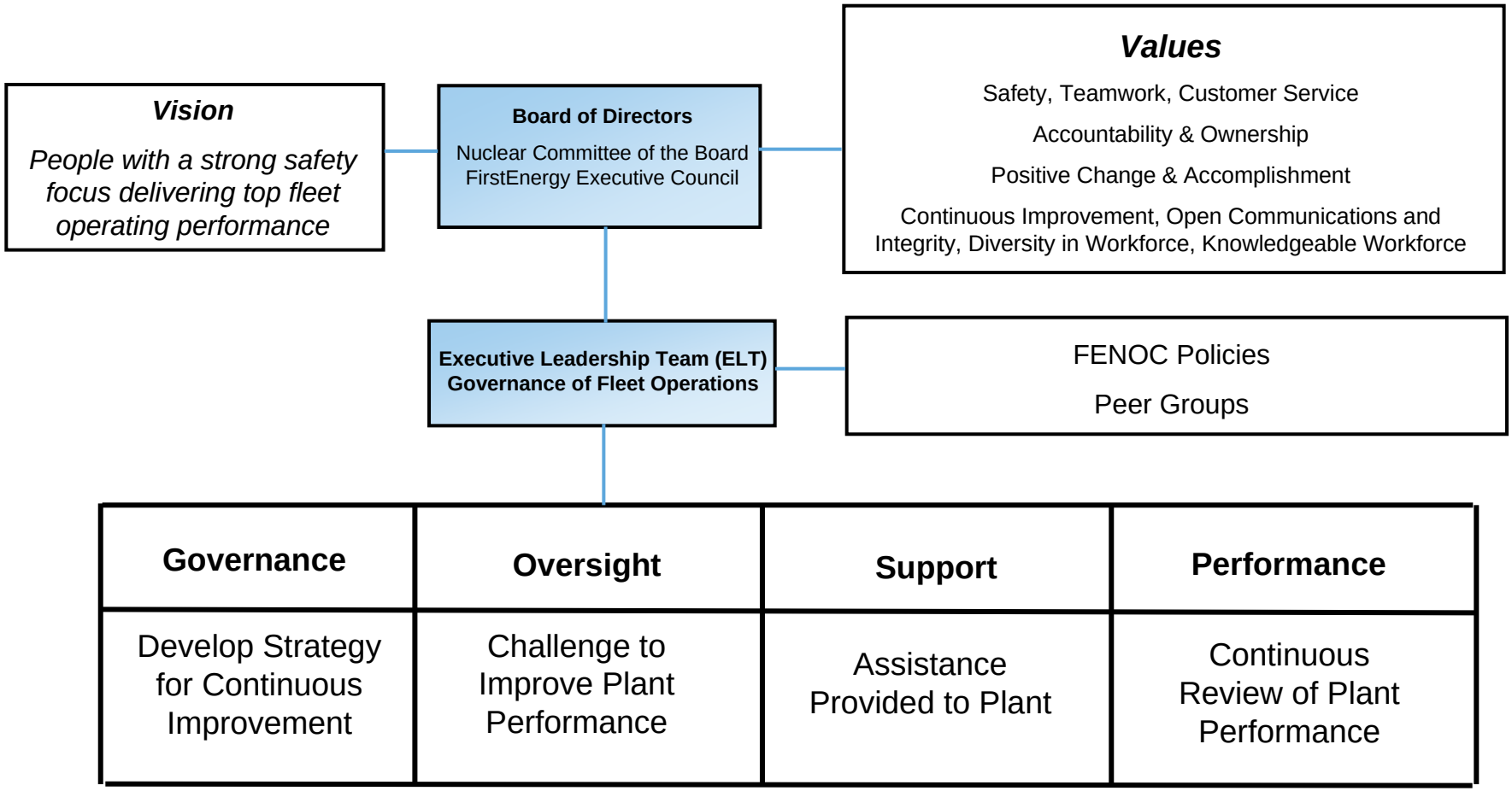
FENOC Vision

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

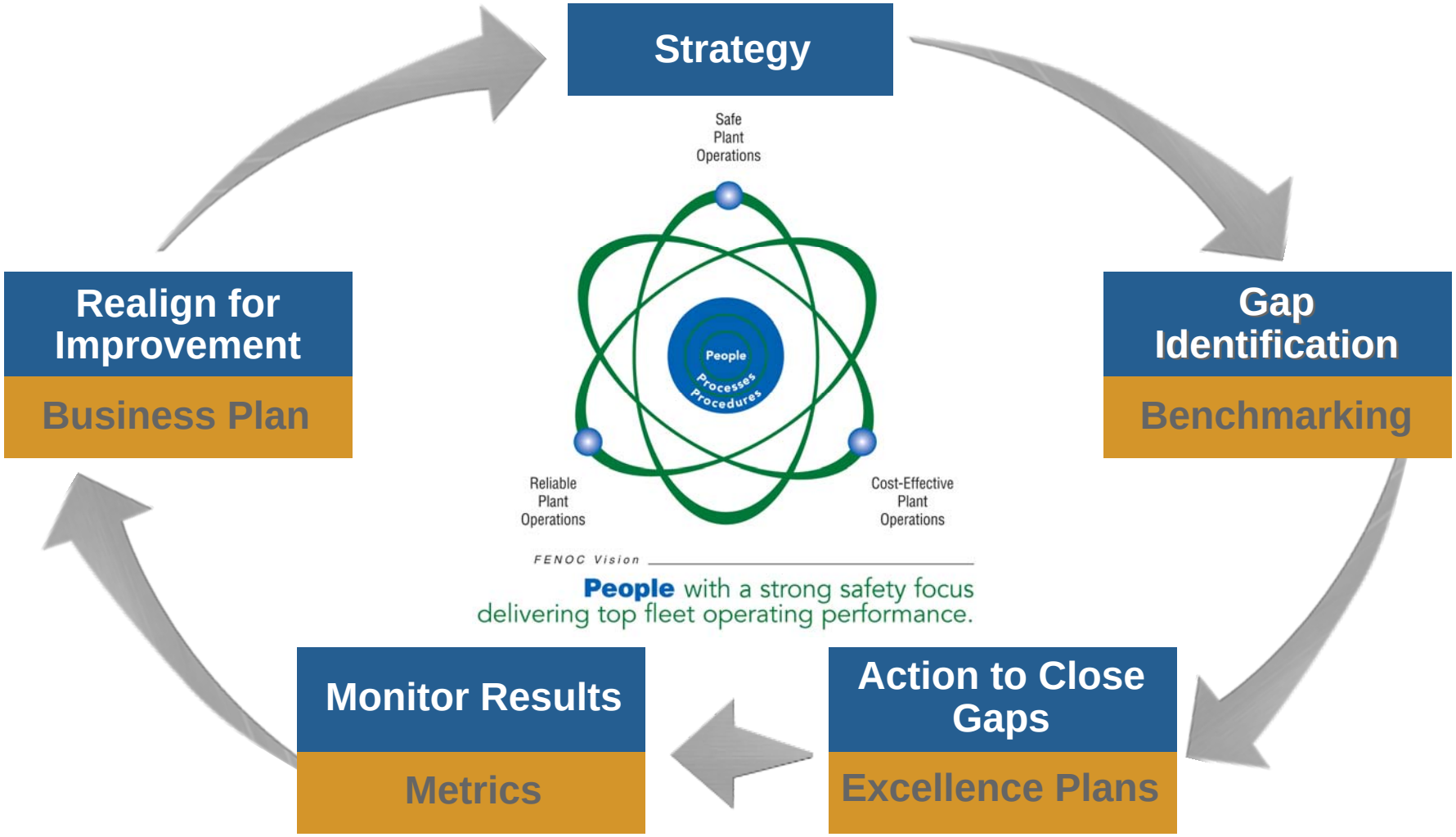


FENOC Management Model

The FENOC Management Model depicts how FENOC conducts business by outlining the responsibilities of the Executive Leadership Team for Governance, Oversight, Support, and Performance and the relationships among individual activities.



Continuous Improvement Process



Fleet Results – 2013 in progress

- **Personal Safety**
  - FENOC Fleet OSHA Rate = 0. 21
- **Focus on Safe, Secure, and Reliable Day-to-Day Operations**
  - 86.8 % Fleet Capability Factor (through August)
  - 3.9 % Fleet Forced Loss Rate (through August)
- **2012 Fleet Benchmark**
  - Strengths
    - Fleet Forced Loss Rate/Events
    - Unplanned Scrams
    - Fleet Equipment Reliability
    - Chemistry Effectiveness Indicator (PWR)
  - Opportunities
    - Outage Execution
    - Collective Radiation Exposure Reduction
    - Security Initiatives

FENOC Strategic Direction

Fleet Focus Areas Drive Improved Performance

Focus Areas:

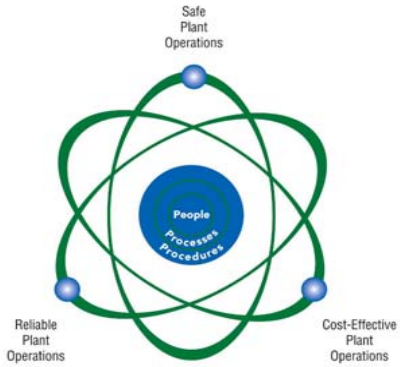
- **Leadership Fundamentals**
- **Personal Safety**
- **Outage Planning and Execution**
- **Key Strategic Projects**

Fleet Focus Area – Leadership Fundamentals

- **Leadership Assessments with Predictive Index**
- **Scientific Approach to Succession Planning**
- **Focus on Leadership Team Alignment and Effectiveness**
- **Corporate Engagement in New Leader Integration**
- **Leaders Teaching Leaders through Engagement in FENOC-Specific New Supervisor/Manager and Continuing Training**
- **Focused Development of High-Potential Leadership Candidates**
- **Refining People Centered Leadership Behavior Model**

Fleet Engagement – Industry Leadership

- **Electric Power Research Institute (EPRI)**
  - Chair, Welding and Repair Technology Committee
  - Co-Chair, Plant Engineering Heat Exchanger Performance User Group
  - Technical Chair, BWR Vessel and Internals Project
  - Vice Chair, Fuel Performance and Reliability Program
  - Vice Chair, Nuclear Maintenance Applications Center Transformer and Switchyard User Group
  - Executive Sponsor, Steam Generator Management Program (SGMP)
  - Executive and Executive Oversight Committees, PWR Materials Management Program (PMMP)
- **Owners' Groups**
  - Vice Chair, BWROG Turbine Generator and Auxiliaries Improvement Committee
  - Vice Chair, BWROG BWR6 Rod Control and Information System Committee
  - Vice Chair, BWROG Emergency Procedure Committee
  - Vice Chair, BWROG Valve Technical Requirements Group
  - Vice Chair, PWROG Risk Management Subcommittee
  - BWROG Executive Committee
  - PWR Executive Management Group and Executive Committee
- **Others**
  - Chair, National Regional Utility Groups (NRUG)
  - Chair, NEI Task Force, Update of FEMA REP 10, "Guide for the Evaluation of Alert and Notification Systems for Nuclear Power Plants"
  - Chair, Nuclear Human Resource Group (NHRG) Community of Practice
  - President, Procedure Professionals Association (PPA)



FENOC Vision

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

Fleet Engineering and Projects

Paul Harden

Fleet Engineering and Projects

- **Margin Improvements and Risk Informed Approach**
- **Equipment Reliability and Maintenance Strategy Refinement**
- **Major Projects Implementation**
- **Mitigating Strategies and Fukushima Related Initiatives**

PRA and Risk Informed Approach

- **Regulatory Guide 1.200 Revision 1 (Internal Events)**
- **Full Seismic Models Under Development**
- **National Fire Protection Association (NFPA) 805 Transitions**
- **Models for Other External Events Scheduled**
- **Risk Informed Surveillance Frequency Control (RITS 5b)**

Margin Improvements

- **Institutionalized Processes and Tools**
  - Margin Management Review Board and Top 10 Margin List
  - Design Basis Activity Reports (DBARs)
  - Project and Design Modification Philosophy
    - Perry alternate decay heat removal system
    - Perry load tap changing replacement transformers
    - Beaver Valley safeguards fire door swing reversal
    - Beaver Valley steam generator level taps
    - Davis-Besse switchyard modifications
    - Davis-Besse non-safety related battery addition

Equipment Reliability and Maintenance Strategy

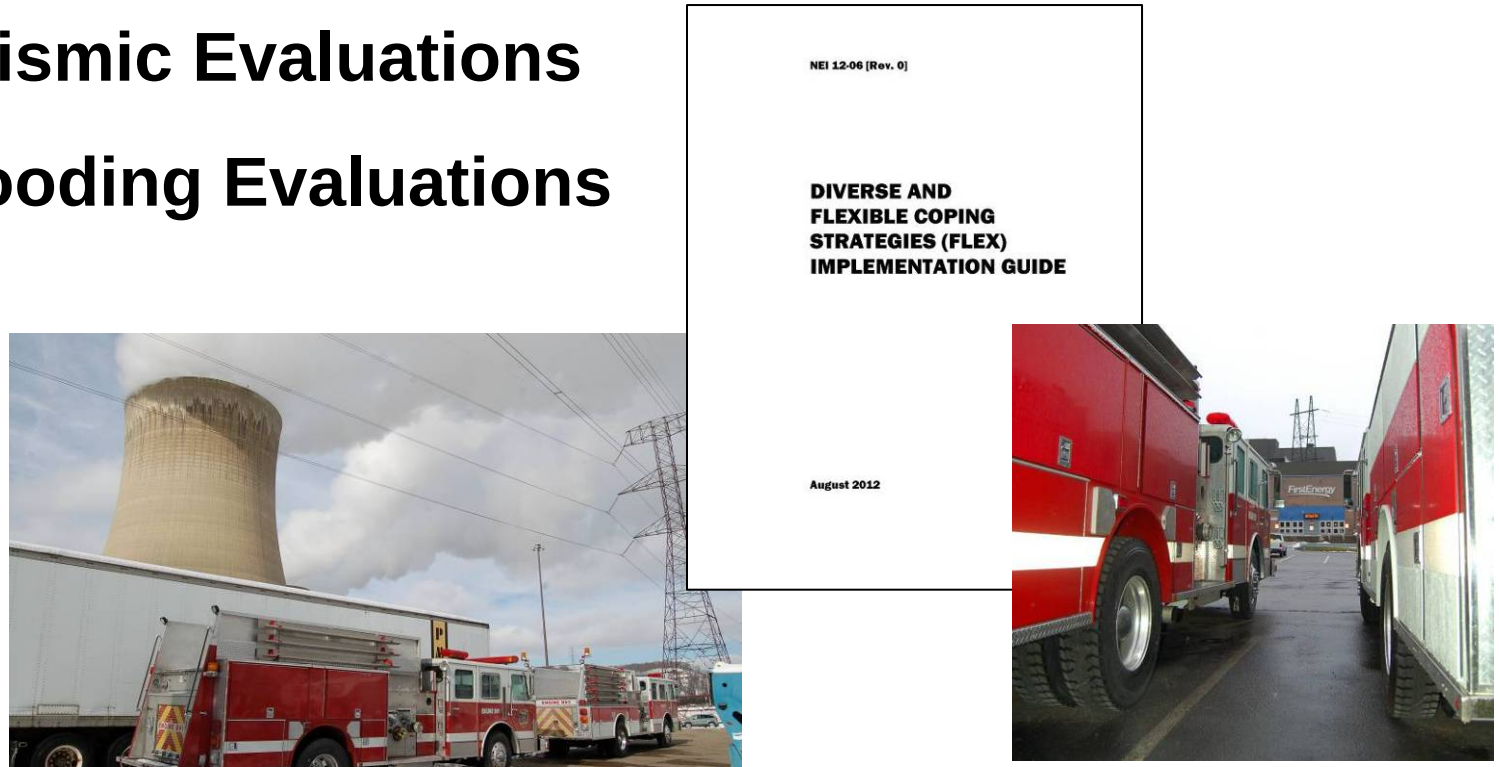
- **Beyond Preventive Maintenance Templates**
  - Deep Dive Reviews to Identify Single Point Failure Vulnerabilities
  - "Proactive Integrated Equipment Reliability and Strategic Sourcing" Initiative
    - Integrated approach to preventive maintenance planning, critical parts availability, parts obsolescence, etc.
    - Leverages industry operating experience at component level
    - Received NEI Top Industry Practice Award
  - Fleet Team Review of Plant Performance for Common Drivers and Adjustment of Maintenance Strategy

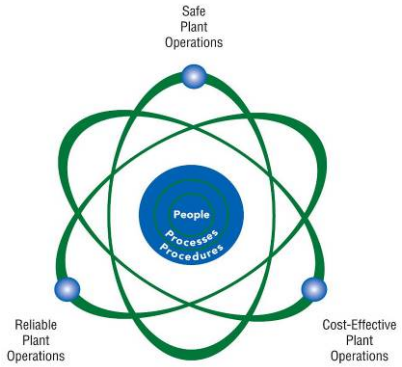
Fleet Focus Area – Key Strategic Projects

- **Dry Fuel Storage**
- **Cyber Security Implementation**
- **Davis-Besse Steam Generator Replacement**
- **Beaver Valley 2 Steam Generator and Reactor Vessel Closure Head Replacement**

Mitigating Strategies and Fukushima Initiatives

- **Diverse and Flexible Coping Strategies - FLEX (NEI 12-06)**
- **Seismic Evaluations**
- **Flooding Evaluations**





FENOC Vision

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

Beaver Valley

Eric Larson

Beaver Valley Organization

Eric Larson
Site Vice President
Beaver Valley

Rich Bologna
Director
Site Operations

- **Brian Matty** — Manager, Site Operations
- **Tim Steed** — Manager, Site Radiation Prot
- **Donald Salera** — Manager, Site Chemistry
- **Todd Hayward** — Manager, Site Work Mgmt
- **Dave Sharbaugh** — Manager, Site Outage Mgmt

Dave Huff
Director
Maintenance

- **Richard Klindworth** — Manager, Site Maintenance

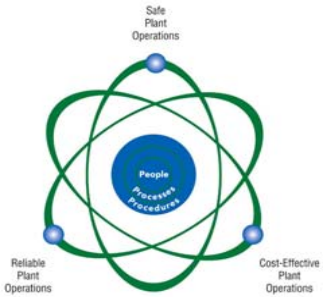
Dan Murray
Director
Perf Improvement

- **TBD** — Manager, Regulatory Comp
- **Chris Hynes** — Manager, Training
- **Steve Sawtschenko** — Manager, Emergency Resp

Chas Mcfeaters
Director
Site Engineering

- **Steve Hovanec** — Manager, Plant Engineering
- **Carmen Mancuso** — Manager, Design Engineering
- **Pat Pauvlinch** — Manager, Tech Svcs Eng
- **Robert Kurkiewicz** — Manager, Site Quality Assurance
- **Dawn Laitres** — Manager, Site Human Resources
- **Dan Craine** — Manager, Site Protection
- **Lee Montanari** — Manager, Site Projects

Matrixed to site from fleet



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2013 Site Priorities

Beaver Valley

- **Safe, Secure, Reliable, Cost-Effective Plant Operations**
- **Safe and Successful Completion of 1R22 Refueling Outage**
- **Comprehensive Preparation for 2R17 Refueling Outage**
- **Successful Support of Spent Fuel Storage Capacity Project**
- **Successful Completion of Security Force-on-Force Exercise**
- **Preparation for 2014 Emergency Preparedness Evaluated Exercise**
- **Successful Support of NFPA-805 Risk-Informed Fire Protection Project**

Performance Snapshot

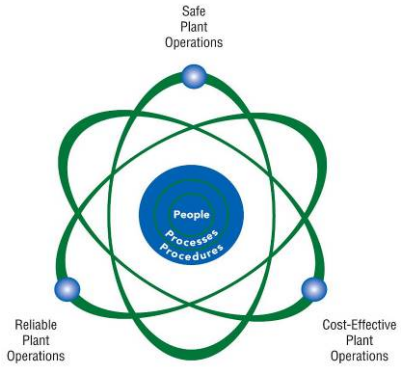
Beaver Valley

- **Personal Safety Performance (both units)**
  - Over 8 million hours without a lost-time accident
- **Operating Performance (through August)**
  - Forced Loss Rate: BV1 = 0.01% / BV2 = 2.70%
  - Capability Factor: BV1 = 93.27% / BV2 = 89.93%
  - Chemistry Effectiveness Index:
    BV1 = 0.02 / BV2 = 2.67
  - Equipment Reliability Index:
    BV1 = 93 / BV2 = 83
  - BV1 2nd Quartile Collective Radiation Exposure
  - BV2 3rd Quartile Collective Radiation Exposure

Continuing Plant Improvement Initiatives

Beaver Valley

- **Unit 2 Steam Generator Replacement**
- **Unit 2 Reactor Vessel Closure Head Replacement**
- **Low Pressure Turbine Rotor Replacements at Unit 1**
- **National Fire Protection Act (NFPA) 805**
  - Risk Informed Modifications
- **Unit 2 Spent Fuel Pool Re-rack Complete**
- **Independent Spent Fuel Storage Facility**
- **Workforce Replenishment**
- **Operator Pipeline**



FENOC Vision

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

Davis-Besse

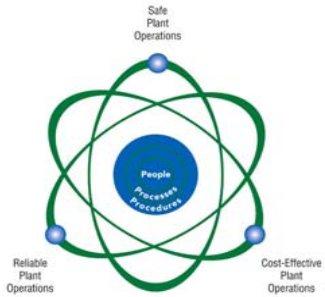
Ray Lieb

Davis-Besse Organization

Ray Lieb
Site Vice President
Davis-Besse

- **Brian Boles** — Director, Site Operations
  - Tom Summers — Manager, Site Operations
  - Doug Noble — Manager, Site Radiation Prot
  - Alvin Dawson — Manager, Site Chemistry
  - Randy Patrick — Manager, Site Work Mgmt
  - Gary Kendrick — Manager, Site Outage Mgmt
- **John Dominy** — Director, Maintenance
  - Doug Saltz — Manager, Site Maintenance
- **Dave Imlay** — Director, Perf Improvement
  - Pat McCloskey — Manager, Regulatory Comp
  - Jeff Cuff — Manager, Training
  - Jim Vetter — Manager, Emergency Resp
- **Ken Byrd** — Director, Site Engineering
  - Brian Kremer — Manager, Plant Engineering
  - Jon Hook — Manager, Design Engineering
  - Craig Hengge — Acting Manager, Tech Svcs Eng
- **Larry Rushing** — Director, DB S/G Replacement
  - Bill O'Malley — Manager, Site Quality Assurance
  - Linda Griffith — Manager, Site Human Resources
  - Greg Cramer — Manager, Site Protection
  - Mark Roelant — Manager, Site Projects

Matrixed to site from fleet



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

2013 and Cycle 18 Site Priorities

Davis-Besse

- **Safe, Secure, Reliable, Cost-Effective Plant Operations**
- **Successfully Complete INPO Evaluation and Assessment**
- **Comprehensive Preparation for 18th Refueling Outage**
- **Successful Completion of Evaluated Emergency Preparedness Exercise**
- **Successful Completion of Operations Training Accreditation Renewal**
- **Recognize and Celebrate Success**

Performance Snapshot

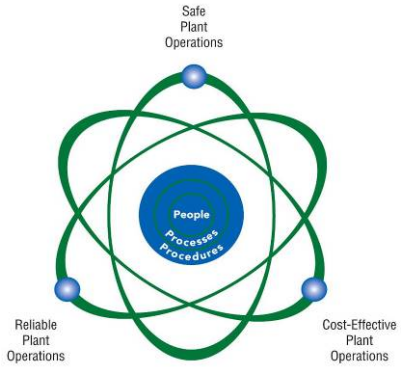
Davis-Besse

- **Personal Safety Performance**
  - Over 6 million hours without a lost-time accident
- **Operating Performance (through August)**
  - Forced Loss Rate = 2.33%
  - Capability Factor = 83.29%
  - Chemistry Effectiveness Index = 0.28
  - Equipment Reliability Index = 87
  - 4th Quartile Collective Radiation Exposure

Continuing Plant Improvement Initiatives

Davis-Besse

- **Steam Generator Replacements**
- **License Renewal**
- **Digital Electro-Hydraulic Control**
- **Reactor Coolant Pump Motor/Seal Replacement**
- **Turbine Plant Cooling Water Heat Exchanger Replacement**
- **Workforce Replenishment**
- **Operator Pipeline**



FENOC Vision

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

Perry

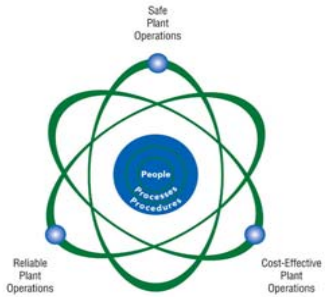
Ernest J. Harkness

Perry Organization

Ernest Harkness
Site Vice President
Perry

- **David Hamilton** — Director, Site Operations
  - Jeff Tufts — Manager, Site Operations
  - Stan Baker — Manager, Site Radiation Prot
  - Joe Oelbracht — Manager, Site Chemistry
  - Mike Koberling — Manager, Site Work Mgmt
  - TBD — Manager, Site Outage Mgmt
- **Jim Ellis** — Director, Perry Recovery
- **Jim Veglia** — Director, Maintenance
  - Barry Blair — Manager, Site Maintenance
- **Terry Brown** — Acting Director, Perf Improvement
  - Tom Veitch — Manager, Regulatory Comp
  - Rick Strohl — Manager, Training
  - Rick Smith — Manager, Emergency Resp
- **Doug Reeves** — Director, Site Engineering
  - Keith Nelson — Manager, Plant Engineering
  - Ben Huck — Manager, Design Engineering
  - Polly Boissoneault — Manager, Tech Svcs Eng
  - John Messina — Manager, Site Quality Assurance
  - Dawn Skerness — Manager, Site Human Resources
  - Mike Fox — Manager, Site Protection
  - Brad Baumgardner — Manager, Site Projects

Matrixed to site from fleet



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

2013 Site Priorities

Perry

- **Safe, Secure, Reliable, Cost-Effective Plant Operations**
- **Strategic Improvement Plan Focus in Organizational Leadership, Decision Making and Fundamental Behaviors**
- **Focus on Error-Free Radiological Performance**
- **Demonstrated Security Readiness Through the Successful Completion of Force-on-Force Exercise**
- **Renew Accreditation of the Maintenance and Technical Training Programs**

Performance Snapshot

Perry

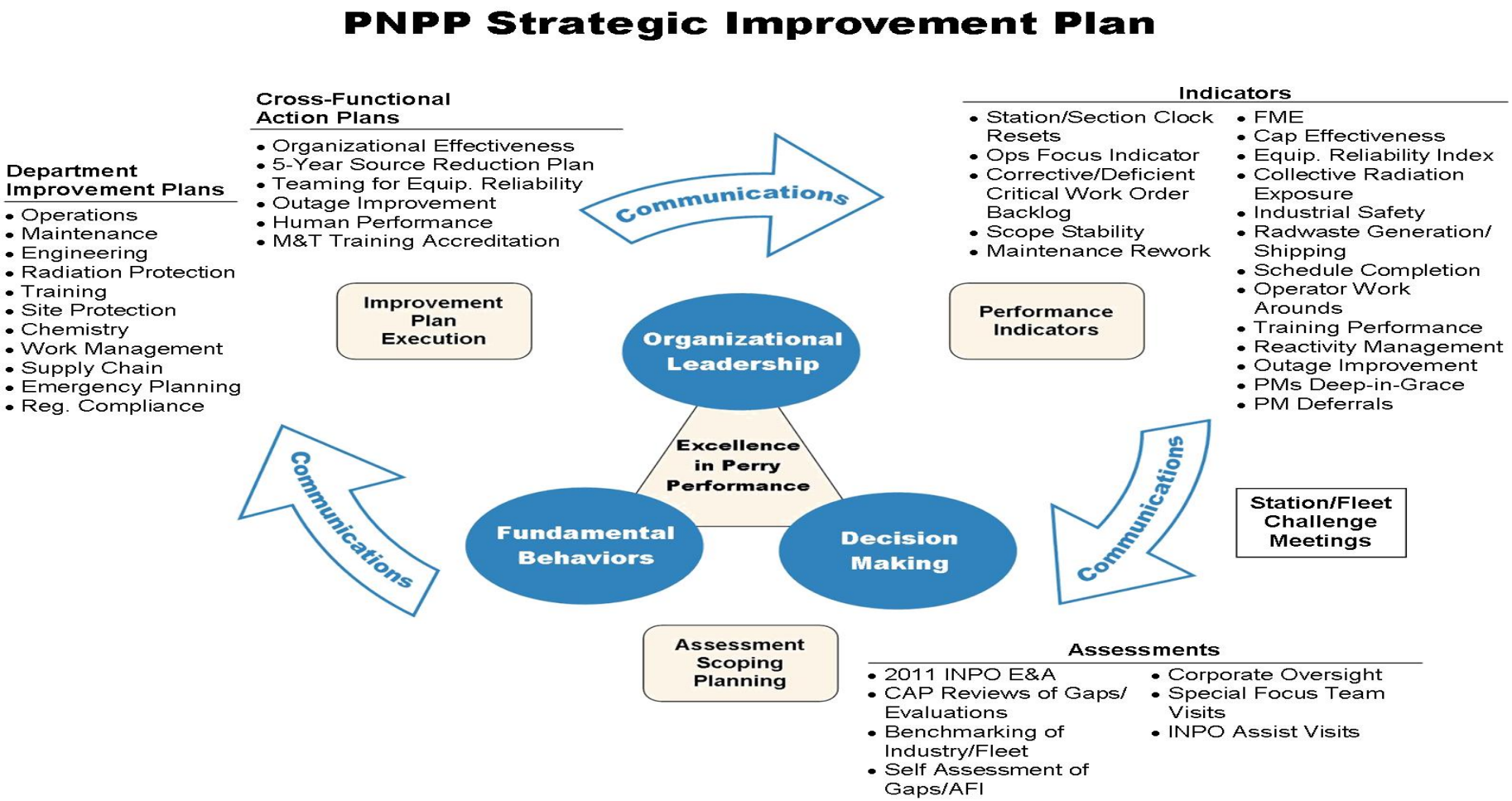
- **Personal Safety Performance**
  - Over 2 million hours without a lost-time accident
- **Operating Performance (through August)**
  - Forced Loss Rate = 4.75%
  - Capability Factor = 83.99%
  - Chemistry Effectiveness Index = 13.77
  - Equipment Reliability Index = 89
  - 4th Quartile Collective Radiation Exposure

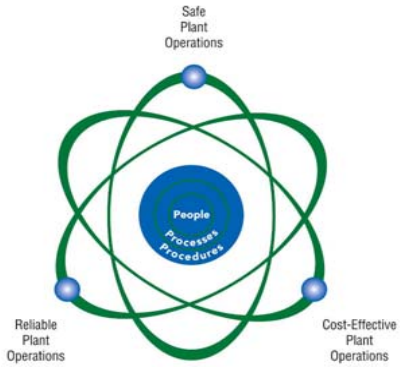
Continuing Plant Improvement Initiatives

Perry

- **Independent Spent Fuel Storage Facility**
- **Unit 1 Start-up Transformer Replacement**
- **Plant Radiation Monitor Upgrade**
- **Emergency Plan Sirens**
- **Physical Security Upgrades**
- **Monoblock Turbine Rotors**
- **Flex and Fukushima Response**
- **Facilities Upgrade**
- **Workforce Replenishment**
- **Operator Pipeline**

Perry Improvement Plan





FENOC Vision

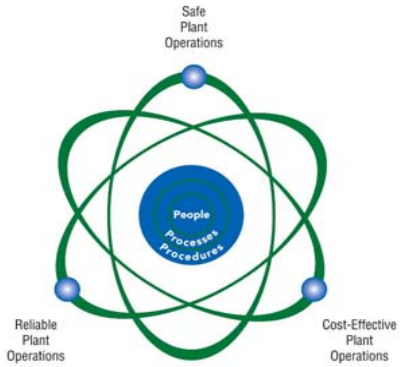
People with a strong safety focus delivering top fleet operating performance.

Fleet Oversight

Kevin Ostrowski

Fleet Oversight

- **Compliance Auditing - 2013**
  - 11 Audits Completed; 3 Planned/In Progress
  - 21 Industry Technical Specialists Used From 15 Plants/Utilities
- **Individual Site Performance Assessment**
  - Updated Assessment Criteria With New INPO Performance Objectives
  - Beaver Valley: Refueling Outage Focus, Steam Generator Construction
  - Davis-Besse: Oversight Of Steam Generator Replacement Preparation
    - INPO Identified Strength: Oversight Identifying Gaps To Improve Performance, Assessor Quality
  - Perry: Focus On Oversight Of Improvement Activities
- **Corporate Assessments**
  - Updated Assessment Criteria To Reflect New Safety Culture Traits (INPO 12-012)
- **Employee Concerns Program**



FENOC Vision

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

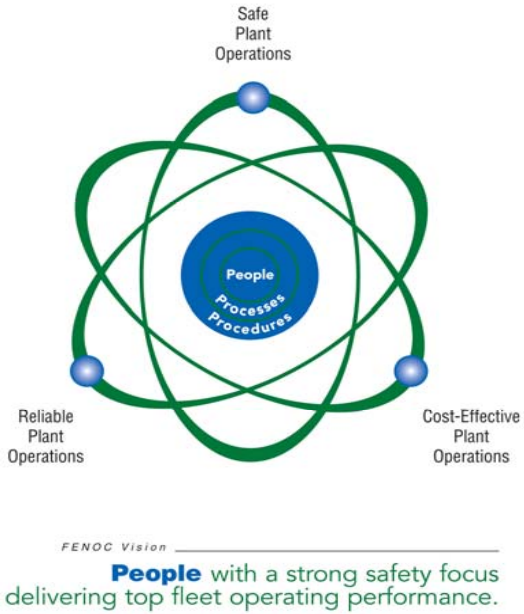
Closing Remarks

Pete Sena

Closing Remarks

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

- **Safe Plant Operations**
- **Reliable Plant Operations**
- **Cost-Effective Plant Operations**
- **Effective use of People, Processes and Procedures**



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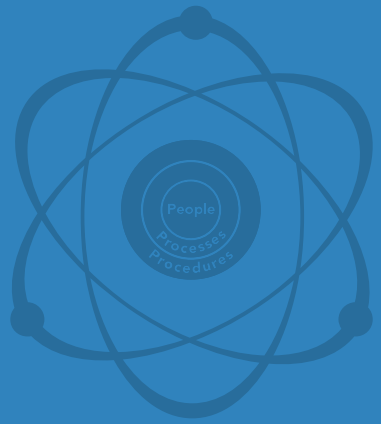

September 24, 2013