



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
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ARLINGTON, TEXAS 76011-4005

January 14, 2004

Mr. J. V. Parrish
Chief Executive Officer
Energy Northwest
P.O. Box 968; MD 1023
Richland, Washington 99352-0968

SUBJECT: COLUMBIA GENERATING STATION - SUMMARY OF THE MEETING WITH
ENERGY NORTHWEST COMPANY TO DISCUSS GENERAL ENGINEERING
ISSUES AND LICENSEE IMPROVEMENT INITIATIVES

Dear Mr. Parrish

This refers to the public meeting conducted at the Energy Northwest Company's office complex at 3000 George Washington Way, Richland, Washington, on January 08, 2004. The purpose of this meeting was to discuss general engineering issues and licensee improvement initiatives. The meeting attendance list and a copy of the handout provided during the meeting are enclosed.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Should you have any questions concerning this matter, we will be pleased to discuss them with you.

Sincerely,

William B. Jones, Chief
Project Branch E
Division of Reactor Projects

Docket: 50-397
License : NPF-21

Enclosures:
1. Attendance List
2. Energy Northwest Handout

Energy Northwest

-2-

cc w/enclosures:

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**NRC Public Meeting
January 8, 2004**

NAME	TITLE	COMPANY
John Twomey	BOP Sys. SUPV	ENW
DAVE GILROY	BOP Sys ENGR.	ENW
Scott Wood	NSSS Supervisor	ENW
CARL KING	MGR Chemistry	ENW
Mike Halle	Sr. Engineer, Systems	ENW
Kent W. Huer	DB Eng Supervisor	ENW
Mike Keller	Operations	EN
MARK HUNTSMAN	RO OPS	EN
Dennis Myers	Eng. Supv	EN
Jack Cole	Design Authority	EN
MIKE TATRO	RO OPS	EN
JAMIE RICH	MAINT.	EN
RICHARD OLSON	RO OPS	EN
RAMON BREWER	OPERATIONS	ENW
John Slack	SRO OPS	ENW
OPROCKS	SRO OPS	ENW
MYRON BACKO	SRO OPS	ENW
Bruce Bryan	Assistant Engng Mgr	ENW
R E Weath	CRO	ENW
DAVE CULLEN	MGR CIVILS	ENW
RON BARBEE	EFIN	ENW
John Holland	IC	ENW
Scott Mulkey	Systems	ENW
JERRY GIBBS	MAINT	ENW
Michael K Brandt	Licensing	ENW

ENCLOSURE 2



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Welcome/Introduction

Public Meeting
NRC/Columbia Generating Station
January 8, 2004

NRC Opening Comments

Dwight Chamberlain
Division Director - Division of
Reactor Safety
US Nuclear Regulatory Commission
Region IV

Agenda

OPENING REMARKS

- NRC
- ENERGY NORTHWEST

Dwight Chamberlain
Rod Webring

ENGINEERING PERFORMANCE

Mike Humphreys

PROBLEM IDENTIFICATION AND RESOLUTION

Don Feldman

***** 15 Minute Break*****

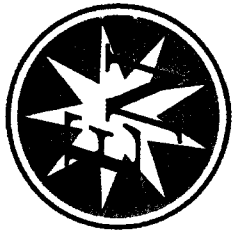
QUEST FOR EXCELLENCE

Scott Oxenford/Greg
Cullen

CLOSING REMARKS

- ENERGY NORTHWEST
- NRC
- PUBLIC COMMENTS/QUESTIONS

Dale Atkinson
Dwight Chamberlain



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Engineering Performance

Public Meeting
NRC/Columbia Generating Station
January 8, 2004

Problem Statement

Over the last 18 months, some lapses in the performance of the Columbia Generating Station Engineering organizations have occurred, primarily in the form of products that missed the mark because they contained errors, omissions, unsupported conclusions, or were not updated in a timely manner.

Agenda

- Engineering Rigor
 - Evaluation of Performance Issues
 - Focus Areas
 - Improvement Actions
 - Measuring Effectiveness
- Other Improvement Actions
- Summary

Evaluation of Performance Issues

- Identify Performance Issues (PERs)
 - Self Identified
 - Quality Identified
 - NRC Identified (Recent Inspections)
- Review PER Resolutions (for Engineering Rigor)
 - Root or Apparent Cause(s) of Performance Problem
 - Contributing Cause(s)
- Evaluate for Common Causes
 - Included Design Basis Knowledge and Design Discrepancies as Areas Evaluated
 - Identify Common Causes

PER No.	Description of Problem	Performance (Completeness & Accuracy)	Problem Identification	Questioning Attitude	Training Issue (Skill / Knowledge)
202-2524	B RFW Speed Control				X
202-3176	AST Submittal Withdrawal	X	X	X	
202-3529	FDR-V-3,4 FAOs (Rev. 0 and 1)		X	X	X
203-0423	DG-1 Bearing High Vibration			X	
203-3664	CREF - Impact of CHI/Q errors not documented		X		
203-3643	CR Inleakage FAO Implementation	X			
203-3693	TOC Switch problems		X	X	
203-3942	Tracer Gas Test - Low dP Alarms			X	
203-3975	Tracer Gas Test - TS Prohibited Lineup	X	X	X	X
203-3373	IST Program Impl. Weaknesses	X			
203-3370	Calculation Status Control	X			
203-3561	SGT Venting & Purging Procedures	X			
203-3416	Operation of 2 nd Train of SGT	X			
203-3767	CAC System Capability	X	X		
203-3559	Failure to Walkdown M SRV Tailpipes		X		

Engineering Rigor

Focus Areas

- Performance of Work (Completeness & Accuracy)
- Problem Identification
- Maintaining a Questioning Attitude
- Training Issue (Skill or Knowledge)

Improvement Actions

Performance of Work

- Improved Management Oversight
 - Engineering Review Board
 - Engineering line management review of selected approved or prepared / reviewed products
 - Initiated October, 2003 (complete)
 - Initial scope - review all open Operability Evaluations (in progress)
 - Patterned after Design Review Board (DRB)

Improvement Actions

Performance of Work

- Broaden Product Scoring
- Accuracy of Communications
 - Communicated management expectations and guidelines for accuracy in communications (complete)
 - Training for engineering staff regarding personal responsibility for accuracy in communications (complete)
- Quest For Excellence (QFE) Action OR-A2 Engineering Reorganization (complete)

Improvement Actions

Performance of Work

QFE OR-A2 Engineering Reorganization

- **Created a Single Engineering Organization**
 - More Focused Roles & Responsibilities, Improved Teamwork
 - Improve Plant Support (EFIN Team Created)
 - Improve Quality of Operability Determinations
 - More Consistent Prioritization of Engineering Resources
 - Improved Focus by System Engineers on Equipment Performance Monitoring & Trending

- **Creation of Discipline Specific Design Authority Positions**

- Civil/Stress, Mechanical, Electrical, I&C
- Separate the design responsibilities from the supervisory / production responsibilities
- More focused responsibility for design basis ownership / knowledge
- Ensure consistency and quality of design basis

Improvement Actions

Performance of Work

- Accountability Focus
 - Incorporated Accountability Expectations into EGM 1-1, Engineering Roles and Responsibilities (complete)
 - Technical Services Accountability Training Pilot –March, 2004

Improvement Actions

Problem Identification

- Trained for understanding of degraded or nonconforming conditions and operability (initial course March, 2003), 5 classes completed, with 130 individuals trained (completed)
- Refresher training on Operability Determination is being developed by Training (in progress)
- Corrective Action Program change – utilize trained Dispositioners to perform PER dispositions (scheduled for January, 2004)
 - Improve Disposition quality
 - Improve quality of Extent of Condition evaluations

Improvement Actions

Questioning Attitude

- Improved Management Oversight
 - Columbia Oversight Board (in progress)
 - Engineering Review Board (in progress)
- QFE Action OR-A2 Engineering Reorganization (complete)

Measuring Effectiveness

- Performance Indicators (PI) which are measures of Engineering Rigor will be used to monitor trends in Engineering performance.
- Current PIs measure “average” performance. New PI’s will also trend the number of Engineering products caught in process that are below minimum standards.
 - More of a leading indicator of performance challenges.
 - Focuses organization on individual product quality verses average product quality.

Engineering PIs

- Current PIs
 - System Engineering Event Free Clock
 - Product Quality (Calculations and Design Change Packages)
 - Engineering Program Health
 - Repeat Events
 - Unplanned Field Changes

Engineering PIs

- New PIs (Under Development)
 - Product Quality
 - expand to cover FAOs, PER resolutions
 - expand to track individual product score
 - Engineering Programs (expanded for all programs in the new organization)
 - Engineering Event Free Clock (expand to all Engineering departments)
 - Engineering Electronic Database (EEDB) Effectiveness

Other Improvement Actions

- Proposed Design Modification and Configuration Control Training
 - Enhancement under consideration
 - Review Regulatory Requirements, Terminology, Fundamental Design Concepts
 - Provide Pilot to Engineering Management / Key Staff (February, 2004)
- Design Basis Documentation
 - Engineering Electronic Database (EEDB)
 - Design Basis Improvement Project planned

Improvement Actions

Design Basis Documentation

Engineering Electronic Database (EEDB)

- Multi-Year Effort Initiated to Improve Design Basis Accessibility
- Design Documents are available in electronic format (~ 125,000 documents)
 - Design Specifications, Procurement Specifications, Design Requirement Documents, Drawings, Tech Memos, Procedures, Component Classification Evaluation Records
 - Calculation Summaries for ~ 5000 calcs
 - Remaining calculations searchable based on title, equipment numbers, and inter-relationships

Improvement Actions

Design Basis Documentation

Engineering Electronic Database (EEDB)

- EEDB fully implemented November, 2003
 - Problems with Curator hit viewer
 - Not in use at the time of the recent inspection

Improvement Actions

Design Basis Documentation

EEDB Implementation & Training

- Trained staff on use of Curator to search EEDB
- Trained staff on use of EEDB in searching for design requirement and design basis information
- EEDB is being used to:
 - Provide for more efficient, effective retrieval of design basis documents
 - Facilitate ready identification of discrepant data

Improvement Actions

Design Basis Documentation

Design Basis Improvement Project

- Two significant components
 - Complete Design Requirement Documents for Safety Significant Systems
 - Apply EEDB to Identify and Reduce Number of Design Basis Discrepancies

Improvement Actions

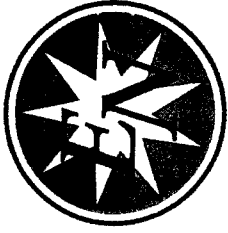
Design Basis Documentation

Design Basis Improvement Project Scope

- Conduct Assessment in early 2004
 - DRD Program
 - Document Discrepancy Project
 - Use and Enhancement of EEDB
- Complete Project Scoping by June, 2004
- Begin Project Implementation by September, 2004

Summary

- Engineering Rigor
 - Focus Areas
 - Improvement Actions
- My Expectations for Engineering Staff
 - Acknowledge the Existing Performance Problems
 - Focus on Demonstrating the Proper Behaviors / Desired Results
 - Actively Engage in Improving the Organization's Performance - Help Achieve the Vision



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Problem Identification and Resolution

Public Meeting
NRC/Columbia Generating Station
January 8, 2004

Problem Statement

At Columbia Generating Station, we are not getting enough benefit from our corrective action program primarily due to insufficient rigor in our problem solutions and our commitment to the process.

Program Improvement Goal

Consistent implementation demonstrated by timely problem identification, high quality resolutions, and employee commitment to using the program to improve our performance.

Agenda

- Basis for Change
- Actions to Improve Rigor
 - Accountability
 - Program
 - Training
 - Trending
- Performance Metrics
- Conclusion

Basis for Change

- Direct Feedback
 - Internal
 - External
- Benchmarking
- Increasing Expectations
- GL 91-18 Understanding

Accountability

- Corrective Action Program: The Primary Tool for Improving Performance
 - VP Nuclear Generation made Chair of Corrective Action Review Board (CARB)
 - Created PER Review Group
 - Daily accountability for timeliness expectations
 - Continuous Improvement Coordinators (CICs) to reinforce use in each department
 - Operations SRO to become Chairman of the Condition Report Review Group

Accountability

- Changes to improve completeness, accuracy and effectiveness of products
 - Site CARB
 - Review of all root causes
 - VP Nuclear Generation – Chairman
 - Members are department managers
 - Department CARB (New – February, 2004)
 - Review apparent causes and root causes performed by their departments
 - Department managers – Chairman

Program

- Improved electronic condition reporting process
- Graded approach – focuses attention on significant issues
- Trending program – enhances ability to identify low level precursors
- New Procedure/Clear Expectations
 - Clarify process
 - Define roles and responsibilities
 - Communicate individual expectations
- Hired consultant to oversee changes

Training

- Employee training on the program and the simplified reporting process (Condition Report) - started January 6, 2004
- Apparent Cause Training (includes Extent of Condition and Extent of Cause) - starts January 19, 2004
- Train Corrective Action Review Board (CARB) members on the new process
- GL 91-18 Knowledge
 - Trained 130 to date
 - Initial and continuing training going forward

Trending

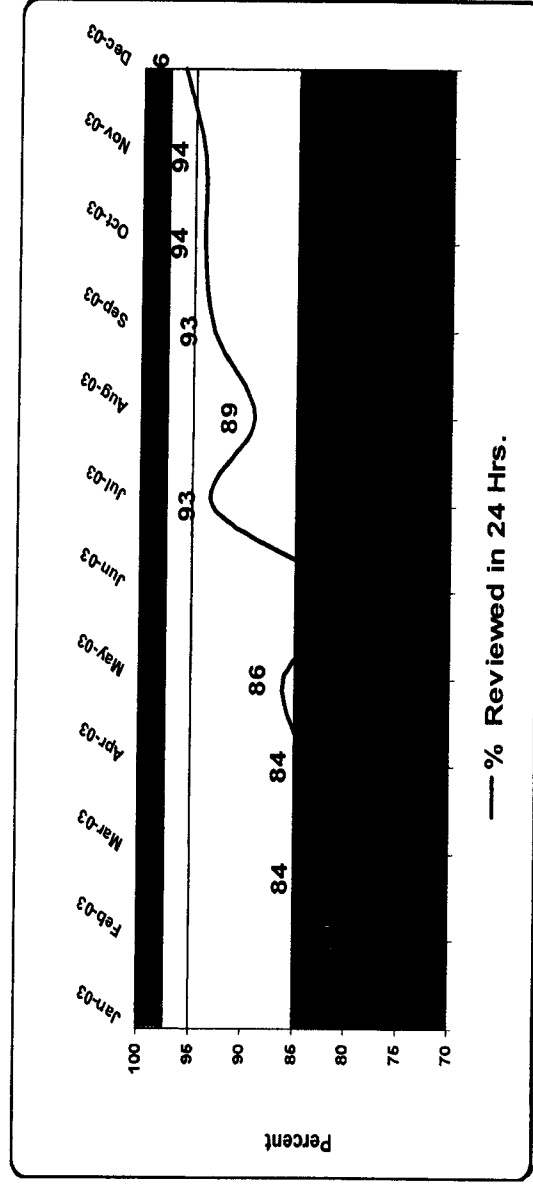
- Current trending performance
 - Bi-monthly trending meetings (started fall 2002)
 - Departments and PER Review Group initiating trend PERs
 - Results: More than 65 trend PERs in 2003
 - Safety
 - Radiation Protection
 - Equipment Performance

Trending

- Improvement initiatives in progress
 - Established a simplified coding scheme
 - Training in cause analysis and coding
 - Better use of cause analysis and coding in trend meetings and reports
 - Created new position: Trend Analyst

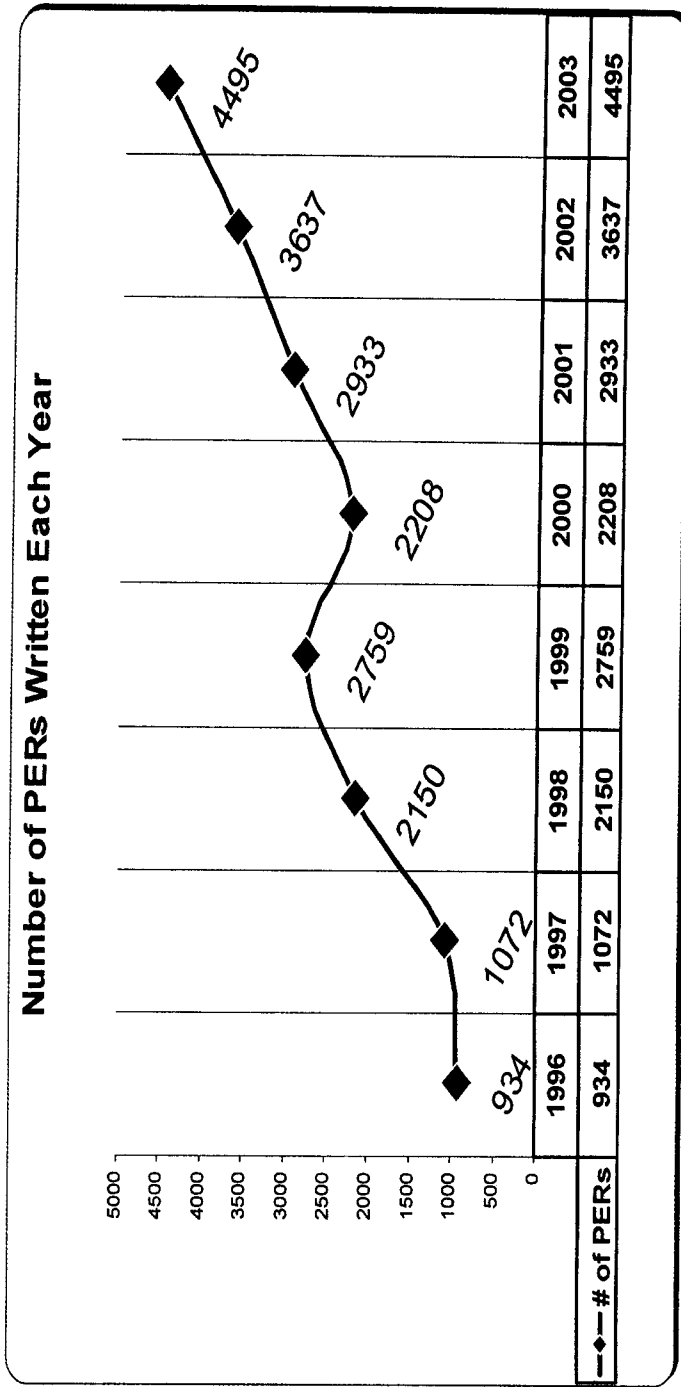
Performance Metrics

- Continued measurable improvement in meeting expectations for problem identification timeliness. Currently applying the same rigor to resolution and corrective action timeliness.



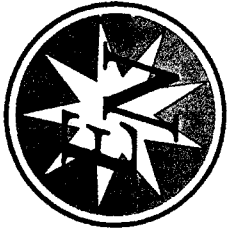
Performance Metrics

- Increased use of the process to identify areas for improvement and solve problems



Conclusion

- We can extract more benefit from our corrective action program.
- To do that we are:
 - giving line management ownership of the program,
 - focusing the program on accountability, and
 - training to make sure we all know how to get the most out of the program.
- When we do these things, I am confident we will see improved performance at Columbia!



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Quest for Excellence

**Public Meeting
NRC/Columbia Generating Station
January 8, 2004**

Why?

- Organizational performance has not met our expectations
 - Plant Performance
 - Internal Assessments
 - Performance Indicators
 - Industry Benchmarking
 - INPO Feedback
 - NRC Feedback

Agenda

- Strategy
- Activities to Date
- Performance Metrics
- Early Successes
- Conclusion

Our Vision

To be an industry leader in Operational Excellence where . . .

- We are actively committed to Safety
- We seek out our problems and eliminate them
- We plan and execute our work
- We are confident our equipment is reliable
- Our signature means quality and commitment

Focus Areas

- Five Key Focus Areas
 - Industrial Safety
 - Problem Identification and Resolution
 - Outage and Work Management Effectiveness
 - Equipment Reliability
 - Accuracy and Completeness of Staff Work

Key Principles

- We Will Use INPO Guidelines Which Lay the Foundation for Excellence in Nuclear Plant Operation
- We Must be *Willing* to Re-engineer and Optimize Each and Every Process – We Will Make Changes Where Determined Necessary
- Clear and Specific Standards, Expectations, and Guidance Are a Necessary Outcome

Key Principles

- We Will Focus on What Is Important, Using a Graded Approach Where Appropriate.
- Change and Improvement Must Be Attacked with Urgency
- Sound Change Management and Effective Leadership Must be Applied
- We Will Plan, Do, Check, and Adjust

QFE Document

- Actions to address these areas are sorted by INPO Cross-Functional Areas
 - Organizational Effectiveness
 - Operational Focus
 - Equipment Reliability
 - Configuration Management
 - Performance Improvement
 - Radiological Protection

Timeline

- July - Gap Analysis Against INPO Model;
Initial Set of Actions Identified
- August - Program Manager Named;
QFE Mgmt Team Formed
- Sept/Oct - Actions Prioritized;
Scope of Actions Finalized;
Vision Developed;
Communications Strategy Developed
- November - QFE Launched

QFE Management Team

- Quest for Excellence Program Mgr
- Plant General Manager
- Maintenance Manager
- Operations Manager
- Chemistry Manager
- Radiological Services Manager
- Reactor Maintenance Manager
- Work Control Manager
- Operations Production Manager
- Operations Support Manager
- Training Manager
- Performance Management Manager
- Long Range Planning Manager
- Procurement Manager
- Engineering Manager
- Plant Modifications Manager
- Technical Engineering Manager
- System Engineering Manager
- Reactor/Fuels Engineering Manager
- Equipment Reliability Program Mgr
- Assistant to the Engineering Manager
- Regulatory Programs Manager
- Quality Manager
- Information Services Manager
- Finance Manager
- C&MS Manager
- Resource Protection Manager
- Corporate Training Manager

Organizational Changes

- Engineering Re-organized
- Engineering Fix-it-now (EFIN) Team Formed
- Maintenance Re-organized
- Work Control Organization Formed and Process Improved
- Organizational Focus on Accountability

Performance Metrics

- Managing the Initiative
 - Project Management Tools
 - Performance Indicators to Monitor Success in Completing Actions
 - Bi-weekly QFE Focus Meetings
 - Communications Strategy

Performance Metrics

- Measuring Success
 - Columbia Generating Station Performance Indicators
 - PIs Modified per INPO 01-005, “Indicators of Changing Performance”
 - Provide Depth and Breadth of Performance Measurement
 - Monthly PI Focus Meetings
 - Key QFE Performance Indicators (PIs)

Performance Metrics

- Validating and Assessing Effectiveness
 - Self-Assessments Against 6 Cross Functional Areas
 - Monitoring Internal and External Assessment Feedback
 - Columbia Oversight Board
 - Quality Department Oversight
 - Employee Feedback
 - Capturing and Recognizing Examples of Proper Behavior

Looking Ahead

- Long Term Strategy
- Employee Involvement Initiative
- Communications Strategy
- Living Program
 - Check and Adjust as Necessary
 - Long-Term Commitment to QFE

Early Successes

- Operational Focus and Equipment Reliability
 - Building an intolerance for failure of Criticality 1, 2, and 3 equipment
 - Improved understanding and execution of Operability Determinations
 - Containment Monitoring particulate detector reliability enhanced
 - Service Air compressor carbon monoxide monitor reliability enhanced
 - Fire Protection pump leak-off resolution

Early Successes

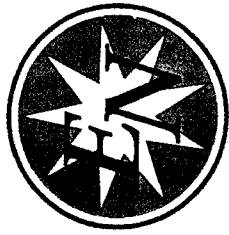
- Craft Ownership
 - Control Rod Drive pump breaker issue resolution
 - Low voltage switchgear modification installation
 - RCIC quarterly surveillance out-of-service time

Early Successes

- **Accountability and Expectations**
 - Station Event Free Clock resets
 - Qualification management
 - Work package walk-downs
 - Twenty-four hour validation of PERs

Conclusion

- First line supervision and employee involvement
- The elements critical to leading change are established
- The department level management team, along with senior management, is aligned and committed
- Oversight and Accountability processes are established
 - Core Business Schedule
 - Bi-weekly QFE Mgmt Team Meetings
 - Performance Indicators
 - Operational Focus Meeting
 - Columbia Oversight Board
- Communication Plan in progress
- We will plan, do, check, and adjust



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Closing Comments/Questions

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Energy Northwest Closing Comments

Dale Atkinson
Vice President, Technical Services

NRC Closing Comments

Dwight Chamberlain
Division Director – Division of
Reactor Safety
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Public Comments Questions

Open Floor
(Last Slide)