UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
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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

cc w/enclosures:
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ENCLOSURE 1

NRC Public Meeting
January 8, 2004

NAME	TITLE	COMPANY
John Twomey	BOP Sys. Supv	ENW
Dave Giroux	BOP Sys Engr.	ENW
Scott Wood	NSSS Supervisor	ENW
Carl King	MGR Chemistry	ENW
Mike Holle	Sr. Engineer, Systems	ENW
Kent Dittmer	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	Rigging Supv	EN
Jamie Rich	Maint.	EN
Richard Olson	RO OPS	EN
Randall Prewet	OPERATIONS	ENW
John Slack	SRO OPS	ENW
[illegible] Brooks	SRO OPS	ENW
Myron Baird	SRO OPS	ENW
Bruce Bryan	Assistant Engrg Mgr	ENW
R E Weaver	CRO	ENW
Doug Culver	Mgr C&MS	ENW
RON BARBEE	EFIN	ENW
John Holland	I/C	ENW
Scott Mulkey	Systems	ENW
Jerry Guess	MAINT	ENW
Michael K Brandon	Licensing	ENN

NRC Public Meeting
January 8, 2004

NAME	TITLE	COMPANY
MIKE FERRY	Q.S. SUPV.	EN
WR Green	Sm	ENW
BE Pesek	Mc ~~[illegible]~~ Design Sup	EN
TF Hoyle	Supvr, Component Pgms	ENW
MIKE PEZEETT	MODS	ENW
JIM GASTON	MANAGER- BUSINESS PLNG	ENW
Danielle Carlson	Admin. Assistant	ENW.
David McClain	Equipment Operator	ENW
Steve Scammon	Resource Program Mgr	ENW
ALFred F. Klauss	alfred Klauss	WA ST. EMD
Johanna Berkey	WDOH REP	Wa St Health
RN Sherman	Nuclear Engineer	BPA
LORI WALLI	Admin. Assistant	ENW
NEIL ZIMMERMAN	RX. MAINTENANCE	ENW

NRC Public Meeting
January 8, 2004

NAME	TITLE	COMPANY
Greg Cullen	Quest for Excellence Program Mgr.	EN
Sajit Mand	Work Control Manager	EN
Tiege Borland	Rad Services Manager	EN
John Bekhasi	Maintenance Mgr.	EN
Robin L. Feuerbacher	Rx/Fuels Engineering Mgr.	EN
Bill LaFramboise	Technical Engineering Mgr	EN
Paul Inserra	System Engineering Mgr	EN
Brian Adami	Plant Modifications Mgr.	EN
Brian Tindell	Nuclear Safety Intern	NRC
Charles Marschall	Chief, Engineering Branch, Region IV	NRC
Dwight Chamberlain	Director, Div. of Reactor Safety, Reg. IV	NRC
Mark Satorius.	Deputy Director, Div. of Reactor Projects	NRC
Bill Jones	Chief, Projects Branch E, Region IV	NRC
ZACHARY DUNHAM	RESIDENT INSPECTOR	NRC

NRC Public Meeting
January 8, 2004

NAME	TITLE	COMPANY
Doug Coleman	Mgr, Regulatory Programs	ENW
DON FELDMAN	MGR, OPERATIONS	ENW
GARY WEIHER	MGR, PERFORMANCE MGMT.	ENW
Kerry Engbarth	Acting Mgr, Quality	ENW
Vic Parrish	CEO/CNO	ENW
Rod Wehring	VPNG	ENW
DALE ATKINSON	VP TECHNICAL SERVICES	ENW
Scott OXENFORD	PLANT GENERAL MGR	ENW
Mike Humphreys	Engineering General Mgr	ENW

ENCLOSURE 2

ENERGY NORTHWEST

People · Vision · Solutions

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**	Dwight Chamberlain
■ **ENERGY NORTHWEST**	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**	Dale Atkinson
■ **NRC**	Dwight Chamberlain
■ **PUBLIC COMMENTS/QUESTIONS**	

ENERGY NORTHWEST

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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 2nd Train of SGT	X			
203-3767	CAC System Capability	X	X		
203-3559	Failure to Walkdown MSRV 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

ENERGY NORTHWEST

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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

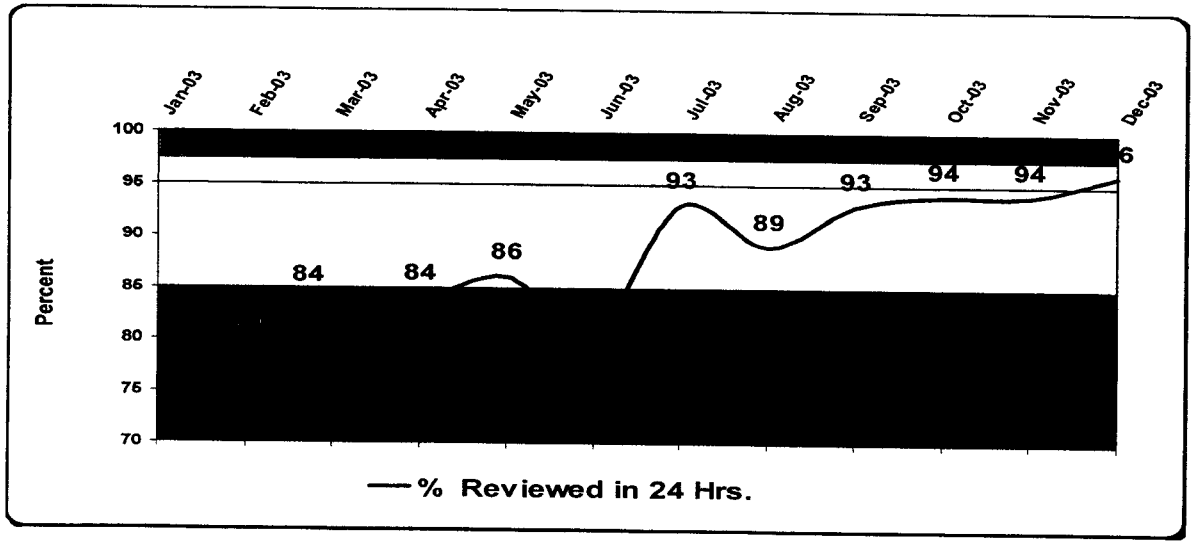
- Current trending performance
  - Bi-monthly trending meetings (started fall 2002)
  - Departments and PER Review Group initiating trend PERs
  - Results: More than 65 trend PERs in 2003
    - Safety
    - Radiation Protection
    - Equipment Performance

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

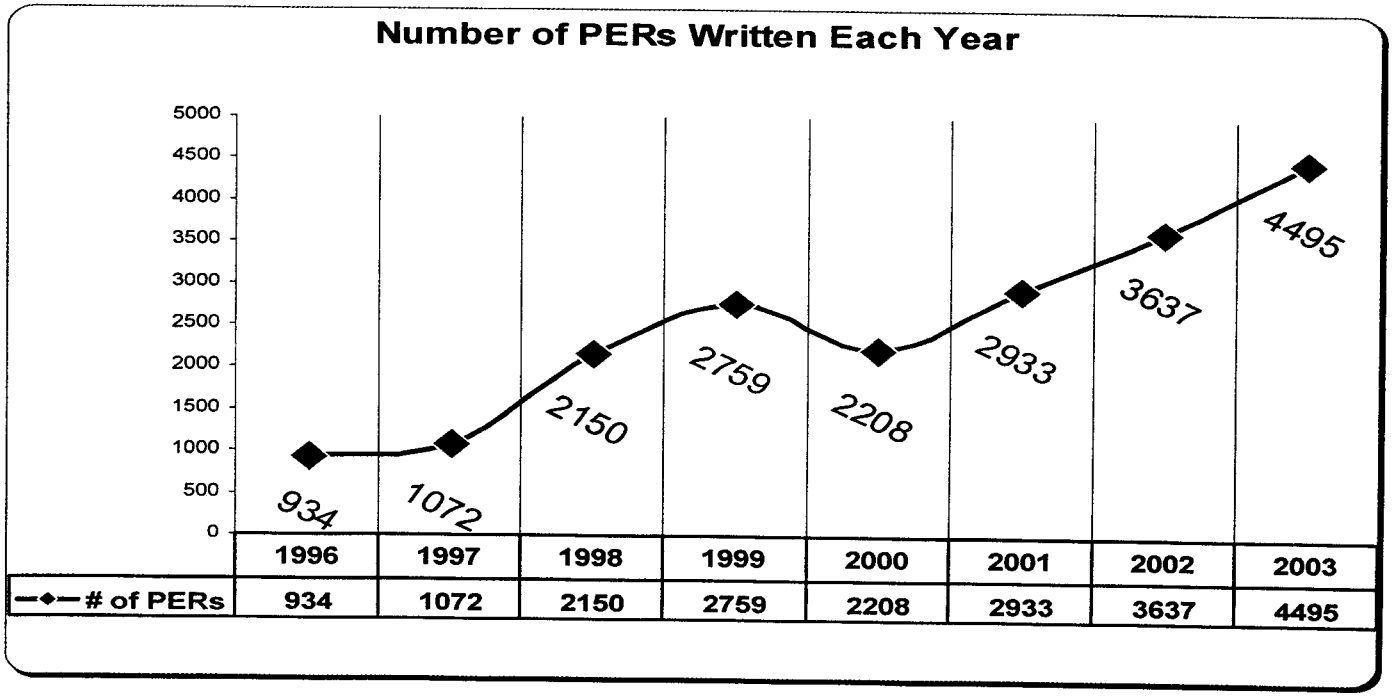
Performance Metrics

- 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



	1996	1997	1998	1999	2000	2001	2002	2003
—◆— # of PERs	934	1072	2150	2759	2208	2933	3637	4495

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 <u>quality</u> and <u>commitment</u>

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

ENERGY NORTHWEST

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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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Region IV

Public Comments Questions

Open Floor
(Last Slide)