



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-4005

April 18, 2006

Charles D. Naslund, Senior Vice
President and Chief Nuclear Officer
Union Electric Company
P.O. Box 620
Fulton, MO 65251

SUBJECT: SUMMARY OF MEETING WITH UNION ELECTRIC COMPANY REGARDING
CALLAWAY PLANT

Dear Mr. Naslund:

This refers to the public meeting conducted at the NRC Region IV office on April 13, 2006, by your staff. At this meeting, Ameren UE management discussed recent plant performance and various topics, including the steam generator and turbine rotor replacement outage, component design bases self assessment, equipment reliability issues and performance indicators, Alloy-600 mitigation plans and update on Callaway's containment sump modification for the 2007 spring outage.

The attendance list is enclosed with this summary (Enclosure 1). A copy of the presentation slides is also enclosed (Enclosure 2).

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response will be made 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,

/RA/

Jeff A. Clark, P.E., Chief
Engineering Branch 1
Division of Reactor Safety

Docket: 50-483
License: NPF-30

Union Electric Company

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 DRS Director (**DDC**)
 DRS Deputy Director (**RJC1**)
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 Branch Chief, DRP/B (**WBJ**)
 Senior Project Engineer, DRP/B (**RAK1**)
 Team Leader, DRP/TSS (**RLN1**)
 RITS Coordinator (**KEG**)

SUNSI Review Completed: Y No ADAMS: Yes No Initials: JPR
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REPLACE THIS LINE WITH FINAL LOCATION AND NAME OF FILE

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Enclosure 1

Meeting with Union Electric Company- Callaway Plant
Attendees

04/13/06 1:30-4:30 p.m.

<u>NAME</u>	<u>TITLE</u>	<u>ORGANIZATION</u>
G. Apger	Reactor Inspector	NRC/RIV/DRP
R. Caniano	Deputy Director, DRS	NRC/RIV/DRS
J. Clark	Branch Chief	NRC/RIV/EB1
F. Diya	Manager, Engineering Services	AmerenUE
T. Herrman	Vice President, Nuclear Engineering	AmerenUE
W. Jones	Branch Chief	NRC/RIV/PBB
R. Kopriva	Senior Project Engineer	NRC/RIV/PBB
B. Mallet	Regional Administrator	NRC/RIV
K. Mills	Supervising Engineer, Regional Regulatory Affairs	AmerenUE
D. Overland	Reactor Inspector	NRC/RIV/EB2
C. Paulk	Senior Reactor Inspector	NRC/RIV/EB1
G. Replogle	Senior Reactor Inspector	NRC/RIV/EB1
J. Reynoso	Reactor Inspector	NRC/RIV/EB1
S. Rutenkroger	Reactor Inspector	NRC/RIV/DRS
L. Smith	Branch Chief	NRC/RIV/EB2
K. Young	Manager, Regulatory Affairs	AmerenUE

Enclosure 2

Callaway Engineering Presentation
to NRC Region IV
Arlington, TX

April 13, 2006

Callaway Engineering Presentation to NRC Region IV

April 13, 2006

Arlington, TX

Introduction

Tim Herrmann

Callaway Plant

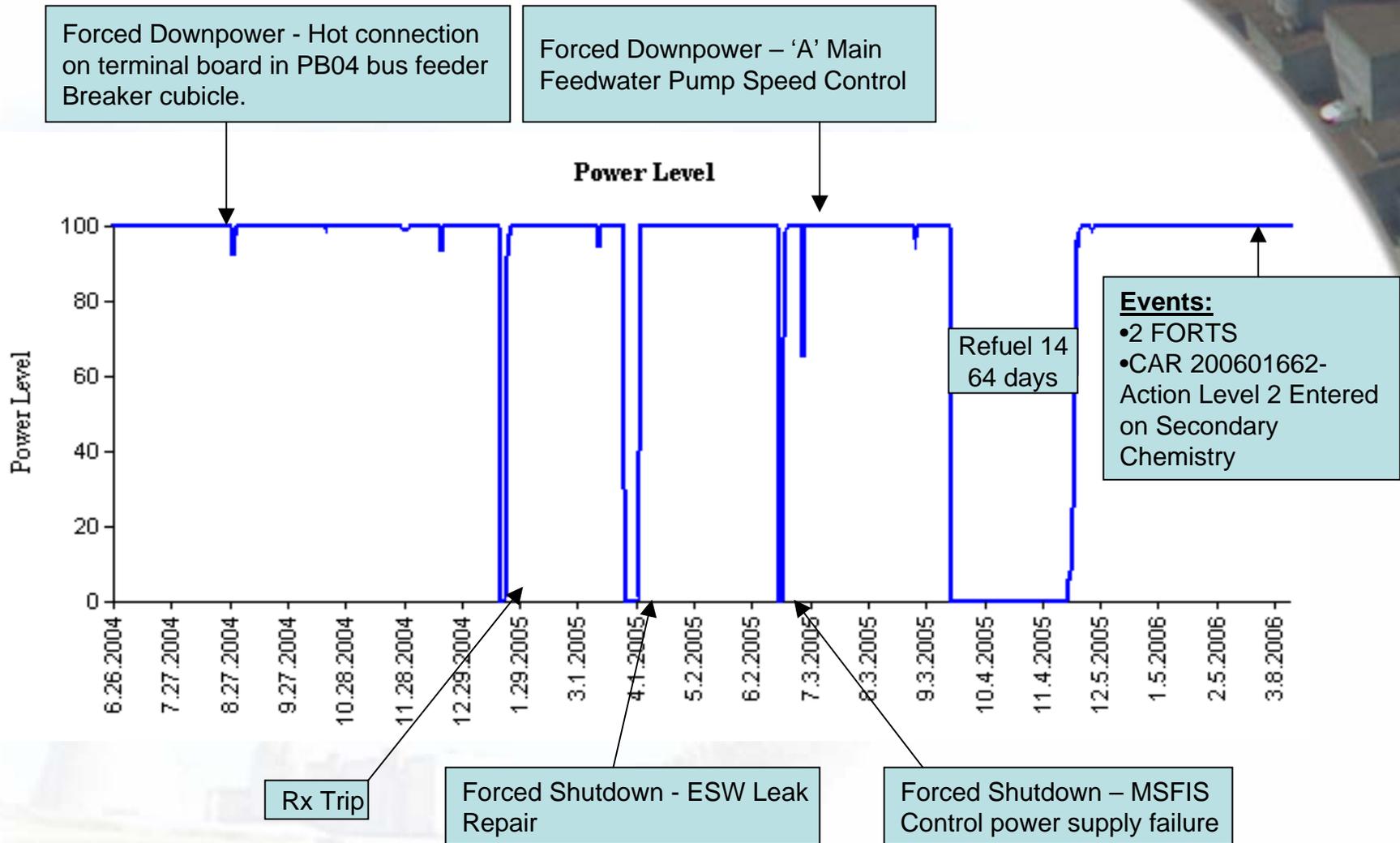
Callaway Plant Personnel

- Timothy Herrmann – Vice President, Engineering
- Fadi Diya – Manager, Engineering Services
- Keith Young – Manager, Regulatory Affairs
- Keith Mills – Supervising Engineer, Regional Regulatory Affairs / Safety Analysis

Agenda

- Introduction / Purpose
- Refuel 14 Engineering Successes / Challenges
- Component Design Bases Audit
- Equipment Reliability
- Alloy 600 Mitigation Plans
- Containment Sump Modification
- Questions / Discussion

Daily Average Power



Quality of Engineering Products

- Improved Quality and Technical Rigor
- Quality Review Teams:
 - Modifications
 - Calculations
 - Request For Resolution (RFR)
- Engineering Corrective Action Review Board (ECARB)
- Coaching Observations

Backlog Reduction

- Reduced Corrective Action Program (CAP) Backlog by 50% to About 112
- Reduced RFR Backlog by 30% to About 150
- Performance Review Groups (PRG), Management Review Meetings (MRM), and ECARB in Place:
 - Oversight of Quality and Backlog Reduction
- Work Real Time By Year End

Refuel 14 Engineering Successes and Challenges

Tim Herrmann

Refuel 14 Major Upgrades

- Major Component Replacements
 - Steam Generators
 - Turbine Rotors
- World Record 63.5 Day Refueling Outage
- All Design Objectives Met
- Operational Issues:
 - Gland Seal Rubs During Initial Roll-up of New Turbine Rotors

Refuel 14 Performance

- No Lost Time and 1 OSHA Recordable Injuries
- No Issues Resulting From Foreign Material:
 - No Fuel Defects
 - No Loose Parts
- Reviewed About 7000 Calculations
- Issued About 1000 New Calculations

Refuel 14 Emergent Issues

- Engineering Resolved 78 Equipment Emergent Issues
- Emergent Issues Included:
 - New Steam Generator Level Transmitter Unqualified Diode Replacement and Re-qualification
 - Condensate Storage Tank Floating Cover Seal Replacement
 - Containment Sump Valve Binding OE (Valves EJHV8811 A/B)
- Used Lessons Learned to Develop Emergent Issues Response Process

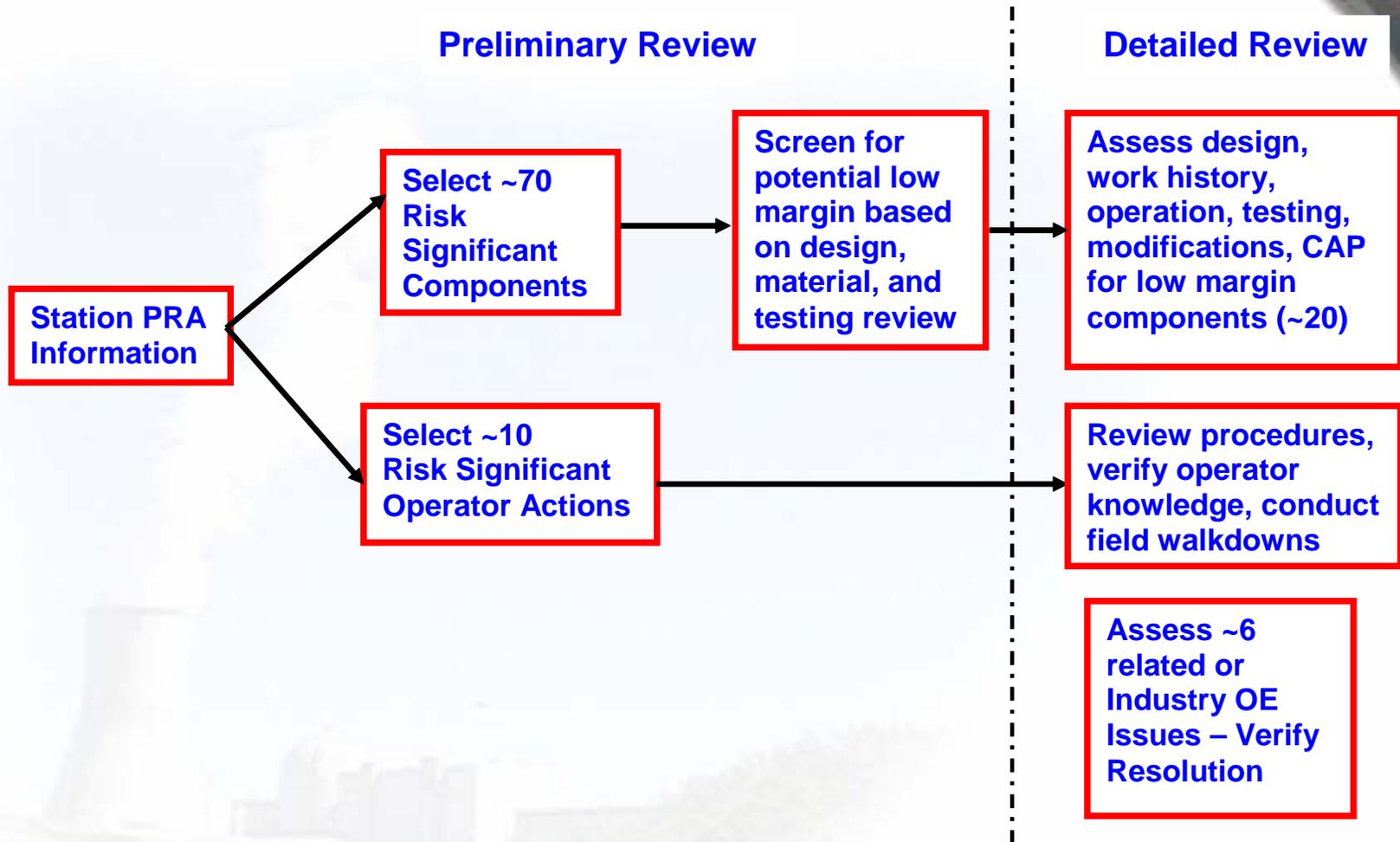
Component Design Bases Audit

Tim Herrmann

Component Design Bases Audit

- NRC IP 71111.21 Guidance Will Be Used
- High Risk Components and Operator Actions Will Be Assessed
- Scheduled June 5 to June 23, 2006
- Audit Team Members From Engineering, Operations, Safety Analysis, and Quality Assurance
- Consultants and Industry Peers Will Participate

Audit Process



Design Basis Consolidation Project

- Upper Level Design Bases Documents (ULDBD):
 - 40 Plant Systems
 - 7 Topical Areas
 - 5 Structures
- Electronic Format With Links
- Scheduled to Complete in 2008
- Some ULDBDs Will Be Ready to Support NRC Inspection

Equipment Reliability

Fadi Diya

Callaway Plant

Mitigating Systems Performance Index (MSPI) Proactive Response

- 2005 Preliminary Evaluation of At-Risk Systems
 - Auxiliary Feedwater (AFW)
 - Emergency AC Power (EAC)
- Entered Into Corrective Action Program and Formed Root Cause Team
- Root Causes:
 - Optimized Preventive Maintenance (PM) Program Not Implemented
 - Worker Practices
 - Management of Safety System Outages

Mitigating Systems Performance Index (MSPI) Proactive Response

- **Primary Actions Taken/Planned:**

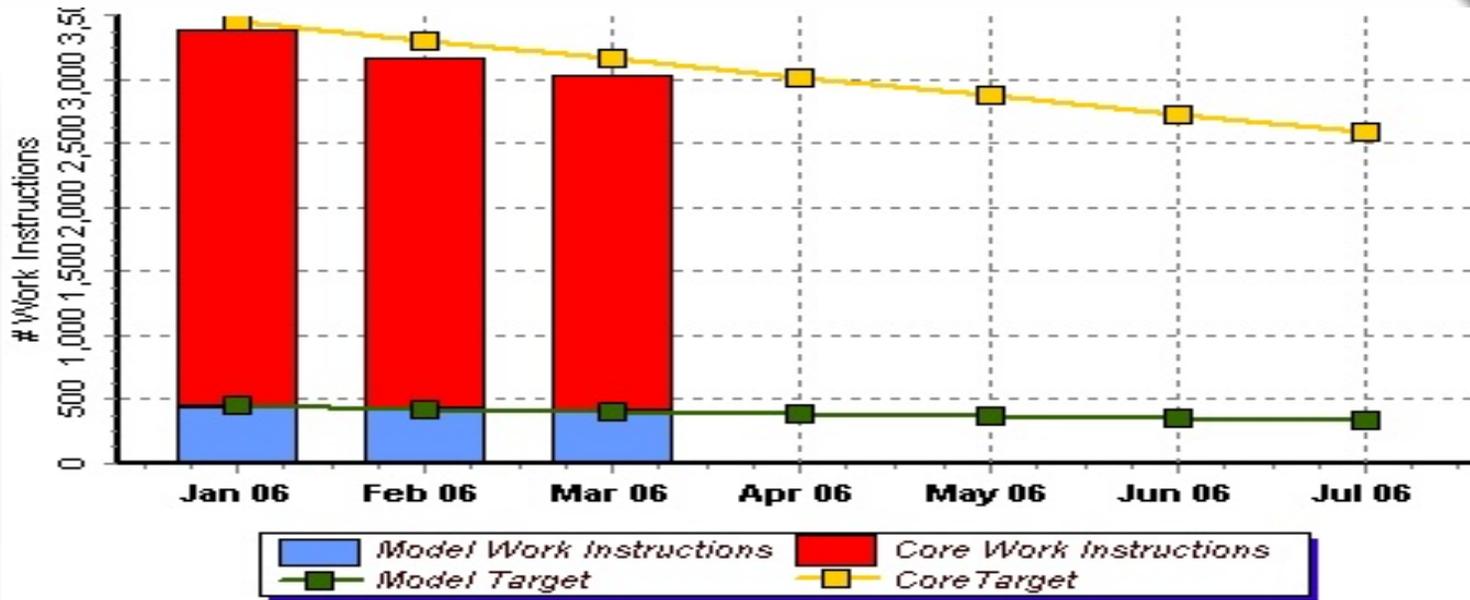
- Revised PMs For EAC System and Turbine Driven Auxiliary Feed Pump
- Revise PMs For Remainder of MSPI Systems
- Cycle-15 Strategies For Operational and Equipment Excellence (Approximately 40% Complete)
- Improve Training on Turbine Driven Auxiliary Feedwater Pump Controls (June 2006)
- Improve Training on Emergency Diesel Generator and Controls (June 2006)
- Develop Troubleshooting Plans For Known Auxiliary Feedwater and Emergency Diesel Generator Failure Modes (June 2006)
- Restructure the System Performance Teams (Complete For MSPI Systems)
- Continue Implementation of LCO Outage Management Improvements (In Progress)

MSPI

Auxiliary Feedwater

- Auxiliary Feedwater:
 - Turbine Driven Auxiliary Feedwater Pump Trip (2/3/2004, CARS 200400798)
 - ALHV0009 Overload Relay Would Not Reset During Troubleshooting (10/21/2004, CARS 200407892)
 - TDAFP Failed OSP-AL-P002 Due to FCFV0313 Valve Position Voltage (11/22/2004, CARS 200408693)

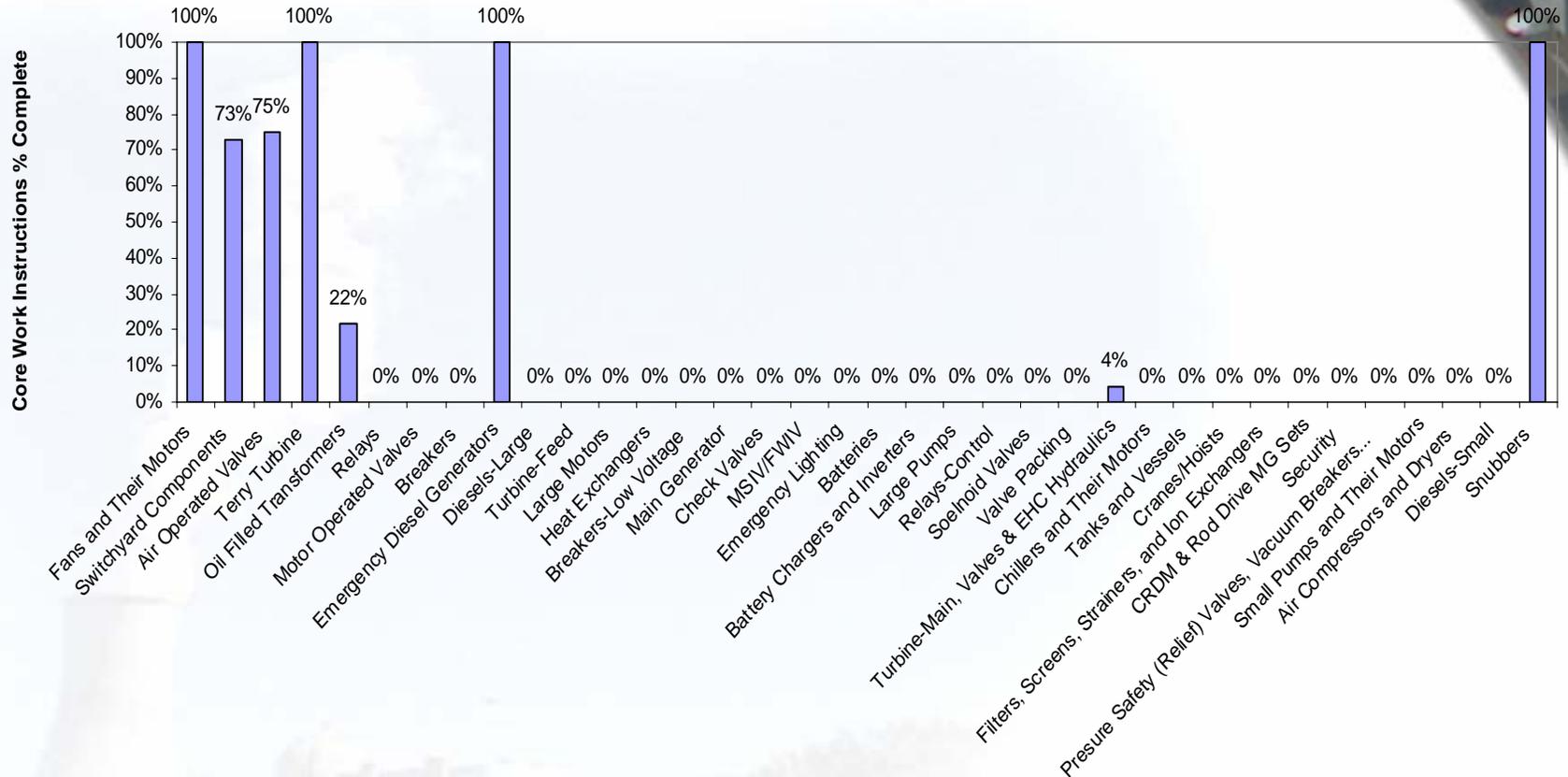
Preventive Maintenance Optimization



- Implementation of Industry-Standard Preventive Maintenance Bases to Improve Equipment Performance
- Revising PMs as Sequenced on Work Schedule
- 3-Year Window

Preventive Maintenance Optimization Implementation

MOI Status (as of 4/5/06)



Alloy 600 Mitigation Plans

Fadi Diya

Recent Information

- Refuel 14:
 - Pressurizer Alloy 600 Weld Profile Data Acquisition:
 - Five Steam Space Nozzle/Safe-end Welds
 - Surge Line
 - EPRI Analysis of Profile Data
 - January 2006 Less Than 90% Coverage
 - Weld Overlay Evaluation
 - January 2006

Refuel 15 Work Scope

- Mitigation/Inspection:
 - Steam Space: Weld Overlay and Inspection
 - Surge Line: Weld Overlay and Inspection
- Vendor Selection in Progress
- Scope Supports Outage Schedule Duration

Containment Sump Modification

Fadi Diya

Containment Recirculation Sump Modification

- Sump Strainers Increasing From 800 to 6400 Sq Ft Total Area
- Sump Float Type Level Instrumentation Being Changed to Differential Pressure Instrumentation
- Tri-Sodium Phosphate (TSP) Baskets Will Be Moved From Within Current Sump Enclosure and Redesigned
- Debris Barriers (Doors) Will Be Installed on 'A' and 'D' Loops
- Industry and Site Testing On-going
- Partnering with Wolf Creek Nuclear Operating Company
- Implementation in Refuel 15

Questions and Discussion