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

July 27, 2005

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

SUBJECT: SUMMARY OF MEETING CONCERNING CALLAWAY PLANT
PUBLIC MEETING ON JULY 20, 2005

Dear Mr. Naslund:

This refers to our meeting conducted at the NRC Region IV office in Arlington, Texas, on July 20, 2005. At this meeting, NRC and Ameren UE management discussed various topics, including the introduction of new plant management, Refueling Outage 14, which includes steam generator replacement, engineering initiatives, accomplishments and site improvement plan, and an update to the licensee's culture survey.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosures 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 B
Division of Reactor Projects

Docket: 50-483
License: NPF-30

Enclosures:
1. Attendance List
2. Presentation Slides

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

SISP Review Completed: ___ ADAMS: ☑ Yes ☐ No Initials: ___
☑ Publicly Available ☐ Non-Publicly Available ☐ Sensitive ☑ Non-Sensitive

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RAKopriva;df	WBJones			
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OFFICIAL RECORD COPY T=Telephone E=E-mail F=Fax

ENCLOSURE 1

END-OF-CYCLE MEETING ATTENDANCE

LICENSEE/FACILITY	AMEREN UE / Callaway Plant
DATE/TIME	July 20, 2005 - 9:00 am
LOCATION	U. S. Nuclear Regulatory Commission Region IV 611 Ryan Plaza Drive Suite 400 Arlington, Texas 76011

NAME (PLEASE PRINT)	ORGANIZATION
Bruce S. Mallett	NRC, Region IV
DWIGHT D. CHAMBERLAIN	NRC, REGION IV
A. Vegel	NRC, RIV
W. Jones	NRC/RIV
C. Stancil	NRC/RIV
R. Kopriva	NRC/RIV
Michael Peck	NRC/RIV
LINDA SMITH	NRC/RIV
RON KOPRIVA	NRC/RIV

END-OF-CYCLE MEETING ATTENDANCE

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NAME (PLEASE PRINT)	ORGANIZATION
Charles Naslund	Ameren UE - Callaway Plant
Adam Heflin	Ameren UE - Callaway Plant
Ludwig Thibault	AUE - Callaway
Tod Moser	Ameren UE - Callaway
Keith Young	Ameren UE - Callaway Plant
Mark Reidmeyer	Ameren UE - Callaway Plant
Daniel Wingbermuehle	Ameren UE - Callaway Plant

ENCLOSURE 2

Public Meeting
AmerenUE-Callaway Plant

NRC Region IV

July 20, 2005

Ameren UE

Introduction

- Chuck Naslund
  Senior Vice President & Chief Nuclear Officer
- Adam Heflin
  Vice President-Nuclear
- L. E. (T-Bow) Thibault
  General Plant Manager
- Dan Wingbermuehle
  Outage Shift Manager
- Keith Young
  Manager, Regulatory Affairs
- Tod Moser
  Manager, Plant Engineering
- Mark Reidmeyer
  Supervisor, Regional Regulatory Affairs

Ameren UE

Agenda

- Introduction and Organization
  - C. D. Naslund
- Refuel 14 Overview
  - D. T. Wingbermuehle
- Substantive Cross-Cutting Issues
  - K. D. Young
- Engineering Initiatives
  - T. A. Moser
- Accomplishments/Turnaround Plan
  - L. E. (T-Bow) Thibault
- Culture Survey
  - K. D. Young
- Closing Remarks
  - C. D. Naslund

Ameren UE

Refuel 14 Overview

Daniel T. Wingbermuehle
Outage Shift Manager

Refuel 14 Overview

REFUEL 14 - A Journey to the Top & Beyond

Vision: Excellence in Outage Implementation

Mission: Perform Refuel 14 Event Free, on Time, on Budget

Refuel 14 Overview

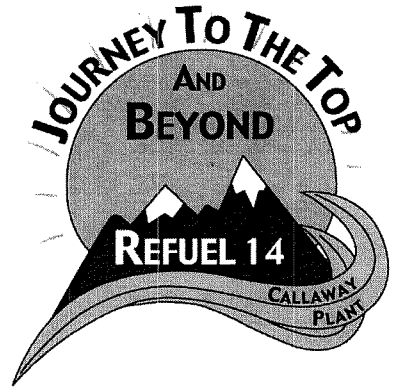
Goals:

- No Events
- Outage Duration meets Schedule
- Radiation Exposure less than ALARA Projections
- Outage Cost meets Budget
- Breaker-to-Breaker Run

Refuel 14 Overview

- Steam Generator Replacement (SGR)
- Main Turbine Rotor Replacement
- Hot Shorts – Motor Operated Valves
- Essential Service Water (ESW) Work
- Condenser Offgas Exhaust Dampers
- Emergency Diesel Generator Overhaul
- Switchyard Modification

Ameren UE



Refuel 14 Overview

Outage Schedule Duration
Mid-September – Mid-November 2005

- **Phase 1**: Plant Shutdown & Offload Complete
- **Phase 2**: Steam Generator Replacement, Main Turbine Work
- **Phase 3**: Core Reload, Plant Start-up and Return to Power Operations
- Defense In Depth assured by Shutdown Safety Assessment

Refuel 14 Overview

Outage Improvements:

- Realistic Schedule
- Self-Assessment
- Business Unit Representatives
- INPO Outage Management Assist Visit
- APA-ZZ-00150, *Outage Preparation & Execution*
- High Impact Teams (HIT)
- Project Management & Risk Assessment Training
- Make It Happen Managers

Refuel 14 Overview

RF 14 - A Journey to the Top & Beyond

Vision: Excellence in Outage Implementation

Mission: Perform Refuel 14 Event Free, on Time, on Budget

Questions?

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Cross-Cutting Issues

Keith D. Young
Manager, Regulatory Affairs

Ameren UE

Substantive Cross-Cutting Issues

- Increasing number of findings identified as having cross-cutting aspects
- Some findings identified as having multiple cross-cutting aspects for the same issue
- Criteria for assigning cross-cutting appears to be subjective
- Threshold is unclear

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Communications

- Restriction on periods of engagement with Region management limit opportunities for meaningful dialogue
- Restricting open communications between NRC and licensees doesn't appear to serve the interest of resolving the issue

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Engineering Initiatives

Tod A. Moser
Manager, Plant Engineering

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Auxiliary Feedwater System

- Maintenance Rule a(1) due to past performance issues
  - Approved performance monitoring plan
  - Recent system performance is good
  - System Health trend improving
  - Recent performance of the Turbine Driven Auxiliary Feedwater Pump (TDAFP) has been good

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Auxiliary Feedwater Reliability Assessment

- Purpose was to independently assess Auxiliary Feedwater System (AFW) reliability
- MPR Associates, Inc. was contracted to complete the AFW study
  - MPR Associates, Inc. previously completed PWR AFW assessments at D. C. Cook, Byron, Braidwood, TMI, Crystal River, and Davis-Besse

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Auxiliary Feedwater Reliability Assessment

- Significant Conclusions:
  - AFW system is in good materiel condition
  - Reliability problems have been resolved
  - Maintenance is improved
  - System Health issues are effectively managed
  - High confidence that the AFW system will perform all design functions

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Auxiliary Feedwater Reliability Assessment

- Recommendations:
  - TDAFP surveillance testing
  - Trip and throttle valve inspections
  - Condensate Storage Tank (CST) buried piping
  - Motor-Driven Auxiliary Feedwater Pump (MDAFP) flow control valve testing
  - MDAFP Automatic Recirculation Control (ARC) valve inspections

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Auxiliary Feedwater Reliability Assessment

- Recommendations (continued):
  - Improve governor tuning procedures
  - Develop analytical model of the turbine driver and control system
  - Develop analytical model of the MDAFP flow control valves
  - Complete maintenance optimization
  - Perform an Equipment Reliability Self-Assessment

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Engineering Technical Rigor

- Quality Review Teams
- Engineering Fundamental Expectations
- Engineering Human Performance Tools
- Trending of Engineering Performance
- Post-Modification Testing

Engineering Training

- Callaway Training Excellence Plan
- Improved Qualification Process
  - New Qualification Standards
  - Mentoring Process
- Performance Analysis Worksheet
- Training Matrix Software

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Design Basis Information

- Configuration Management Database
- Engineering Change Process
- Design Basis Engineer
- Training
- Design Basis Documents

Turnaround Plan

L. E. (T-Bow) Thibault

General Plant Manager

Ameren UE

Turnaround Plan Direction

- NO EVENTS
- Solid Worker Practices
- Effective Processes
- Meet or Exceed Industry Standards

Mission: To safely, reliably, and efficiently generate electricity.

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Turnaround Plan Focus Areas

- **Operational Focus**
  - Achieve performance excellence and strive to eliminate plant events
- **Worker Practices**
  - Establish and reinforce high standards to effectively prevent events
- **Equipment Reliability**
  - Establish plant and equipment reliability to support event-free breaker to breaker operation
- **Refuel 14**
  - Meet outage preparation milestones and complete the outage event-free per the established schedule and budget

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Turnaround Plan Accomplishments

Operational Focus:

- Reactivity Management improved
- Implemented new Operational Decision Making Process
- Work Control Center established
- Emergency Operating Procedures are industry standard
- 12-Hour Shifts

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Turnaround Plan Accomplishments

Worker Practices:

- Significant investment
- Established a sense of urgency/burning platform
- Engaging workforce to implement the plan
- Field Observations and Coaching for Performance

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Turnaround Plan Accomplishments

Equipment Reliability:

- Prevent/Predict/Detect
- Preventive Maintenance (PM) Bases developed for Maintenance Optimization
- Improved the design modification process
  - Quality Review Team
- Maintenance Feedback

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Turnaround Plan Accomplishments

Refuel 14:

- "Defense in Depth" Scheduling
- Project Risk Assessments completed for all projects
- Two fulltime Outage Shift Manager positions
- Vertical Slice Schedule Review in August

Turnaround Plan Accomplishments

Other Initiatives:

- Comprehensive Training Improvement Efforts

Culture Survey

Keith D. Young

Manager, Regulatory Affairs

Ameren UE

Closing Remarks

Chuck Naslund

Senior Vice President & Chief Nuclear Officer

Ameren UE

- **Our Mission:**

To Safely, Reliably, and Efficiently Generate Electricity

- **Our Vision:**

To be THE Performance Leader in the Nuclear Industry