



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

April 30, 2007

John Herron, Senior Vice President  
Entergy Operations, Inc.  
P.O. Box 31995  
Jackson, Mississippi 39286-1995

SUBJECT: NRC/ENTERGY OPERATIONS, INC. MANAGEMENT MEETING

Dear Mr. Herron:

This refers to our meeting conducted at the NRC Region IV office, in Arlington, Texas, on April 26, 2007. At this meeting, NRC and Entergy management discussed the performance of Arkansas Nuclear One, Cooper Nuclear Station, Grand Gulf Nuclear Station, River Bend Station, and the Waterford Steam Electric Station, Unit 3. Recent Entergy organizational changes and current regulatory issues were also discussed, as indicated in the enclosed slide presentations.

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,

Michael C. Hay, Chief  
Project Branch C

Dockets:

ANO: 50-313; 50-368  
CNS: 50-298  
GG: 50-416  
RBS: 50-458  
WAT: 50-382

Licenses:

ANO: DPR-51; NPF-6

CNS: DPR-46

GG: NPF-29

RBS: NPF-47

WAT: NPF-38

Enclosures:

1. Attendance List
2. Presentation Slides

cc w/Enclosure:

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### NRC PUBLIC MEETING ATTENDANCE

|                            |  |
|----------------------------|--|
| <b>LICENSEE/FACILITY</b>   | Entergy Operations, Inc.                     |
| <b>DATE/TIME</b>           | April 26, 2007; 8:30 (CST)                   |
| <b>LOCATION</b>            | Training Conference Room<br>Region IV Office |
| <b>NAME (PLEASE PRINT)</b> | <b>ORGANIZATION</b>                          |
| WAYNE WALKER               | US NRC - RIV                                 |
| Ray Powell                 | US NRC - RI                                  |
| Tim Mitchell               | Entergy                                      |
| Rick Doese                 | NRC - RIV                                    |
| Michael Hay                | NRC  |
| SB Minahan                 | Entergy                                      |
| Scott Schwind              | NRC  |
| Dub Barfield               | Entergy                                      |
| John McCann                | Entergy                                      |
| Bruce C. Williams          | Entergy                                      |
| Jeff Forbes                | Entergy                                      |
| John T. Herron             | Entergy                                      |
| Bruce S. Mallett           | NRC - RIV                                    |

**NRC PUBLIC MEETING ATTENDANCE**

|                            |  |
|----------------------------|--|
| <b>LICENSEE/FACILITY</b>   | Entergy Operations, Inc.                     |
| <b>DATE/TIME</b>           | April 26, 2007; 8:30 (CST)                   |
| <b>LOCATION</b>            | Training Conference Room<br>Region IV Office |
| <b>NAME (PLEASE PRINT)</b> | <b>ORGANIZATION</b>                          |
| Arthur T. Howell III       | USNRC, RIV - DRP                             |
| DWIGHT D. CHAMBERLAIN      | NRC, RIV - ORS                               |
| Roy J. Caniano             | NRC, RIV - ORS                               |
| Jeffrey Clark              | NRC, RIV - DRP                               |
| Tom Hiltz                  | NRC, DORL, LPLA                              |
| GEORGEY MILLER             | NRC / RIV / DRP / C                          |
| Russ BRIAN                 | Entergy                                      |
| Michael O. Miller          | NRC / RIV / DRP / C                          |
| Joe Venable                | Entergy                                      |
| Grant Larkin               | NRC, RIV, SRI, W3                            |
| Kern Walsh                 | Entergy.                                     |
| George Roplogle            | USNRC, RIV - DRP                             |

**2007 EOI/NRC  
Senior Management Meeting  
April 26, 2007**



**EOI - NRC MEETING AGENDA  
APRIL 26, 2007**

|             |                               |                              |
|-------------|-------------------------------|------------------------------|
| 8:30-8:45   | Introduction, Objectives      | Bruce Mallet<br>Jeff Forbes  |
| 8:45-9:15   | Opening Remarks<br>NRC<br>EOI | Bruce Mallet<br>John Herron  |
| 9:15-9:45   | Alignment Overview            | John Herron<br>Jeff Forbes   |
| 9:45-9:55   | Break                         |                              |
| 9:55-10:35  | Plant Presentations - ANO     | Rick Deese<br>Tim Mitchell   |
| 10:35-11:15 | Plant Presentations - CNS     | Scott Schwind<br>Stu Minahan |
| 11:15-12:15 | LUNCH                         |                              |



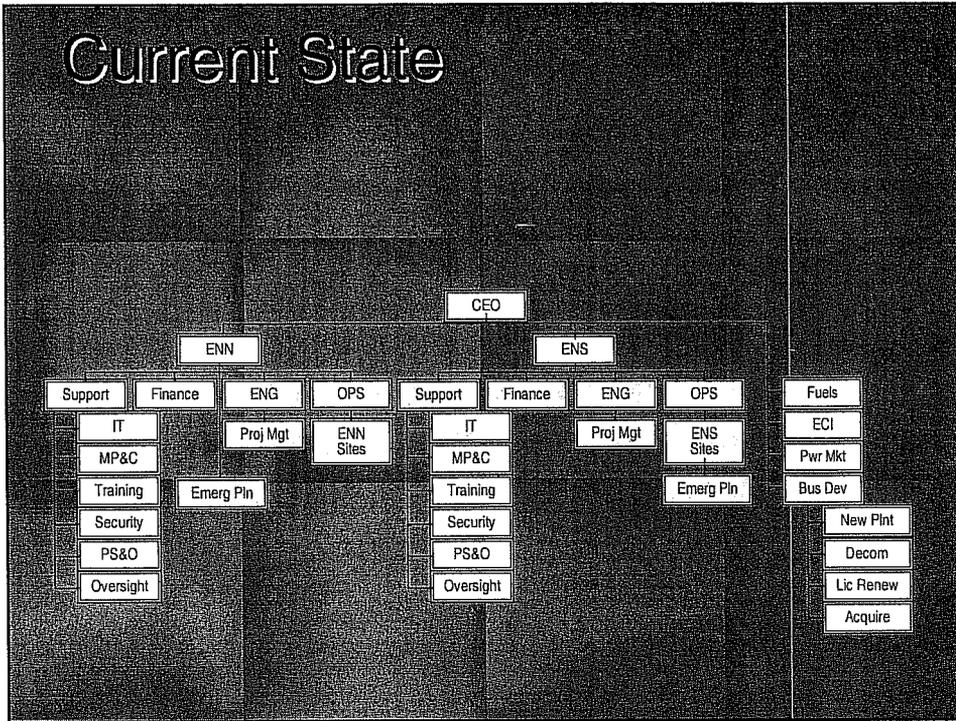
**EOI - NRC MEETING AGENDA**  
**APRIL 26, 2007**  
**(cont'd)**

|             |                           |                             |
|-------------|---------------------------|-----------------------------|
| 12:15-12:55 | Plant Presentations - GG  | Geoff Miller<br>Russ Brian  |
| 12:55-1:35  | Plant Presentations - RBS | Mike Miller<br>Joe Venable  |
| 1:35-2:05   | Plant Presentations - W3  | Grant Larkin<br>Kevin Walsh |
| 2:05-2:15   | BREAK                     |                             |
| 2:15-3:30   | Open Discussion           | Bruce Mallet<br>Jeff Forbes |
| 3:30-4:00   | Closing Remarks           |                             |
| 4:00        | Adjourn                   |                             |

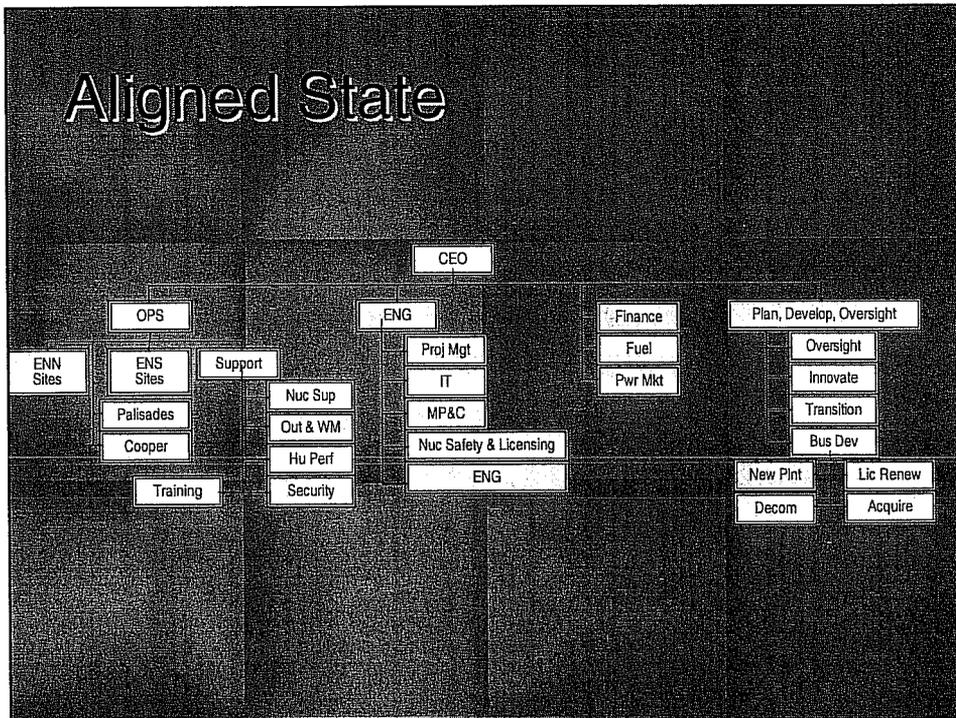


**Alignment**

# Current State



# Aligned State



# **ARKANSAS NUCLEAR ONE PERFORMANCE INSIGHTS**

**Presented by Rick Deese  
Senior Resident Inspector  
Arkansas Nuclear One**



## **PERFORMANCE INSIGHTS**

- **Unit 2 Operations Human Performance Issues**
- **Fire Protection Related Issues**
- **Procedure Quality**
- **Design Control**



## **Unit 2 Operations Human Performance Issues**

- **Draindown in Mode 5**
- **Emergency Feedwater Drain Valves**
- **Reactor Coolant System Sample Valves**
- **Controlled Bleed Off Line Leak**
- **Intake Structure Ventilation Temperature Tracking**



## **Fire Protection Related Issues**

- **Small Fire in Unit 2 Containment**
- **Unit 2 Continuous Fire Watch**
- **Unit 1 RCP Oil Collection System**
- **Fire Doors**



## **Procedure Quality**

- **Unit 2 Dropped Control Element Assembly**
- **Unit 1 Reactor Trip in December 2005**
- **Unit 2 Loss of Component Cooling Water**
- **Intermediate Cooling Water Pump Trip**



## **Design Control**

- **Unit 1 Initiation of Emergency Feedwater**
- **Unit 1 Main Feedwater Pump Trip**
- **Motor Control Center Fire**



## Arkansas Nuclear One

**Tim Mitchell**

Site Vice President, Operations

**Rick Deese**

NRC Region IV, Senior Resident



## Issues / Challenges

- 1R20
- Equipment Reliability
- Human Performance



## **Results / Accomplishments**

- Equipment Reliability
- Leadership Effectiveness
- ALARA Improvement
- Corrective Action Program (CAP) Improvements



## **COOPER NUCLEAR STATION PERFORMANCE INSIGHTS**

**Presented by  
Scott Schwind  
Senior Resident Inspector  
Cooper Nuclear Station**



## **PERFORMANCE INSIGHTS**

- **Equipment Reliability**
- **Human Performance**
- **Events**



## **EQUIPMENT RELIABILITY**

- **Emergency Diesel Generators**
- **Instrumentation and Controls Equipment**



## **HUMAN PERFORMANCE**

- **Control Rod Mispositioning**
- **Main Steam Line Water Hammer**
- **Operation Above Rated Core Flow**



## **EVENTS**

- **Scram/Transient due to Modifications**
- **Electrical Equipment Fires**
- **Personnel Contamination Events**



## Cooper Nuclear Station

### **Stu Minahan**

Site Vice President, Operations

### **Scott Schwind**

NRC Region IV, Senior Resident



## **Issues / Challenges**

- Substantive Cross-Cutting Issue
- Diesel Generator Reliability
- Work Execution
- Future Outage Performance



## **Results / Accomplishments**

- Intake Performance
- Operations Program Accreditation
- Source Term Reduction
- RF-23 Performance



## **GRAND GULF NUCLEAR STATION PERFORMANCE INSIGHTS**

**Presented by Geoff Miller  
Senior Resident Inspector  
Grand Gulf Nuclear Station**



## **PERFORMANCE INSIGHTS**

- **Human Performance**
- **Operational Decision Making**
- **Diesel Generator Reliability**
- **Events**



## **HUMAN PERFORMANCE**

- **Safeguards Switchgear Ventilation (Z77)**
- **Standby Service Water Flow Orifices**
- **Recirculation Pump Shift**
- **Control Room Panel Bulb Replacement**



## **OPERATIONAL DECISION MAKING**

- **Operability Evaluations**
  - **Safeguards Switchgear Ventilation**
  - **Division 3 Battery Cable**
  - **Division 1 Diesel Generator TCV**
- **Gagged Open Containment Isolation Valve**



## **DIESEL GENERATOR RELIABILITY**

- **Two Special Inspections in Past Year**
  - **Division 1 EDG Exhaust Valve Failure**
  - **Division 1 EDG Temperature Control Valve Failures**
- **Division 3 EDG Bearing Oil**



## EVENTS

- **Bus Duct Cooling System Failure**
- **Reactor Feed Pump Trip / Loss of Feedwater Heating (INFI-90 Controls)**



## Grand Gulf

**Russ Brian**

Vice President, Operations

**Geoff Miller**

NRC Region IV, Senior Resident



## **Issues / Challenges**

- Human Performance
- Diesel Generator
- Operability Improvements
- Long Term Assets



## **Results / Accomplishments**

- RF15 Outage
- Margin Recovery
- Dry Fuel Storage
- Equipment Reliability



# **RIVER BEND STATION PERFORMANCE INSIGHTS**

**Presented by  
Mike Miller  
Resident Inspector  
River Bend Station**



## **PERFORMANCE INSIGHTS**

- **Problem Identification & Resolution**
- **Human Performance**
- **Equipment Performance**
- **Events**



## **PROBLEM IDENTIFICATION AND RESOLUTION**

- **Identification, Evaluation, and Correction of Problems**



## **HUMAN PERFORMANCE**

- **Operations Performance**
- **Error Prevention Techniques**
- **Procedure Adequacy**



## **EQUIPMENT PERFORMANCE**

- **Reactor Water Clean-up System Valves**
- **Service Water Cooling Tower Structural Integrity**
- **Circulating Water and Main Condenser**
- **Reactor Core Isolation Cooling**



## **EVENTS**

- **Scrams/Transient Due To Equipment Failures**



## River Bend Station

**Joseph E. Venable**

Sr. Vice President, Operations

Mike Miller

NRC Region IV, Resident Inspector



## Issues / Challenges

- Cross-cutting Issues
- Operations Staffing
- Reliability Strategy



## **Results / Accomplishments**

- RF-13
- Dry Cask Storage
- Work Order Backlog
- Operations Pipeline



## **WATERFORD 3 PERFORMANCE INSIGHTS**

**Presented by Grant Larkin  
Senior Resident Inspector  
Waterford Steam Electric Station  
Unit 3**



## **Performance Insights**

- **Corrective Actions**
- **Procedures**
- **Design Control**



## **Corrective Action Challenges**

- **Full Qualification of the EDG Starting Air System**
- **Steam Generator Batwing Support**
- **SI-405B**



## **Procedure Issues**

- **ESFAS Relay Replacement**
- **Eddy Current Testing of Essential Chiller Condenser Tubing**
- **Pressurizer Skirt Bolt Torque Requirements**



## **Design Control**

- **RCS Leak Detection System**



## Waterford 3

**Kevin T. Walsh**

Site Vice President, Operations

**Grant F. Larkin**

NRC Region IV, Senior Resident



## Issues / Challenges

- Steam Generator Batwings and Reactor Coolant System leakage
- Human Performance Improvement
- Continued Emphasis on Corrective Action
- Mid Cycle Outage (November 2007)
- Refuel 15 Outage (Spring 2008)



## Results / Accomplishments

- 2006 Safety Performance
- RF 14 System Health Improvements
- Operations Accreditation Renewal



## **TOPICS FOR PERSPECTIVE DISCUSSIONS**

- **Perspectives on How Cross-Cutting Issue Process is Working in ROP**
- **Safety Conscious Work Environment Initiatives**
- **Contractor Oversight**



## **TOPICS FOR PERSPECTIVE DISCUSSIONS (CONT'D)**

- **Equipment Reliability/Equipment Aging Management**
- **Operator Performance**
- **Communications**
- **Feedback to the NRC**

