



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

July 9, 2007

Joseph E. Venable  
Vice President of Operations  
Entergy Operations, Inc.  
River Bend Station  
5485 US Highway 61N  
St. Francisville, LA 70775

SUBJECT: MEETING SUMMARY - DISCUSSION OF RIVER BEND STATION PLANS FOR  
IMPROVING HUMAN PERFORMANCE AND CORRECTIVE ACTION PROGRAM

Dear Mr. Venable:

This refers to the meeting conducted at the NRC Region IV Office, Arlington, Texas, on July 5, 2007. The purpose of the meeting was to provide you an opportunity to present to the NRC your plans for improving performance in the areas of human performance and the corrective action program. Additional topics discussed included operational excellence initiatives, equipment reliability, and work management execution. The meeting attendance list and a copy of the presentation are included as Enclosures 1 and 2.

In accordance with Section 2.390 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, a copy of this letter and its enclosures will be available electronically for public inspection in the NRC's Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Webb 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,

A handwritten signature in black ink that reads "Michael C. Hay".

Michael C. Hay, Chief  
Project Branch C  
Division of Reactor Projects

Docket: 50-458  
License: NPF-47

Enclosures:

1. Attendance List
2. Licensee Presentation Slides

Entergy Operations, Inc.

- 2 -

cc w/enclosures:  
Executive Vice President and  
Chief Operating Officer  
Entergy Operations, Inc.  
P.O. Box 31995  
Jackson, MS 39286-1995

Richard Penrod, Senior Environmental  
Scientist, State Liaison Officer  
Office of Environmental Services  
Northwestern State University  
Russell Hall, Room 201  
Natchitoches, LA 71497

Vice President  
Operations Support  
Entergy Operations, Inc.  
P.O. Box 31995  
Jackson, MS 39286-1995

Brian Almon  
Public Utility Commission  
William B. Travis Building  
P.O. Box 13326  
1701 North Congress Avenue  
Austin, TX 78701-3326

General Manager  
Plant Operations  
Entergy Operations, Inc.  
River Bend Station  
5485 US Highway 61N  
St. Francisville, LA 70775

Jim Calloway  
Public Utility Commission of Texas  
1701 N. Congress Avenue  
Austin, TX 78711-3326

Director, Nuclear Safety & Licensing  
Entergy Operations, Inc.  
1340 Echelon Parkway  
Jackson, MS 39213-8298

Lisa R. Hammond, Chief  
Technological Hazards Branch  
National Preparedness Division.  
FEMA Region VI  
800 N. Loop 288  
Denton, TX 76209

Manager, Licensing  
Entergy Operations, Inc.  
River Bend Station  
5485 US Highway 61N  
St. Francisville, LA 70775

The Honorable Charles C. Foti, Jr.  
Attorney General  
Department of Justice  
State of Louisiana  
P.O. Box 94095  
Baton Rouge, LA 70804-9005

H. Anne Plettinger  
3456 Villa Rose Drive  
Baton Rouge, LA 70806

Bert Babers, President  
West Feliciana Parish Police Jury  
P.O. Box 1921  
St. Francisville, LA 70775

**NRC PUBLIC MEETING ATTENDANCE**

<b>LICENSEE/FACILITY</b>	Entergy Operations, Inc. River Bend Station
<b>DATE/TIME</b>	July 5, 2007; 1:00 p.m. (CDT)
<b>LOCATION</b>	Executive Conference Room Region IV Office
<b>NAME (PLEASE PRINT)</b>	<b>ORGANIZATION</b>
WAYNE C. WALKER	US NRC / RIV
Sailesh Lakdawale	Comanche Peak TXM
James Gallman	" "
A Vogel	NRC
T. P. Gwynn	Deputy Regional Administrator
Roy Gwiano	Deputy Director DRS RTV
Michael C. Hay	US NRC

**NRC PUBLIC MEETING ATTENDANCE**

<b>LICENSEE/FACILITY</b>	Entergy Operations, Inc. River Bend Station
<b>DATE/TIME</b>	July 5, 2007; 1:00 p.m. (CDT)
<b>LOCATION</b>	Executive Conference Room Region IV Office
<b>NAME (PLEASE PRINT)</b>	<b>ORGANIZATION</b>
Serry C Roberts	Entergy River Bend
Eric Olson	Entergy/River Bend
Joe Venable	Entergy, RBS
Chris Forpahl	Entergy, RBS
Jay Miller	Entergy, RBS
Phil Russell	ENTERGY, RBS
Dennis Wiles	Entergy, RBS
Bill DAM	ASD Engineers & Consultants, Inc.
John Mlatychick	NRC/RIV/DRS/EBZ
Michael Miller	NRC - SRS - RBS

**River Bend Station's  
Status of Substantive Cross-cutting  
Issues  
July 5<sup>th</sup>, 2007**

Joe Venable  
Sr. Vice President, Operations

**Agenda**

- ◆ Objectives Jerry Roberts, Dir. NSA
- ◆ PI&R Chris Forpahl, Mgr CA&A
- ◆ HU Performance Eric Olson, GMPO
- ◆ Sustained Performance Joe Venable, Sr. VP

**Objectives**

Jerry Roberts  
Director, NSA

**Objectives**

- ◆ Provide Status of RBS' Cross-cutting Issues:
  - PI&R - Problem Identification
    - ◆ Actions and results achieved
  - Human Performance - Error Prevention Techniques
    - ◆ Causal determination results and actions to address issue
- ◆ Share our strategy for sustained high performance

**PIR Cross-Cutting  
Issue**

Chris Forpahl  
Manager, Corrective  
Action & Assessments

**PIR Cross-Cutting Issue  
Common Cause Results**

.....The Issue.....

- ◆ Predominant Common Causes
  - Not aggressively pursuing to resolution
  - Initial problem diagnosis not identifying/misdiagnosing the problem

## Resolution - PIR Cross-Cutting Issue

.....ORGANIZATIONAL ALIGNMENT.....

- ◆ Key Corrective Actions
  - Set & Communicated Expectations
    - ◆ Focus on behavioral changes
    - ◆ Awareness/sensitivity toward risk
    - ◆ Personnel Training
      - Problem Diagnosis
      - Thought Process/mindset

## Resolution - PIR Cross-Cutting Issue

.....ORGANIZATIONAL ALIGNMENT.....

- ◆ Process Changes
  - Emergent Issues Checklist
  - Improved CRG oversight of risk sensitive CRs
  - Department Performance Improvement Coordinators
- ◆ Alignment of Site Management Team—CRG/CARB

## Resolution - PIR Cross-Cutting Issue

.....MONITORING FOR RESULTS.....

- ◆ QA Review—opportunity to check and adjust
- ◆ Risk sensitivity reviews—results positive and improving
- ◆ 2007 PI&R Inspection—results consistent with station's assessment
- ◆ INPO—improvement in problem identification/causal determination
- ◆ Entergy 2007 Survey—problem identification a strong point

## Resolution - PIR Cross-Cutting Issue

.....FINALIZE & REVIEW.....

- ◆ Effectiveness Review
  - Internal
  - Fleet Oversight

## Resolution - PIR Cross-Cutting Issue

.....What's Different?.....

- ◆ CR Initiation rate at all time high in 2007
- ◆ Higher standards being upheld in CRG
  - More discussion of each CR
  - Increased focus on extent of condition
  - Thorough review of "overnight" CRs to ensure prompt action if necessary
- ◆ Managers commonly coaching each other on CAP behaviors
- ◆ Craft personnel and Operators initiating more CRs for trending purposes only

## Resolution - PIR Cross-Cutting Issue

.....Positive Behavioral Examples.....

- ◆ RCIC instrumentation spiking
- ◆ Recirculation Pump Discharge Valve
- ◆ Condenser Water Boxes
- ◆ Transformer Cooling
- ◆ Feedwater Regulating Valve Isolation Valve
- ◆ Feedwater Pump Motor
- ◆ Airlock materials

## Resolution - PIR Cross-Cutting Issue

.....New PIR aspects.....

- ◆ Chart paper problems on Control Room recorders (10/19/06)
- ◆ Spiking on Reactor Core Isolation Cooling transmitter (2004)
- ◆ Ventilation heater in G-tunnel out of service (2003-2006)

## Resolution - PIR Cross-Cutting Issue

.....PIR Summary.....

- ◆ Site Values the Corrective Action Process
- ◆ Knowledge of PIR cross-cutting issue has helped the site and fleet
  - More focus on problem identification
  - Improved sense of urgency as a station
  - Established fleet-wide tool to help drive appropriate behaviors

## Human Performance Cross-cutting Issue

"Ineffective Human Error  
Prevention Techniques"

Eric Olson, GMPO

## Common Cause Overview

.....Defining the Problem.....

- ◆ Problem Statement
  - Instances of ineffective human error prevention techniques have resulted in consequential impacts to the station.
- ◆ Scope of review
  - Events and Errors from 1/06 - 2/07
  - Error Precursors from 1/06 - 2/07
  - 2006 Coaching Card data
  - Industry Evaluation Field Notes (2007)

## Common Cause Overview

.....Defining the Problem.....

- ◆ Binning Analysis Method
  - Causal Factors
  - HU Tools and Traps
  - NRC categories for cross-cutting aspects in human performance
- ◆ Conclusions
  - Workers know tools but have not consistently/rigorously used them
  - Inconsistent focus and alignment on error prevention behaviors

## Key Corrective Actions

.....Addressing the Issue.....

- ◆ RBS 2007 Performance Improvement Plan—One of 4 Focus Areas
  - Clarify Standards/Alignment
  - Establish Line Ownership
  - Ensure Accountability
  - Operations Crew Performance Special Focus Area

## Key Corrective Actions

.....Addressing the Issue.....

- ◆ Fleet HU Action Plan
  - Emphasis on sustained performance— not quick fix
  - “Blitz” on HU tools
    - ◆ Focused on one tool per week for 6 weeks
    - ◆ Not a one-time approach
  - Focused coaching to observe effectiveness of Blitz
  - Evaluation of Supervisor coaching effectiveness

## Measures / Monitoring

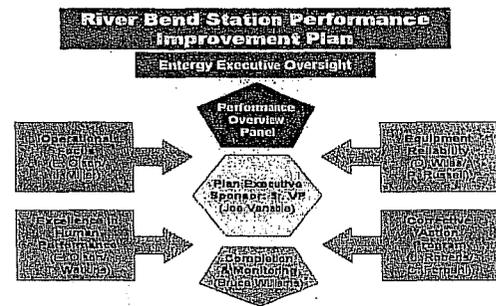
.....Results.....

- ◆ Industrial Safety Injury Rates
- ◆ HU Events
- ◆ Consequential Error Rate
- ◆ Non-Consequential Error Rate
- ◆ HU Latent Organizational Weaknesses (LOWs)

## Strategy for Sustained High Performance

Joe Venable  
Sr. Vice President  
River Bend Station

## Strategy—The Plan



## Closing Remarks

Joe Venable  
Sr. Vice President  
River Bend Station