



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

August 19, 2004

Jeffrey S. Forbes
Vice President Operations
Arkansas Nuclear One
Entergy Operations, Inc.
1448 S.R. 333
Russellville, AR 72801-0967

SUBJECT: MEETING WITH ARKANSAS NUCLEAR ONE PLANT MANAGEMENT TO
DISCUSS IMPROVEMENTS TO THEIR FIRE PROTECTION PROGRAM

Dear Mr. Forbes:

This refers to the Category 1 public meeting conducted on August 10, 2004, at the Region IV Office, Arlington, Texas, with representatives of Entergy Operations, Inc. The purpose of the meeting was to discuss aspects of the Arkansas Nuclear One fire protection program, including Entergy's manual action review project, interim compensatory measures, and fire protection improvement program.

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,

//RA//

Linda Joy Smith, Chief
Plant Engineering Branch
Division of Reactor Safety

Dockets: 50-313
50-368
Licenses: DPR-51
NPF-6

Enclosures:

1. Attendance List
2. Licensee Presentation

Entergy Operations, Inc.

-2-

cc:

Senior Vice President
& Chief Operating Officer
Entergy Operations, Inc.
P.O. Box 31995
Jackson, MS 39286-1995

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

Manager, Washington Nuclear Operations
ABB Combustion Engineering Nuclear
Power
12300 Twinbrook Parkway, Suite 330
Rockville, MD 20852

County Judge of Pope County
Pope County Courthouse
100 West Main Street
Russellville, AR 72801

Winston & Strawn
1400 L Street, N.W.
Washington, DC 20005-3502

Bernard Bevill
Radiation Control Team Leader
Division of Radiation Control and
Emergency Management
Arkansas Department of Health
4815 West Markham Street, Mail Slot 30
Little Rock, AR 72205-3867

James Mallay
Director, Regulatory Affairs
Framatome ANP
3815 Old Forest Road
Lynchburg, VA 24501

Electronic distribution by RIV:
 Regional Administrator (**BSM1**)
 Deputy Regional Administrator (**TPG**)
 DRP Director (**ATH**)
 DRS Director (**DDC**)
 Branch Chief, DRP/D (**TWP**)
 Senior Resident Inspector (**RWD**)
 Senior Project Engineer, DRP/D (**CJP**)
 Staff Chief, DRP/TSS (**PHH**)
 RITS Coordinator (**KEG**)
 Region IV PAO (**VLD**)
 ANO Site Secretary (**VLH**)
 Jennifer Dixon-Herrity, OEDO RIV Coordinator (**JLD**)

ADAMS: **X Yes** ☐ No Initials: _____
X Publicly Available ☐ Non-Publicly Available ☐ Sensitive **X Non-Sensitive**

R:_ano\2004\AN8-10-04MS-PEB.wpd

TL:PEB	C:DRP/D	C:PEB		
RLNease;jlh	TWPruett	LJSmith		
/RA/	/RA/	/RA/		
8/ 16 /04	8/16 /04	8/19 /04		

OFFICIAL RECORD COPY T=Telephone

T=Telephone E=E-mail F=Fax

ENCLOSURE 1
ATTENDANCE LIST

Attending in the Region IV office in Arlington, TX

Name	Organization
Pat Gwynn	NRC Region IV - Deputy Regional Administrator
Dwight Chamberlain	NRC Region IV - Director, Division of Reactor Safety (DRS)
Vonna Ordaz	NRC Region IV - Acting Deputy Director, DRS
Linda Smith	NRC Region IV - Chief, Plant Engineering Branch (PEB), DRS
Troy Pruett	NRC Region IV - Chief, Branch D, Division of Reactor Projects
Victor Dricks	NRC Region IV - Public Affairs Officer
Rebecca Nease	NRC Region IV - Team Leader, PEB/DRS
Elizabeth Owen	NRC Region IV - Reactor Inspector, Nuclear Safety Professional Development Program, DRS
Austin Hansley	NRC Region IV - Engineering Associate, PEB/DRS
Isabel Montoya	NRC Region IV - Engineering Associate, Engineering Branch, DRS
Jeff Forbes	Entergy - Vice President, Operations
Joe Kowalewski	Entergy - Director of Engineering
Dale James	Entergy - Manager, Licensing
Leslie Compton	Entergy - Manager, Engineering Programs and Components
Rebecca Puckett	Entergy - Supervisor, Engineering

Attending via video-conference or tele-conference

Name	Organization
Robert Gramm	NRC Office of Nuclear Reactor Regulation (NRR) Region IV - Section Chief Project Directorate 4-1
Alex Klein	NRC/NRR - Senior Fire Protection Engineer
See-Meng Wong	NRC/NRR - Senior Risk Analyst
Jim Bongarra	NRC/NRR - Engineering Psychologist
Drew Holland	NRC/NRR - Project Manager
Phil Qualls	NRC/NRR - Fire Protection Engineer
Paul Gunter	Nuclear Information Resource Service

ENCLOSURE 2
LICENSEE'S PRESENTATION

Enclosure

ANO Fire Protection

August 10, 2004

Overview of Topics - Agenda

- Jeff Forbes - Vice President
 - Introduction and Agenda
- Joe Kowalewski – Director Engineering
 - Compensatory Measures
 - Manual Action Review Project
 - Fire Protection Improvement Project
- Jeff Forbes - Vice President
 - Summary

Introduction

- Introduction of Team
- Major Compliance Issues
 - Lack of Zone Specific Procedures
 - Complexity of Manual Actions
- Immediate Compensatory Actions Taken
- Focus on Steps to Achieve Compliance
 - Manual Action Review Project
 - Modifications and Analyses to Reduce Risk
 - Comprehensive Fire Protection Improvement Project

Compensatory Measures

Defense-in-Depth Approach

- Immediately established firewatches
- Developed zone-specific procedures
- Performed feasibility assessments
- Training

Manual Action Review Project

- Process utilized
 - Convened expert panel
 - Reviewed timelines for all zones with hot shutdown manual actions (40 zones)
 - Review criteria
 - Time critical tasks for elimination
 - Tasks to reduce complexity

Manual Action Review Project

Results of Review

- Strategies for risk reduction
 - ❑ Prevent RCS inventory loss
 - ❑ Prevent heat addition to the reactor coolant outside of decay heat
 - ❑ Eliminate manual local start of EDG
 - ❑ Protect buss power supply
- Proposed changes
 - ❑ Eliminate 21 action sequences in 13 zones
 - ❑ Eliminate 12 action sequences required in less than 30 minutes
- Results
 - ❑ No action requires less than 30 minutes
 - ❑ All manual actions accomplished with a single Operator

Comprehensive Fire Protection Improvement Project

- Self assessment conducted March 2004
- Address major new initiatives in the industry
 - Fire Induced Circuit Failures (FICF)
 - Manual Action Rule-Making
 - Established fleet procedures for incorporation of new guidance
- Coupled with commitments to reduce risk by elimination of specific manual actions
- Reconstitute Fire Protection Program from ground up
- Significant effort
 - \$3~5 million in engineering and modifications
 - Driven by detailed project plan and 2004 Operating Plan as a site initiative

Fire Protection Improvement Project

Major Elements

- Fire Prevention
 - Control of combustibles
- Suppression and Detection
 - Reviews to ensure adequacy for the hazard
 - Review hydraulic calculations
 - Review flooding calculations

Fire Protection Improvement Project

Major Elements

- Safe Shutdown Methodology
 - Validate Safe Shutdown Equipment List
 - Validate Appendix R functional requirements and logics
 - Assess/implement impact of fire induced circuit failure
 - Fire area compliance
 - Upgrade zone specific procedures to new guidelines assessments
 - Update safe shutdown capability and fire program documents

Fire Protection Improvement Project

Major Milestones

- Fire prevention improvements – 9/30/04
- Zone specific procedure updates – 9/30/04
- Schedule of updates from Manual Action Review Project – 9/30/04
- Fire detection/suppression review – 9/30/04
- Safe shutdown methodology
 - Validate Safe Shutdown Equipment List and functional requirements – 10/30/04
 - Assess/implement impact of fire induced circuit failure – 12/31/04
 - Fire Area Compliance Assessments – 6/30/05
 - Update safe shutdown capability and fire program documents – 7/31/05
- Schedule for exemption requests and modifications – 12/31/05
- Complete Safe Shutdown Capability Analysis, Fire Hazards Analysis, design calculations and procedure updates – 12/30/06

Summary

- New compliance strategy
 - Cooperation instead of confrontation
 - Reduce risk associated with manual actions
 - Comprehensive program upgrades
- We are committed to doing the right thing