

**FILE**

April 27, 2004

Carolina Power and Light Company  
ATTN: Mr. James Scarola  
Vice President - Harris Plant  
Shearon Harris Nuclear Power Plant  
P. O. Box 165, Mail Code: Zone 1  
New Hill, North Carolina 27562-0165

**SUBJECT: PUBLIC MEETING SUMMARY -SHEARON HARRIS NUCLEAR POWER  
PLANT - DOCKET NO. 50-400**

Dear Mr. Scarola:

This refers to the meeting conducted at the Region II Office, Sam Nunn Atlanta Federal Center, 61 Forsyth Street, S.W., Atlanta, Georgia, in Room 24T25 on April 20, 2004, at 12:30 p.m. The meeting's purpose was to provide an update of the status of the Shearon Harris fire protection safe shutdown validation project. Enclosed is a list of attendees and the presentation handout.

The discussion included topics such as the project organization, root causes, corrective actions, project plan tasks and schedules.

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 meeting, please contact me at 404-562-4605.

Sincerely,

**/RA/**

Charles R. Ogle, Chief  
Engineering Branch 1  
Division of Reactor Safety

Docket No.: 50-400  
License No.: NPF-63

Enclosures: 1. List of Attendees  
2. Handout - Harris Nuclear Plant Safe Shutdown Validation Fire Protection Project Plan

cc w/encls: (See page 2)

CP&L

2

cc w/encls:

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Performance Evaluation and  
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(cc w/encl cont'd - See page 3)

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summary letter .WPD

DOCUMENT NAME: S:\DRS\Eng Branch 1\Fire Protection\Notification Letter\HarrisMeeting

## LIST OF ATTENDEES

### Licensee

J. Caves, Supervisor, Licensing  
F. Diya, Manager, Engineering  
T. Maness, Supervisor, Fire Protection  
S. O'Conner, Superintendent, Design Engineering

### NRC

C. Casto, Division Director, DRS  
G. McDonald, Sr. Project Engineer  
K. O'Donohue, Fire Protection Team Leader  
C. Ogle, Branch Chief, Engineering Branch 1  
C. Payne, Sr. Reactor Inspector  
B. Schin, Sr. Reactor Inspector  
G. Wiseman, Sr. Reactor Inspector

**Nuclear Regulatory Commission  
Region II  
April 20, 2004**

**Harris Nuclear Plant  
Safe Shutdown Validation  
Fire Protection  
Project Plan**



**Progress Energy**

# Attendees

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- Fadi Diya – Manager, Engineering
- Sean O’Connor – Superintendent,  
Design Engineering
- John Caves – Supervisor, Licensing
- Tony Maness – Supervisor, Fire  
Protection



# Agenda

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- Overview Of Fire Protection Inspection Findings, Root Causes, Corrective Actions
- SSA Validation Project
  - ▶ Organization
  - ▶ Goals
  - ▶ Tasks
  - ▶ Milestones
- SSA Validation Current State

# Focus Team

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- **Team Members**
  - ▶ Supervisor
  - ▶ FP Program Manager
  - ▶ SSA Program Manager
  - ▶ Operations - STA
  - ▶ FP Staff Augmentation Engineer
  - ▶ Configuration Management Staff Augmentation
  - ▶ Matrix Additional Staff As Needed
  - ▶ Progress Energy Fleet Steering Committee





# Overview of Inspection Findings

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- Failure To Protect Cables Potentially Affected By Fires
- Inconsistency Between Safe Shutdown Analysis And Implementing Procedure
- Some Non-feasible Manual Actions
- Technical Compliance
  - ▶ 8 Hour Battery Backed Emergency Lighting
  - ▶ Manual Actions Not Approved

# Summary of Root Causes

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- Post-Fire Circuit Analysis
  - ▶ Errors In Analysis
  - ▶ Procedures Allowed Use Of Manual Action In Lieu Of Circuit Protection For Fire Areas From Initial Plant Licensing Efforts
  - ▶ HNP Understanding Of Standards For Acceptability Of Manual Actions Changed In August 2002 Based On Industry OE (ANO and NRC/NEI meetings)

# Summary of Root Causes

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- Operational Implementation
  - ▶ AOP-036, Safe Shutdown Following a Fire
  - ▶ AOP-004, Remote Shutdown
  - ▶ Lack Of Specific Criteria For Manual Action Feasibility
- Assessments Focused On Conventional Fire Protection – Barriers, Detection, Suppression, Equipment Impairments

# Fire Protection Corrective Actions

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- Immediate Actions Completed
  - ▶ Established Fire Watch Coverage For Identified Issues
  - ▶ Revised Safe Shutdown Operating Procedures
  - ▶ Assigned 1 Additional Auxiliary Operator To Shift Staffing On An Interim Basis
  - ▶ De-Energized MOV (MCC-1E12) To Eliminate Hot Short Potential
  - ▶ Plexiglas Cover Removed For TDAFW Fuse

# Project Plan Goals

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- Validate SSA Design
  - ▶ Reduce Reliance On Manual Actions
  - ▶ Correct Identified Deficiencies
  - ▶ Ensure SSA Is Properly Reflected In Plant Procedures
  - ▶ Configuration Controls Protects The Design Basis
- Improve Reliability Of Fire Protection Equipment

## **Project Plan Goals (cont)**

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- Position HNP For Potential Future Development Of A Fire PRA
- Ensure SSA Is Consistent With Fleet Circuit Analysis On Multiple Circuit Failures

# Project Plan Tasks

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- Sixteen Plan Tasks
  1. Project Initiation
  2. Modifications
    - ◆ Proposed Modifications
      - ▼ Cable Protection
      - ▼ Circuits In MCCs
      - ▼ 8 Hour Battery Backed Lighting

# Project Plan Tasks (cont)

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## 2. Modifications (cont)

- ◆ Modifications In Progress
  - ▼ EC 48802 – ACP Room Cable Protection
    - Removed Thermo-Lag Enclosure
    - Fire Wrap Added To Cable Trays
  - ▼ EC 52769 – VCT Outlet Valve Cable Protection
    - 3 Hour Fire Rated Cable
    - Design And Testing In Progress



# Project Plan Tasks (cont.)

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## 2. Modifications (cont)

- ◆ LER Committed Modifications :
  - ▼ EC 52769 – VCT Outlet Valves
  - ▼ ECR 1864 – Provide Protection For 1CC-208 And 1CC-251
  - ▼ ECR 2169 – Provide Protection For SI valves
  - ▼ EC 54065 – Provide Protection For CT valves
  - ▼ ECR 1893, ECR 1982, ECR 1895 – Spurious Closure Of CVCS Valves Affecting CSIP Operations
  - ▼ ECR 1862, ECR 1935 – Spurious Closure of CCW Valves Affecting RCP Seal Cooling.

# Project Plan Tasks (cont.)

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## 2. Modifications (cont.)

### Self Identified Modifications:

- ▼ ECR 4104 – Install Manual Transfer Switch for “C” CSIP
- ▼ ECR 3893 – WC-2B Power Supply From Appendix R Inverter
- ▼ ECR 3896 – AF-130 Power Supply From Appendix R Inverter
- ▼ ECR 4119 – Dampers CZ-D73 and CZ-D74 Modification For Non-Feasible Manual Action
- ▼ ECR 4213 – Add RWST Level Indication And/Or Alarm To ACP *Non-acting - can be on-line*

# Project Plan Tasks (cont.)

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- 3. Oversight/Gap Analysis
  - ◆ NGG Fleet FP Strategic Plan
  
- 4. SSA Validation
  - ◆ Developed Project Scoping Document
  - ◆ A/E Selection
  - ◆ Major Milestones
  - ◆ Additional Discoveries
    - ▼ Document In Corrective Action Program

# Project Plan Tasks (cont)

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## 5. Thermo-Lag Configurations

- ◆ ACP Room
  - ▼ Current Modification
- ◆ Cable Spread Room
  - ▼ Modification Completed

# Project Plan Tasks (cont)

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## 6. Hemyc/MT Fire Barrier Wrap

- ◆ SSA Validation
- ▼ Identify Functions Where Protection Is Needed And Hemyc Wrap Is Credited
- ▼ Monitoring Industry And NRC testing

## 7. Fire Hazards Analysis (FHA)/SSA Integration

- ◆ Resolve Identified Deficiencies

## 8. NFPA Code Compliance

- ◆ Resolve Identified Deficiencies

## **Project Plan Tasks (cont)**

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9. Fire Protection QA Inspection Hold Point
  - ◆ Identify Inspection Attributes And Updated Implementing Procedures
  
10. Enhance Transient Combustible/Fixed Combustible Loading Controls
  - ◆ SSA Integration
  - ◆ Revise Combustible Control Program

# Project Plan Tasks (cont)

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## 11. Penetration Seals

- ◆ Improve program
  - ▼ Adopt Wisconsin Electric Internal Conduit Seal Testing
- ▼ Enhanced Penetration Seal Report Generation Tool
- ▼ Drawings

# Project Plan Tasks (cont)

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## 12. Surveillance Optimization

- ◆ Evaluation And Improve
- ◆ Performance Based Assessment

## 13. Miscellaneous FP Program Deficiencies

- ◆ Manage And Prioritize FP Backlog

## 14. Fire Response/Operational Implementation

- ◆ Improve Operations Response To Fires



# Project Plan Tasks (cont)

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## 15. Effectiveness Review

- ◆ Self-Assessment

## 16. Allocation Of Funds

- ◆ Administrative

# Design Validation

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- **Validation of SSA**
  - ▶ Develop Safe Shutdown Equipment List
  - ▶ Perform Circuit Analysis
  - ▶ Load SSD Program Manager Database
  - ▶ Perform Compliance Fault Tree Analysis
  - ▶ Manual Action Feasibility
  - ▶ Revise Safe Shutdown Procedure
  - ▶ Revise Admin Control Procedures

# SSA/Fire Protection Major Milestones

Best Estimate

SSA Tasks	Start	Finish
▶ SSA Project Kick-Off Mtg	5/20/03	-
▶ Discovery Phase	10/2/03	9/3/04
▶ Manual Action Feasibility Analysis	12/01/04	3/03/05
▶ EC Approval	--	6/20/05
▶ EC Turnover – Implementation Of New SSA	6/21/05	8/12/05
<b>Cable Protection Mods</b>		
▶ ACP Room	5/21/03	5/31/04
▶ VCT Outlet Valve Cable Protection	7/7/03	R12

# SUMMARY

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- HNP Is committed To resolving Fire Protection Program And Safe Shut Down Program Concerns