

official

January 15, 1991

Docket Nos. 50-348, 50-364
License Nos. NPF-2, NPF-8

Alabama Power Company
ATTN: Mr. W. G. Hairston, III
Senior Vice President
Nuclear Operations
40 Inverness Center Parkway
P. O. Box 1295
Birmingham, AL 35201

Gentlemen:

SUBJECT: MEETING SUMMARY - FARLEY

This refers to the management meeting held at your request in the Region II Office on January 4, 1991. The purpose of the meeting was to discuss the resolution of issues associated with the Engineering and Technical Support Program for the Farley Project. A list of attendees, a meeting summary, and a copy of your handout are enclosed. It is our opinion that the meeting was beneficial in that it provided a good understanding of the actions you have taken in response to our concerns.

In accordance with Section 2.790 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 placed in the NRC Public Document Room.

Should you have any questions concerning this matter, please contact us.

Sincerely,

Original signed by
Albert F. Gibson

Albert F. Gibson, Director
Division of Reactor Safety

Enclosures:

1. List of Attendees
2. Meeting Summary
3. Licensee Handout

cc w/encl: (See page 2)

January 15, 1991

cc w/encl:

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ENCLOSURE

LIST OF ATTENDEES

Alabama Power Company

J. E. Garlington, General Manager, Nuclear Support
B. D. McKinney, Manager Nuclear Engineering and Licensing
D. H. Jones, Manager Nuclear Engineering
L. C. Troutt, Senior Engineer

Nuclear Regulatory Commission

A. F. Gibson, Director, Division of Reactor Safety (DRS), RII
L. A. Reyes, Director, Division of Reactor Projects (DRP), RII
E. W. Merschhoff, Deputy Director, DRP, RII
C. A. Julian, Chief, Engineering Branch, DRS, RII
D. M. Verreli, Chief, Reactor Projects Branch 1, DRP, RII
S. T. Hoffman, Licensee Project Manager, Office of Nuclear Reactor
Regulation (NRR)
F. Jape, Chief, Test Programs Section, DRS, RII
F. S. Cantrell, Chief, Reactor Projects Section 1B, DRP, RII
G. F. Maxwell, Senior Resident Inspector - Farley, DRP, RII
R. N. Wright, Project Engineer - Farley, DRP, RII
P. J. Fillion, Reactor Inspector, RII
G. A. Hallstrom, Reactor Inspector, RII

ENCLOSURE 2

MEETING SUMMARY

The DRS Division Director opened the meeting by expressing NRC's interest in actions taken by Alabama Power Company (APCo) in response to issues arising from Inspection Report Nos. 50-348,364/90-03. This inspection of design control activities, engineering and technical support was completed during April - May, 1990. APCo personnel then began their presentation by discussing the areas of concern together with the actions taken by APCo to strengthen those areas. Sufficient detail was provided to provide a clear understanding regarding actions completed to satisfy NRC concern.

Following a discussion of the actions, as detailed in the meeting handout, it was generally agreed that the role of engineering support has been enhanced even though the licensee is conducting business in essentially the same manner as before. Closure of the open items will be scheduled for a future inspection. Director Gibson cautioned APCo that dependence on second party independent verification within the designer's organization rather than within APCo could cause additional vulnerability to potential design errors. Therefore, this area will be additionally assessed during future performance based inspections of the licensee's activities. It was mutually agreed that APCo's reliance on second party independent verification was acceptable contingent on continued satisfactory performance.

AGENDA

- | | | |
|------|-----------------------------|------------------|
| I. | INTRODUCTION | J. E. Garlington |
| II. | NRC ISSUES | B. D. McKinney |
| | - TECHNICAL ADEQUACY | |
| | - COMMUNICATION | |
| | - TIMELINESS | |
| | - TESTING CRITERIA | |
| | - TRAINING | |
| III. | DESIGNER INTERFACE DOCUMENT | L. C. Troutt |
| IV. | INSPECTOR FOLLOW-UP ITEMS | D. H. Jones |
| V. | SUMMARY | J. E. Garlington |

NRC ISSUES

TECHNICAL ADEQUACY:

Reviews of PCNs performed by the Nuclear Support staff are not performed to verify the technical adequacy of design changes.

APCo ACTION:

1. Design Adequacy Review Committee (DARC)
2. Participation in Technical Audits of Design Organizations
3. Self-Initiated Safety System Assessments (SSAs)
4. Designer Interface Document
5. Incident Reports/Corrective Action Reports
6. Periodic APCo Meetings with Design Organizations

NRC ISSUES

COMMUNICATION:

Much of the communications between FNP and the APCo corporate offices was informal. This concern seemed to be most closely tied to ES activities and design engineering support for immediate operability concerns or real time operating events.

APCo ACTION:

1. New APCo Nuclear Support Procedure GO-NG-41
2. Designer Interface Document (DID)
3. Revision to Nuclear Support Procedure GO-NG-34
(Engineering Support)

NRC ISSUES

TIMELINESS:

The inspectors considered APCo's timeliness in responding to various engineering support activities to be weak. Examples cited by the NRC included responses to NRC Information Notice 89-16, Excessive Voltage Drop in DC Systems (e.g., auxiliary building battery load profiles), NRC Information Notice 86-70, Potential Failure of All Emergency Diesel Generators (e.g., incorporation of transformer losses into diesel load study), and NRC Information Notice 89-63 (sic), (possible submergence of electrical circuits located above flood level).

APCo ACTION:

1. New Nuclear Support Procedure GO-NG-41
2. Action Item Tracking
3. Designer Schedules for PCRs and ESs, and Periodic NEL Management Meetings
4. Resolution of Potential Nonconforming Conditions (GO-NG-41 and Designer Interface Document)
5. Periodic Nuclear Support Management ES Reviews

NRC ISSUES

TESTING CRITERIA:

There was a weakness in the lack of involvement by the design organizations in identifying acceptance criteria and post modification testing requirements in PCNs.

APCo ACTION:

1. Guidance for when and how the designers should provide PCN acceptance criteria (including post modification testing requirements) has been included in the Designer Interface Document.
2. System and component design requirements (e.g., acceptance criteria) will be identified in the Functional System Descriptions (FSDs), which are being developed as part of the Configuration Management program. The FSDs will be controlled design documents that will be maintained consistent with the as-built plant configuration.

NRC ISSUES

TRAINING:

The training for NEL personnel is not very formal and appears to be weak in the areas of 10 CFR 50.59 safety evaluations and PCN reviews.

APCo ACTION:

1. Nuclear Support Training Matrix
2. Southern Nuclear Training on 10 CFR 50.59 and NSAC-125
 - Southern Nuclear Guidelines Developed
 - Vendor Training Provided for Southern Nuclear Trainers
 - Other Southern Nuclear Personnel to be Trained in 1991
3. PCN Training
 - DARC
 - DID to be Issued and Training to be Provided

SUMMARY OF NRC ISSUES

<u>ISSUE</u>	<u>ACTION</u>
Technical Adequacy	Participation in Technical Audits CARC SSSAs Designer Interface Document (New) IRs/CARs Periodic Management Meetings
Communication	GO-NG-41 (New) Designer Interface Document (New) GO-NG-34 (Revised)
Timeliness	GO-NG-41 (New) Action Item Tracking (New) Designer Schedules for PCRs Designer Schedules for ESs (New) Documented Guidance for Resolution of Nonconforming Conditions (New) NS Management ES Reviews (New)
Testing Criteria	Designer Interface Document and PCN Format Change (New) FSDs (New)
Training	Training Matrix (New) 10CFR50.59 Training (New)

DESIGNER INTERFACE DOCUMENT

I. Interface Document

- Purpose
- General Requirements
- Implementation Programs
- Abnormal Operating Event Response

II. Appendix A, Detailed Design Guidance

- Contents
- Format
- Guidance for PCN Packages
(Includes Post-Mod Testing on Special Design Considerations)
- Additional Design Input Guidance
- Reload Core Design Guidance

III. Appendix B, Division of Responsibility

- FNP, NS and Designer Responsibilities
- APCo PCR Budget and Priority Processes
- DOR between Designers
- Technical Guidance on Interfaces (including shared responsibilities)

IV. Appendix C, Technical Overview

- Technical Audits
- Design Adequacy Review Committee
- Self-Initiated Safety System Assessments
- Incident Reports/Corrective Action Reports
- Periodic APCo Management Meetings

V. Appendix D, 10CFR50.59 Evaluation Guidelines

- Southern Nuclear Guidelines for Performing 10CFR50.59 Evaluations based on NSAC-125

DESIGNER INTERFACE DOCUMENT
APPENDIX A, DETAILED DESIGN GUIDANCE

1.0 Contents

Briefly identifies the required contents of a PCN.

2.0 Format

Describes minimum acceptable format requirements for PCNs and references figures for the actual PCN pages.

3.0 PCN Guidance

Provides detailed guidance and APCo expectations for consistent use of the information presented in PCN packages. This includes:

- 3.1 Title Page
- 3.2 Revision Summary Sheet
- 3.3 Design Input Record
- 3.4 10 CFR 50.59 Safety Evaluation Checklist
- 3.5 Design Verification Record
- 3.6 Work Completion Notice (WCN)
- 3.7 Special Design Considerations
- 3.8 Index Sheets
- 3.9 Related Drawings/Design Documents
- 3.10 PCN Work Sheets
- 3.11 Bills of Material (BOM)
- 3.12 Engineering Requisitions
- 3.13 Full Size Drawings/Sketches
- 3.14 Attachments

DESIGNER INTERFACE DOCUMENT
APPENDIX A, DETAILED DESIGN GUIDANCE

4.0 Additional ANSI N45.2.11 Design Input Guidance

Provides additional guidance on the following subjects, which are tied to Section 3.2 of the ANSI Standard:

- 4.1 Post Modification Testing
- 4.2 Environmental Qualification
- 4.3 Fire Protection
- 4.4 ISI/IST
- 4.5 Setpoint Changes
- 4.6 ALARA
- 4.7 Fuse Sizing
- 4.8 Electrical Circuit Protection Coordination
- 4.9 Flooding
- 4.10 Control Room Habitability
- 4.11 Human Factors
- 4.12 Seismic
- 4.13 Environmental
- 4.14 Freeze Protection

5.0 Other Design Guidance

Provides guidance on the following subject, which are not directly tied to Section 3.2 of ANSI N45.2.11-1974:

- 5.1 Drawing Change PCNs
- 5.2 Maintenance Replacement PCNs
- 5.3 Calculations
- 5.4 Identification of Discrepancies
- 5.5 Construction Considerations
- 5.6 Commercial Considerations
- 5.7 Correspondence
- 5.8 River Water System Design
- 5.9 Safeguards Information
- 5.10 Computer Programs
- 5.11 NAMCO Limit Switches
- 5.12 Specifications
- 5.13 Pipe and Conduit Routing

DESIGNER INTERFACE DOCUMENT
APPENDIX A, DETAILED DESIGN GUIDANCE

6.0 Westinghouse Design (Fuel and NSSS)

Provides guidance for fuel and reload core designs, and non-fuel NSSS design which is packaged in a PCN by Bechtel.

INSPECTOR FOLLOW-UP ITEMS

1. IFI 50-348, 364/90-03-01, DC Load Profiles

Commitment to complete the 7-point action plan identified in the Inspection Report.

APCo Action:

All 7 items of the action plan have been completed, except the testing to be completed during the upcoming Unit 1 refueling outage.

2. IFI 50-348, 364/90-03-02, EDG Loading Conditions

Commitment to realign MCC 1X to Unit 2, and to add a precautionary note to procedure FNP-1-SOP-36.3 to indicate that aligning MCC 1X to Unit 1 may cause the 2000-hour rating of EDG 1C to be exceeded.

APCo Action:

MCC 1X has been realigned to Unit 2 and FNP-1-SOP-36.3 has been revised to include the precautionary note.

3. IFI 50-348, 364/90-03-03, Clarification of EDG Loading Restriction

The inspector requested that APCo obtain clarification of the minimum loading requirements under emergency operations and upon receipt of this information, revise the plant procedures, if required.

APCo Action:

Clarification has been received from Colt Industries. We are in the process of revising the design documentation to reflect the clarification and plan to request FNP to determine if plant procedures require revision.

INSPECTOR FOLLOW-UP ITEMS

4. IFI 50-348, 364/90-03-04, Revised AC Load Analysis

The question of whether or not the revised AC load analysis should be submitted to the NRC will be tracked as an IFI.

APCo Action:

The 1979 NRC letter that required the performance of the original degraded grid voltage analysis also required the submittal of the analysis to the NRC. Thus, the original degraded grid voltage analysis was submitted to the NRC for review. However, consistent with 10 CFR 50.59 and other changes to the plant or supporting plant design documentation which are made without submittal to the NRC for review (unless the change involves an unreviewed safety question), this updated analysis need not be submitted to the NRC for review.

5. IFI 50-348, 364/89-17-01, Minor Departure from Design Program

The NRC expressed the following concerns with the implementation of minor departures from design (MDDs):

- There are no requirements for either on-site or off-site engineering review of MDDs prior to implementation.
- The level of approval authority for MDDs may not have adequate technical knowledge or access to design basis information in all areas that could be affected by the various MDDs.
- The reviewer is not required to document areas considered in reaching conclusions during the safety evaluation screening process.
- The administrative controls are such that design changes can be made under a MDD (The inspectors considered some of the MDDs reviewed during the inspection to be design changes and beyond the scope of what APCo considers a MDD).

INSPECTOR FOLLOW-UP ITEMS

APCo Action:

FNP Issue

SUMMARY

<u>ACTION</u>	<u>NRC ISSUE ADDRESSED</u>
GO-NG-11 (Revised)	Communication/Interface
GO-NG-13 (Revised)	Training
GO-NG-34 (Revised)	Communication/Interface
GO-NG-41 (New)	Communication Timeliness Documentation of Resolution of Nonconforming Items
GO-NG-42 (New)	10CFR50.59 Reviews
Designer Interface Doc. (New)	Communication/Interface PCN Acceptance Criteria Technical Adequacy Documentation of Design Deficiencies
Action Item Tracking (New)	Timeliness
DARC	Technical Adequacy
SSSA	Technical Adequacy
CM Manual/Assessment	Communications
Drawing Review	Technical Adequacy

COMMUNICATIONS, TIMELINESS AND REPORTABILITY

NUCLEAR SUPPORT PROCEDURE GO-NG-41

I. Communications

- Informal Communications is a Strength
- Guidance on Formal Communications
- Guidance on Project Milestones/Status

II. Timeliness

- Need to Reprioritize Engineering Support Activities
- Role of NS Managers and Project Engineers
- Designers Schedules and Periodic NS Management Meetings
- Response to Nonconforming Conditions

III. Processing of Nonconforming Conditions

- NS Role in Reportability and Operability Determinations
- Design Deficiencies
- Principles for Dealing with Operability Issues
- Responsibilities and Interfaces
- Documentation of NS Actions

	POWER PLANT BASICS	SYSTEMS *	CODES AND STANDARDS *	PRINT READING *	TNP IMS *	EQ *	50.59 EVALS. * (GO-NG-42)	REPORTABLE EVENTS * (GO-NG-41)	DESIGN CONTROL * (GO-NG-11)	ENGINEERING SUPPORT * (GO-NG-34)
BASIC TECHNICAL TRAINING										
NEL PROJ ENG	X	X	X	X	X	X	X	X	X	X
NEL SR ENG	X	X	X	X	X	X	X	X	X	X
NEL SPECIALIST	X	X	X	X	X	X	X	X	X	X
NMS PROJ ENG	X	X	X	X	X	X	X	X	X	X
NMS SR ENG	X	X	X	X	X	X	X	X	X	X
NMS SPECIALIST	X	X	X	X	X	X	X	X	X	X
NA SR ENG	X	X	X	X	X	X	X	X		
NA SPECIALIST	X	X	X	X	X	X	X	X		
ACCOUNTANTS	X	X			X		X	X		
HUM RES SPECIALIST	X	X			X		X	X		
CLERKS & SECTYS										
SUPV & MGRS	X	X	X	X	X	X	X	X	X	X

* These courses should be taught initially and be incorporated into a period retraining program.