February 13, 1985

Docket Nos. 50-348
and 50-364

Distribution	Docket file
NRC PDR	LPDR
ORB#1 RDG	Gray file
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ACRS (10)	OELD

Mr. R. P. McDonald
Senior Vice President
Alabama Power Company
Post Office Box 2641
Birmingham, Alabama 35291

Dear Mr. McDonald:

SUBJECT: REQUEST FOR INFORMATION REACTOR TRIP BREAKERS ITEM 4.2.1 AND 4.2.2 OF GENERIC LETTER 83-28 -- JOSEPH M. FARLEY NUCLEAR PLANT UNITS 1 AND 2

Your response of November 4, 1983, to the subject generic letter is under review. To complete our evaluation of the adequacy of the periodic maintenance and trending programs for the reactor trip breakers, we need additional information.

Please provide the requested information shown in the enclosure within 60 days of receipt of this letter, or earlier if possible, to allow completion of the review.

The reporting and/or recordkeeping requirements of this letter affect fewer than ten respondents; therefore, OMB clearance is not required under P.L. 96-511.

Sincerely,

/s/SAVarga

Steven A. Varga, Chief
Operating Reactors Branch #1
Division of Licensing

Enclosure:
As stated

cc w/enclosure:
See next page

ORB#1:DL
EReeves/ts
02/13/85

BC-ORB#1:DL
SVarga
02/13/85

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P PDR

cc: Mr. W. O. Whitt
Executive Vice President
Alabama Power Company
Post Office Box 2641
Birmingham, Alabama 35291

Mr. Louis B. Long, General Manager
Southern Company Services, Inc.
Post Office Box 2625
Birmingham, Alabama 35202

Houston County Commission
Dothan, Alabama 36301

George F. Trowbridge, Esquire
Shaw, Pittman, Potts and Trowbridge
1800 M Street, N.W.
Washington, DC 20036

Chairman
Houston County Commission
Dothan, Alabama 36301

Robert A. Buettner, Esquire
Balch, Bingham, Baker, Hawthorne,
Williams and Ward
Post Office Box 306
Birmingham, Alabama 35201

Resident Inspector
U.S. Nuclear Regulatory Commission
Post Office Box 24 - Route 2
Columbia, Alabama 36319

State Department of Public Health
ATTN: State Health Officer
State Office Building
Montgomery, Alabama 36104

Regional Radiation Representative
EPA Region IV
345 Courtland Street, N.E.
Atlanta, GA 30308

D. Biard MacGuineas, Esquire
Volpe, Boskey and Lyons
918 16th Street, N.W.
Washington, DC 20006

Charles R. Lowman
Alabama Electric Corporation
Post Office Box 550
Andalusia, Alabama 36420

James P. O'Reilly
Regional Administrator - Region II
U.S. Nuclear Regulatory Commission
101 Marietta Street, Suite 2900
Atlanta, GA 30303

Ira L. Myers, M.D.
State Health Officer
State Department of Public Health
State Office Building
Montgomery, Alabama 36130

Enclosure

JOSEPH M. FARLEY, UNITS 1 AND 2
REQUEST FOR ADDITIONAL INFORMATION
GL 83-28, ITEMS 4.2.1 AND 4.2.2

INTRODUCTION

Alabama Power Company, the licensee for Joseph M. Farley Nuclear Plant, Units 1 and 2, submitted their response to Generic Letter 83-28 on November 4, 1983. The response has been reviewed with respect to Items 4.2.1 and 4.2.2 of the Generic Letter. The licensee response was not sufficiently detailed to permit an evaluation of the adequacy of the periodic maintenance and trending programs for the breakers. The following additional information is required to evaluate compliance with Items 4.2.1 and 4.2.2.

1. Item 4.2.1 - Periodic Maintenance Program for Reactor Trip Breakers.

1.1 Criteria for Evaluating Compliance with Item 4.2.1

The Joseph M. Farley Nuclear Plant, Units 1 and 2 Reactor Trip Systems utilize Westinghouse DS-416 circuit breakers. The primary criteria for an acceptable maintenance program for the DS-416 Reactor Trip Breaker (RTB) are contained in Westinghouse Maintenance Manual for the DS-416 Reactor Trip Circuit Breaker, Revision 0, October 1984. The NRC staff, Equipment Qualification Branch, has reviewed this document and endorsed the maintenance program described in it. More specifically, the criteria used to evaluate compliance include those items in this document that relate to the safety function of the breaker, supplemented by those measures that must be taken to accumulate data for trending.

1.2 Issues Relating to Item 4.2.1

The licensee response states that their "preventative maintenance program contained in FNP-O-MP-28.114 includes provisions for periodic maintenance including lubrication and housekeeping. This program is in accordance with vendor technical bulletin NSD-TB-75-2 and IEB 83.03."

The licensee document FNP-O-MP-28.114 is not included with the licensee response. The Westinghouse Maintenance Manual for the DS-416 breaker, October 1984, supersedes the above mentioned vendor documents.

The Joseph M. Farley Nuclear Plant, Units 1 and 2 Periodic Maintenance Program for the reactor trip breakers should include, on a six-month basis (or when 500 breaker operations have been counted, whichever comes first):

1. General inspection to include checking of breaker's cleanliness, all bolts and nuts, pole bases, arc chutes, insulating link, wiring and auxiliary switches;

2. The retaining rings inspection, including those on the undervoltage trip attachment (UVTA) and shunt trip attachment (STA);

3. Arcing and main contacts inspection as specified by the Westinghouse Maintenance Manual;

4. UVTA check as specified by the Westinghouse Maintenance Manual, including replacement of UVTA if dropout voltage is greater than 60% or less than 30% of rated UVTA coil voltage;

5. STA check as specified by the Westinghouse Maintenance Manual;

6. Lubrication as specified by the Westinghouse Maintenance Manual;

7. Functional check of the breaker's operation prior to returning it to service.

The Joseph M. Farley Nuclear Plant, Units 1 and 2 Periodic Maintenance Program for the reactor trip breakers should include, on a refueling interval basis (or when 500 breaker operations have been counted, whichever comes first):

1. Pre-cleaning insulation resistance measurement and recording;

2. RTB dusting and cleaning;

3. Post-cleaning insulation resistance measurement and recording, as specified by the Westinghouse Maintenance Manual;

4. Inspection of main and secondary disconnecting contacts, bolt tightness, secondary wiring, mechanical parts, cell switches, instruments, relays and other panel mounted devices;

5. UVTA trip force and breaker load check as specified by the Westinghouse Maintenance Manual;

6. Measurement and recording RTB response time for the undervoltage trip;

7. Functional test of the breaker prior to returning to service as specified by the Westinghouse Maintenance Manual.

The maintenance procedure should include a caution to the maintenance personnel against undocumented adjustments or modifications to RTBs.

The licensee is to confirm that the periodic maintenance program includes these fourteen items at the specified intervals or commit to their inclusion.

2. Item 4.2.2 - Trending of Reactor Trip Breaker Parameters to Forecast Degradation of Operability.

2.1 Criteria for Evaluating Compliance with Item 4.2.2

Four parameters have been identified as trendable and are included in the criteria for evaluation. These are (a) undervoltage trip attachment dropout voltage, (b) trip force, (c) breaker response time for undervoltage trip, and (d) breaker insulation resistance.

2.2 Issues Relating to Item 4.2.2

The licensee states that "The preventative maintenance procedure contains acceptance criteria for initial parameters affecting operation and requires corrective action if these parameters fall outside the acceptance criteria. Repeated failures of the as-found condition will be indicative of trends. APCo has worked with the Westinghouse Owners Group to develop a specific program for life testing of the reactor trip breakers and periodic maintenance and replacement of breakers and components consistent with demonstrated life cycles. Based on the results of the Westinghouse testing, APCo will incorporate appropriate changes into its preventive maintenance and surveillance program for the reactor trip breakers."

The licensee is to commit to inclusion of trip force, breaker response time and dropout voltage for undervoltage trip and breaker insulation resistance as trending parameters. The licensee should also identify the organization which will perform the trend analysis, how often the analysis will be performed, and how the information derived from the analysis will be used to affect periodic maintenance.

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