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Alabama Power
the southern electric system

September 24, 1980

Docket No. 50-348
No. 50-364

Mr. James P. O'Reilly
U. S. Nuclear Regulatory Commission
Region II
Suite 300
101 Marietta Street, N.W.
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

As requested by I.E. Bulletin 80-20, "Failures of Westinghouse Type W-2 Spring Return to Neutral Control Switches," dated July 31, 1980, Alabama Power Company submits the enclosed response for Units 1 and 2 of the Farley Nuclear Plant.

If there are any questions, please advise.

Yours very truly,

for F. L. Clayton, Jr.

RWS:de

Enclosures

cc: Mr. R. A. Thomas
Mr. G. F. Trowbridge
Mr. L. L. Kintner
Mr. E. A. Reeves
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Office of I&E
Division of Reactor Operations Inspection
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Mr. M. D. Hunt
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ACTIONS TO BE TAKEN BY LICENSEES AND HOLDERS OF CONSTRUCTION PERMITS:

1. Determine whether Westinghouse Type W-2 control switches with spring return to neutral position are used in safety-related applications at your facility. If so, identify the safety-related systems using these switches and the total number of switches so used. If no such switches are used in your facility, you should indicate that this is the case and ignore the remaining questions.

RESPONSE:

All safety related systems have been reviewed to identify all Westinghouse Type W-2 control switches with spring return to neutral position. A total of 67 of the subject switches were identified at FNP Unit 1 and 49 in FNP Unit 2. The function of each switch is shown in Appendix A.

2. Licensees of operating plants using Type W-2 spring return to neutral control switches in safety-related applications shall perform continuity tests on all such switches. These tests shall be performed with the switch operator in the neutral position and completed within ten (10) days of the date of this bulletin. In addition, this continuity test shall be repeated at least every thirty-one (31) days after the initial test and after each manipulation of the switch from its neutral position. These continuity tests may be discontinued subsequent to implementing the longer term corrective measures described below.

RESPONSE:

Unit 1

The 67 switches identified in FNP Unit 1 have been reviewed to determine the effect of a failure of the neutral contacts to close properly, 58 of the identified switches do not use the neutral contacts. Of the nine Unit 1 switches utilizing the neutral contacts, only two are configured such that the subject failure would not be detected and result in defeat of an automatic function. These switches, their function and associated immediate corrective actions are as follows:

a. Local handswitch at 600V load center 1D local control panel (LCP). ED13 - PWR TO MCC 1S from 600V load center 1D. A failure of this handswitch could prevent auto closure of the breaker if the associated "REMOTE-LOCAL" handswitch is in the "LOCAL" position. The normal position is "REMOTE".

   INTERIM CORRECTIVE ACTION:

   The "REMOTE-LOCAL" handswitch has been tagged in the "REMOTE" position. Continuity of the neutral contacts of switch ED-13 will be checked prior to placing the "REMOTE-LOCAL" switch to "LOCAL", after each manipulation of ED-13 when the "REMOTE-LOCAL" switch is in "LOCAL", and every 31 days.

b. Local handswitch on 600 volt bus 1R LCP. ER02-INCOMING BREAKER. A failure of this handswitch could prevent automatic bus transfer of 600 volt load center 1R from Unit 1 power to Unit 2 power.

   INTERIM CORRECTIVE ACTION:

   The automatic bus transfer function is not required to be operable prior to Unit 2 operation. The testing requirements of item 2 of this bulletin will be implemented from fuel loading until long term corrective action is completed.

c. Local handswitch on 600 volt bus 1S LCP. ES02-INCOMING BREAKER.
Local handswitch on 600 volt bus 1D LCP. ED12-INCOMING BREAKER.
Local handswitch on 600 volt bus 1E LCP. EE12-INCOMING BREAKER.
Local handswitch on 600 volt bus 1D LCP. ED02-INCOMING BREAKER.
Local handswitch on 600 volt bus 1E LCP. EE02-INCOMING BREAKER.
A failure of the switches could prevent an audible alarm on the EPB of a breaker trip.

INTERIM CORRECTIVE ACTION:

Due to the fact that failure of these handswitches will not affect the visual position indication on the EPB, Load Center or Local Control Panel indicating a breaker trip, no corrective action is necessary prior to the implementation of the longer term corrective action.

d. Handswitch on Main Control Board N1C11HS-2109G - REACTOR BREAKER TRIP.
Handswitch on Main Control Board N1C11HS-2109H - REACTOR BREAKER TRIP.
A failure of these switches to makeup in the neutral position would prevent reset of the reactor trip breakers.

INTERIM CORRECTIVE ACTION:

Due to the fact that the failure of these switches' neutral position contacts to makeup in no way impairs their ability to perform their trip (or safety) function, no interim corrective action is to be implemented pending implementation of the long term corrective action.

Unit 2

Of the 49 switches identified in FNP Unit 2, 40 do not use the neutral contacts. Of the remaining nine, only two are configured such that the subject failure would not be detected and result in defeat of an automatic function. These switches are as follows:

a. Local handswitch at 600 volt load center 2D LCP, ED-13-BKR TO MCC 1S from 600V load center 2D. A failure of this handswitch is identical to that of ED-13 in Unit 1 (see item 2a above).

b. Local handswitch at 600 volt load center 1R LCP. ER-05-INCOMING BKR. A failure of this handswitch could prevent automatic bus transfer of 600 volt load center 1R from Unit 2 power to Unit 1 power.

INTERIM CORRECTIVE ACTION:

FNP Unit 2 is presently not operational, therefore, this item does not apply; however, subsequent to Unit 2 fuel loading, the testing requirements of item 2 of this bulletin will be implemented until long term corrective action is completed.

c. Local handswitch on 600 volt bus 2D LCP. ED12-INCOMING BREAKER.
Local handswitch on 600 volt bus 2E LCP. EE12-INCOMING BREAKER.
Local handswitch on 600 volt bus 2D LCP. ED02-INCOMING BREAKER.
Local handswitch on 600 volt bus 2E LCP. EE02-INCOMING BREAKER.
Local handswitch on 600 volt bus 1S LCP. ES05-INCOMING BREAKER.
A failure of these switches could prevent an audible alarm on the EPB of a breaker trip.

INTERIM CORRECTIVE ACTION:

Due to the fact that failure of these handswitches will not affect the visual position indication of the EPB, Load Center, or Local Control Panel indicating a breaker trip, no corrective action is necessary prior to the implementation of the longer term corrective action.

d. Handswitch on Main Control Board N2C11HS-2109G - REACTOR BREAKER TRIP.
Handswitch on Main Control Board N2C11HS-2109H - REACTOR BREAKER TRIP.
A failure of these switches to makeup in the neutral position would prevent reset of the reactor trip breakers.

INTERIM CORRECTIVE ACTION:

Due to the fact that the failure of these switches' neutral position contacts to makeup in no way impairs their ability to perform their trip (or safety) function, no interim corrective action is to be implemented pending implementation of the long term corrective action.

3. Licensees of operating plants and holders of construction permits shall describe the longer term corrective measures planned and the date by which such measures will be implemented by actual installation or by design change, as appropriate. As a minimum, the longer term corrective measures should include rewiring the indicating light as shown in Figure 1 provided the light is readily visible to the control room operator. If not, failures of the neutral position contacts should be annunciated in the control room.

RESPONSE:

The nine FNP Unit 1 and the nine FNP Unit 2 switches utilizing neutral position contacts will be replaced as soon as replacements are available and plant conditions permit.

APPENDIX "A"

UNIT 1

ITEM NO.	ELEM. DIAG. DWG. NO.	SWITCH & LOCATION	BKR NO. & SERVICE	NORMAL POSITION CONTACT USED	REMARKS
1	D-177047	LHS AT 600V L.C. 1A LCP	EA08-L.C. 1A BUS TIE BKR	NO	
2	D-177050	LHS AT 600V L.C. 1A LCP	EA09-L.C. 1A TIE BKR TO L.C. 1D	NO	
3	D-177058	LHS AT 600V L.C. 1C LCP	EC08-L.C. 1C BUS TIE BKR	NO	
4	D-177059	LHS AT 600V L.C. 1C LCP	EC10-L.C. 1C TIE BKR TO L.C. 1E	NO	
5	D-177064	LHS AT 600V L.C. 1D LCP	ED08-L.C. 1D TIE BKR TO L.C. 1A	NO	
6	D-177070	LHS AT 600V L.C. 1E LCP	EE07-L.C. 1E TIE BKR TO L.C. 1C	NO	
7	D-177072	HS AT 600V L.C. 1D LCP	ED12-L.C. 1D INC BKR FROM L.C. 1F	YES CONTACT USED FOR EPB ALARM	SW W/PULL TO LOCK-OUT IN TRIP POSITION
8	D-177072	HS AT 600V L.C. 1E LCP	EE12-L.C. 1E INC BKR FROM L.C. 1F	↓	↓
9	D-177074	HS AT 600V L.C. 1D LCP	ED02-L.C. 1D INC BKR FROM STA SERVICE XFMR 1D	↓	↓
10	D-177074	HS AT 600V L.C. 1E LCP	EE02-L.C. 1E INC BKR FROM STA SERVICE XFMR 1E	↓	↓
11	D-177077	HS AT 600V L.C. 1D LCP	ED04- BKR TO BATT CHRGR 1A	NO	
12	D-177077	HS AT 600V L.C. 1E LCP	EE05- BKR TO BATT CHRGR 1B	NO	

ITEM NO.	ELEM. DIAG. DWG. NO.	SWITCH & LOCATION	BKR NO. & SERVICE	NORMAL POSITION CONTACT USED	REMARKS
13	D-177078	HS AT 600V L.C. 1D LCP	ED09- BKR TO BATT CHRGR 1C	NO	
14	D-177078	HS AT 600V L.C. 1E LCP	EE06- BKR TO BATT CHRGR 1C	NO	
15	D-177089/1	LHS AT 600V L.C. 1D LCP	ED10-BKR TO MCC 1A	NO	
16		LHS AT 600V L.C. 1E LCP	EE10-BKR TO MCC 1B	NO	
17		LHS AT 600V L.C. 1D LCP	ED05- BKR TO MCC 1F	NO	
18		LHS AT 600V L.C. 1E LCP	EE11- BKR TO MCC 1G	NO	
19		LHS AT 600V L.C. 1E LCP	EE14-BKR TO MCC 1T	NO	
20		LHS AT 600V L.C. 1D LCP	ED14- BKR TO MCC 1U	NO	
21		LHS AT 600V L.C. 1E LCP	EE15- BKR TO MCC 1V	NO	
22	D-177089/2	LHS AT 600V L.C. 1D LCP	ED13- BKR TO MCC 1S	YES - IN AUTO CLOSE CKT WHEN CTR. IS XFER'D TO 'LOCAL'	
23	D-177222/1	LHS AT 600V L.C. 1D LCP	ED15 - CTMT CLR 1A	NO	
24		LHS AT 600V L.C. 1D LCP	ED16 - CTMT CLR 1B	NO	
25		LHS AT 600V L.C. 1E LCP	EE08 - CTMT CLR 1C	NO	
26		LHS AT 600V L.C. 1E LCP	EE16 - CTMT CLR 1D	NO	
27	D-177262	LHS AT 600V L.C. 1D LCP	ED11 - CRDM CLNG FAN 1B	NO	
28	D-177262	LHS AT 600V L.C. 1E LCP	EE13 - CRDM CLNG FAN 1A	NO	

ITEM NO.	ELEM. DIAG. DWG. NO.	SWITCH & LOCATION	BKR NO. & SERVICE	NORMAL POSITION CONTACT USED	REMARKS
29	2825	600V BUS 1K LCP	EK02 INC. BREAKER	NO	
30	2826	↓	EK03 FDR. TO MCC 1K	NO	
31	282	↓	EK05 BUS TIE BRKR.	NO	
32	2825	600V BUS 1L LCP	EL02 INC. BREAKER	NO	
33	2826	↓	EL05 BUS TIE BRKR.	NO	
34	2826	↓	EL09 FDR. TO MCC 1L	NO	
35	2825	600V BUS 1H LCP	EH02 INC. BREAKER	NO	
36	2826	↓	EH03 FDR. TO MCC 1X	NO	
37	2826	↓	EH05 BUS TIE BRKR.	NO	
38	2825	600V BUS 1J LCP	EJ02 INC. BREAKER	NO	
39	2826	↓	EJ05 BUS TIE BRKR.	NO	
40	2826	↓	EJ09 FDR. TO MCC 1Y	NO	
41	2831	600V BUS 1R LCP	ER02 INC. BREAKER	YES	FAILURE OF CONTACT WOULD PREVENT AUTO. BREAKER CLOSE
42	2832	↓	ER03 FDR. TO MCC 1N	NO	
43	2831	600V BUS 1S LCP	ES02 INC. BREAKER	YES	CONTACT USED IN BREAKER TRIP ALARM (EPB)
44	2832	↓	ES03 FDR. TO MCC 1P	NO	

ITEM NO.	ELEM. DIAG. DWG. NO.	SWITCH & LOCATION	BKR. NO. & SERVICE	NORMAL POSITION CONTACT USED	REMARKS
45	2831	600V BUS 1S LCP	ES04 FIRE PROT. PUMP HOUSE	NO	
46	2775	DIESEL 1-2A LCP	DIESEL 1-2A SPEED CONT.	NO	
47	2775		DIESEL 1-2A MAN. VOLT. CONT.	YES	FAILURE OF CONTACT CLOSURE WILL NOT AFFECT DIESEL
48	2775		DIESEL 1-2A AUTO. VOLT. CONT.	YES	FAILURE OF CONTACT CLOSURE WILL NOT AFFECT DIESEL
49	2779	DIESEL 1B LCP	DIESEL 1B SPEED CONT.	NO	
50	2779		DIESEL 1B MAN. VOLT. CONT.	YES	FAILURE OF CONTACT CLOSURE WILL NOT AFFECT DIESEL
51	2779		DIESEL 1B AUTO. VOLT. CONT.	YES	FAILURE OF CONTACT CLOSURE WILL NOT AFFECT DIESEL
52	2783	DIESEL 1C LCP	DIESEL 1C SPEED CONT.	NO	
53	2783		DIESEL 1C MAN. VOLT. CONT.	YES	FAILURE OF CONTACT CLOSURE WILL NOT AFFECT DIESEL
54	2783		DIESEL 1C AUTO. VOLT. CONT.	YES	FAILURE OF CONTACT CLOSURE WILL NOT AFFECT DIESEL
55	2794	DIESEL 2C LCP	DIESEL 2C SPEED CONT.	NO	
56	2794		DIESEL 2C MAN. VOLT. CONT.	YES	FAILURE OF CONTACT CLOSURE WILL NOT AFFECT THE DIESEL
57	2794		DIESEL 2C AUTO VOLT. CONT.	YES	FAILURE OF CONTACT CLOSURE WILL NOT AFFECT THE DIESEL

ITEM NO.	ELEM. DIAG. DWG. NO.	SWITCH & LOCATION	BKR. NO. & SERVICE	NORMAL POSITION CONTACT USED	REMARKS
58	U-260544 U-175907	128 MCB SEC. A1	CTMT ISOLATION PHASE "B"	NO	
59		129 MCB SEC. A1	CTMT ISOLATION PHASE "B"	NO	
60		27 MCB SEC. A2	CTMT ISOLATION PHASE "B"	NO	
61		28 MCB SEC. A2	CTMT ISOLATION PHASE "B"	NO	
62		29 MCB SEC. A2	CTMT ISOLATION PHASE "A"	NO	
63		30 MCB SEC. A2	SAFETY INJ.	NO	
64		31 MCB SEC. A2	REACTOR TRIP	YES	
65		80 MCB SEC. C	REACTOR TRIP	YES	
66		81 MCB SEC. C	SAFETY INJ.	NO	
67		82 MCB SEC. C	CTMT ISOLATION PHASE "A"	NO	

APPENDIX "A"

UNIT 2

ITEM NO.	ELEM. DIAG. DWG. NO.	SWITCH & LOCATION	BKR. NO. & SERVICE	NORMAL POSITION CONTACT USED	REMARKS
1	D-207047	LHS AT 600V L.C. 2A LCP	EA08- L.C. 2A BUS TIE BKR	NO	
2	D-207050	LHS AT 600V L.C. 2A LCP	EA09- L.C. 2A TIE BKR TO L.C. 2D	NO	
3	D-207058	LHS AT 600V L.C. 2C LCP	EC08- L.C. 2C BUS TIE BKR	NO	
4	D-207059	LHS AT 600V L.C. 2C LCP	EC10- L.C. 2C TIE BKR TO L.C. 2E	NO	
5	D-207064	LHS AT 600V L.C. 2D LCP	ED08- L.C. 2D TIE BKR TO L.C. 2A	NO	
6	D-207070	LHS AT 600V L.C. 2E LCP	EE07- L.C. 2E TIE BKR TO L.C. 2C	NO	
7	D-207072	HS AT 600V L.C. 2D LCP	ED12- L.C. 2D INC BKR FROM L.C. 2F	YES CONTACT USED FOR EPB ALARM	SW W/PULL TO LOCK-OUT IN TRIP POSITION
8	D-207072	HS AT 600V L.C. 2E LCP	EE12-L.C. 2E INC BKR FROM L.C. 2F	↓	↓
9	D-207074	HS AT 600V L.C. 2D LCP	ED02- L.C. 2D INC BKR FROM STA SERVICE XFMR 2D	↓	↓
10	D-207074	HS AT 600V L.C. 2E LCP	EE02- L.C. 2E INC BKR FROM STA SERVICE XFMR 2E	↓	↓
11	D-207077	HS AT 600V L.C. 2D LCP	ED04- BKR TO BATT CHRGR 2A	NO	
12	D-207077	HS AT 600V L.C. 2E LCP	EE05- BKR TO BATT CHRGR 2B	NO	

ITEM NO.	ELEM. DIAG. DWG. NO.	SWITCH & LOCATION	BKR. NO. & SERVICE	NORMAL POSITION CONTACT USED	REMARKS
13	D-207078	HS AT 600V L.C. 2D LCP	ED09- BKR TO BATT CHRGR 2C	NO	
14	D-207078	HS AT 600V L.C. 2E LCP	EE06- BKR TO BATT CHRGR 2C	NO	
15	D-207089/1	LHS AT 600V L.C. 2D LCP	ED10- BKR TO MCC 2A	NO	
16		LHS AT 600V L.C. 2E LCP	EE10- BKR TO MCC 2B	NO	
17		LHS AT 600V L.C. 2D LCP	ED05- BKR TO MCC 1F	NO	
18		LHS AT 600V L.C. 2E LCP	EE09- BKR TO MCC 1G	NO	
19		LHS AT 600V L.C. 2E LCP	EE14- BKR TO MCC 2T	NO	
20		LHS AT 600V L.C. 2D LCP	ED14- BKR TO MCC 2U	NO	
21		LHS AT 600V L.C. 2E LCP	EE15- BKR TO MCC 2V	NO	
22	D-207089/2	LHS AT 600V L.C. 2D LCP	ED13- BKR TO MCC 1S	YES - IN AUTO CLOSE CKT WHEN CTRL IS XFER'D TO 'LOCAL'	
23	D-207222/1	LHS AT 600V L.C. 2D LCP	ED15 - CTMT CLR 2A	NO	
24		LHS AT 600V L.C. 2D LCP	ED16 - CTMT CLR 2B	NO	
25		LHS AT 600V L.C. 2E LCP	EE08 - CTMT CLR 2C	NO	
26		LHS AT 600V L.C. 2E LCP	EE16 - CTMT CLR 2D	NO	
27	D-207262	LHS AT 600V L.C. 2D LCP	ED11 - CRDM CLNG FAN 2A	NO	

ITEM NO.	ELEM. DIAG. DWG. NO.	SWITCH & LOCATION	BKR. NO. & SERVICE	NORMAL POSITION CONTACT USED	REMARKS
28	D-207262	LHS AT 600V L.C. 2E LCP	EE13- CRDM CLNG FAN 2B	NO	
29	D-207089/1	LHS AT 600V L.C. 2D LCP	ED06- BKR TO MCC 2CC	NO	
30	D-207089/1	LHS AT 600V L.C. 2E LCP	EE11- BKR TO MCC 2DD	NO	
31	D-202825/1	LHS AT 600V L.C. 1H LCP	EH08 - 600V L.C. 2H INC BKR	NO	
32	D-202825/1	LHS AT 600V L.C. 1J LCP	EJ08 - 600V L.C. 2J INC BKR	NO	
33	D-202825/2	LHS AT 600V L.C. 1K LCP	EK08 - 600V L.C. 2K INC BKR	NO	
34	D-202825/2	LHS AT 600V L.C. 1L LCP	EL08 - 600V L.C. 2L INC BKR	NO	
35	D-202831/1	LHS AT 600V L.C. 1S LCP	ES05 - 600V L.C. 1S INC BKR FR STA SERV XFMR 2S	YES CONTACT USED FOR EPB ALARM	
36	D-202831/2	LHS AT 600V L.C. 1R LCP	ER05 - 600V L.C. 1R INC BKR FR STA SERV XFMR 2R	YES CONTACT USED IN AUTO-CLOSE CKT	
37	D-202779	LHS/GS AT DSL LOCAL CTRL PNL	DSL GEN #2B SPEED CTRL	NO	
38	D-202779	LHS/MV AT DSL LOCAL CTRL PNL	DSL GEN #2B MANUAL VOLT. CTRL	YES CONTACT USED IN MAN. VOLT. CTRL CKT.	
39	D-202779	LHS/AV AT DSL LOCAL CTRL PNL	DSL GEN #2B AUTO. VOLT. CTRL	YES CONTACT USED IN AUTO VOLT CTRL CKT	
40	U-260544 U-175907	128 MCB SEC. A1	CTMT ISOLATION PHASE "B"	NO	

ITEM NO.	ELEM. DIAG. DWG. NO.	SWITCH & LOCATION	BKR. NO. & SERVICE	NORMAL POSITION CONTACT USED	REMARKS
41	U-215854 U-215853	129 MCB SEC. A1	CTMT ISOLATION PHASE "B"	NO	
42		27 MCB SEC. A2	CTMT ISOLATION PHASE "B"	NO	
43		28 MCB SEC. A2	CTMT ISOLATION PHASE "B"	NO	
44		29 MCB SEC. A2	CTMT ISOLATION PHASE "A"	NO	
45		30 MCB SEC. A2	SAFETY INJ.	NO	
46		31 MCB SEC. A2	REACTOR TRIP	YES	
47		80 MCB SEC. C	REACTOR TRIP	YES	
48		81 MCB SEC. C	SAFETY INJ.	NO	
49	↓	82 MCB SEC. C	CTMT 'SOLATION PHASE "A"	NO	