## VIRGINIA ELECTRIC AND POWER COMPANY

## RICHMOND, VIRGINIA 23261

### June 22, 1989

U. S. Nuclear Regulatory Commission	Serial No.	88-788D
Attn: Document Control Desk	SPS/GDM:pmk	
Washington, D. C. 20555	Docket Nos.	50-280 50-281
	Licensee Nos.	DPR-32

DPR-37

Gentlemen:

### VIRGINIA ELECTRIC AND POWER COMPANY SURRY POWER STATION UNITS 1 AND 2 SUPPLEMENTAL RESPONSE TO NRC BULLETIN NO. 88-10 NONCONFORMING MOLDED CASE CIRCUIT BREAKERS

As discussed in our previous response to the subject bulletin (Letter No. 88-788B, dated April 3, 1989, we have completed additional actions to ensure that only qualified molded case circuit breakers (MCCBs) can be used in safety related applications. We have taken these actions to ensure a conservative approach was used to disposition the stock and installed MCCBs. In preparing this supplemental response, we considered the recent discussions between the NRC Staff and the Nuclear Management and Resources Council regarding future guidance in addressing ongoing NRC Bulletin 88-10 activities. Our revised response is provided in the enclosure.

The information contained herein is true and accurate to the best of my knowledge. If you require additional information, please contact us.

Very truly yours,

1. Stewart

Senior Vice President - Power

Enclosure

cc: U. S. Nuclear Regulatory Commission Region II 101 Marietta Street, N.W. Suite 2900 Atlanta, GA 30323

> Mr. W. E. Holland NRC Senior Resident Inspector Surry Power Station

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## COMMONWEALTH OF VIRGINIA )

COUNTY OF HENRICO

The foregoing document was acknowledged before me, in and for the County and Commonwealth aforesaid, today by J. L. Wilson who is Assistant Vice President - Nuclear, of Virginia Electric and Power Company. He is duly authorized to execute and file the foregoing document in behalf of that Company, and the statements in the document are true to the best of his knowledge and belief.

Acknowledged before me this <u>22</u> day of <u>Alune</u>, 19<u>89</u>. My Commission Expires: <u>Lebruary</u> 25, 19<u>90</u>.

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(SEAL)

### Enclosure

#### RESPONSE TO NRCB 88-10 AND SUPPLEMENT 1

#### Action Requested 1a)

Identify all molded-case CBs purchased prior to August 1, 1988 that are being maintained as stored spares for safety-related (Class 1E) applications or commercial grade CBs that are being maintained as stored spares for future use in safety-related applications; this includes CBs purchased from a CBM or from any other source.

#### Response

The MCCBs being maintained as stored spares for use in safety-related applications have been identified and are listed in Table 1. A review of stock items was also performed for MCCBs that may have been provided in electrical panels or motor control centers. No additional MCCBs were identified as a result of this effort.

#### Action Requested 1b)

Verify the traceability of these MCCBs.

#### Response

The traceability of the MCCBs maintained in stock has been reevaluated. Although correspondence obtained from both intermediate suppliers and circuit breaker manufacturers provided a MCCB procurement chain, actual procurement/ shipping records were not available for review in most instances. Commercial suppliers stated that they often purchase breakers in bulk to use as their in-house stock; consequently, individual breakers purchased from the suppliers are drawn from their stock and are generally not <u>directly</u> traceable to the CBM through shipping records. Therefore, to be conservative, we consider the MCCBs identified in Table 1 as non-traceable.

#### Action Requested 1c

Identify the number, manufacturer, model number, and to the extent possible, the procurement chain for all those CBs identified in (1a) that cannot be traced to the CBM.

#### Response

This information is provided in Table 1.

### Action Requested 2)

All holders of operating licenses who identify installed CBs per item 1 above or item 4 below that cannot be traced to a CBM are requested to prepare, within 30 days of the completion of each item, an analysis justifying continued operation until items 1 through 5 of the actions requested in this bulletin have been completed.

#### Response

The installed nontraceable MCCBs have been identified and are currently being tested per the bulletin requirements. The testing of the Unit 1 MCCBs is complete with no breaker failures. Five Unit 2 MCCBs have been satisfactorily tested as well, with the remainder to be tested prior to Unit 2 startup. A justification for continued operation is not required.

#### Action Requested 3)

All addressees who identify 80 percent or more CBs traceable to the CBM per item 1 above are requested to test the CBs that are not traceable to the CBM in accordance with the test program described in Attachment 1. Any installed CBs that fail any of these tests should be replaced with CBs that meet the criteria of item 7 of the actions requested or CBs that pass all tests in accordance with the testing program described in Attachment 1. If more than 10 percent of the CBs tested fail any of the tests described in Attachment 1, continue with item 4; otherwise, proceed to item 6 of the actions requested.

Holders of operating licenses are requested to complete this testing program before startup from the first refueling outage beginning after March 1, 1989.

#### Response

As discussed in Action 1b above, the MCCBs maintained in stock for use in safety-related applications have been conservatively considered as nontraceable. Controls have been implemented to prohibit issue of a MCCB for plant installation until the breaker is tested in accordance with the bulletin testing requirements. A station procedure has been implemented to perform the testing. General testing or replacement of the MCCBs in stock to eliminate the administrative controls will be accomplished in accordance with the established schedule provided in the bulletin.

#### Action Requested 4)

All addressees who identify less than 80 percent of the CBs traceable to the CBM per item 1 above or who identify a failure rate of more than 10 percent for the CBs tested per item 3 above are requested to perform the following actions:

a) Identify all molded-case CBs that have been purchased between August 1, 1983 and August 1, 1988, and installed in safety-related applications as replacements or installed during modifications.

#### Response

The MCCBs installed in safety-related systems between August 1, 1983 and August 1, 1988 have been identified and are provided in Table 2.

b) Verify the traceability of these MCCBs.

Response

See Table 2.

c) Identify the number, manufacturer, model number, system in which they are/were installed, and to the extent possible, the procurement chain for all those CBs identified in (4a) that cannot be traced to the CBM.

Response

See Table 2.

#### Action Requested 5)

All addressees who identify installed CBs that cannot be traced to the CBM per item 4 above are requested to replace these CBs with components that meet the criteria of item 7 of the actions requested or to test them in accordance with the program described in Attachment 1; CBs that fail any of these tests should be replaced with CBs that meet the criteria of item 7 of the actions requested or CBs that pass all tests in accordance with the test program described in Attachment 1. Holders of operating licenses are requested to replace or to test at least one-half, or all if the total number is less than 75, of these installed CBs before startup from the first refueling outage beginning after March 1, 1989. The remaining CBs should be replaced or tested before startup from the second refueling outage beginning after March 1, 1989.

#### Response

The MCCBs identified in Table 2 are currently being tested. The testing of the Unit 1 MCCBs is complete with no breaker failures. Five Unit 2 MCCBs have been satisfactorily tested as well, with the remainder to be tested prior to Unit 2 startup.

#### Action Requested 6)

Information generated while performing the actions requested in items 1, 2, 3, 4 and 5 above should be documented and maintained for a period of 5 years after the completion of all requested actions.

### Response

The information collected to satisfy actions 1-5 above will be maintained on site in an auditable fashion for a minimum of 5 years.

### Action Requested 7)

With the exception of actions taken in response to items 3 and 5 of the actions requested above, molded-case CBs installed in safety-related applications after August 1, 1988 should be:

- a. Manufactured by and procured from a CBM under a 10 CFR 50, Appendix B, program; or
- b. Procured from a CBM or others with verifiable traceability to the CBM, in compliance with applicable industry standards, and upgraded to safety-related by the licensee or others using an acceptable dedication program.

#### Response

The documents used to procure safety-related MCCBs have been revised to require traceability of the MCCBs to a CBM. In addition, MCCB purchase orders (POs) issued since August 1, 1988 were reviewed. Outstanding POs were amended to require traceability to a CBM. Two MCCBs were received after August 1, 1988, but prior to implementation of the new traceability requirements. These two breakers have been removed from stock. The existing non-traceable MCCBs in stock as of August 1, 1988 that successfully pass the bulletin testing requirements will be considered acceptable for use in safety-related applications. MCCBs procured after August 1, 1988 from a commercial supplier and traceable to a CBM will be tested prior to installation until the process is replaced by an enhanced dedication program.

A procurement engineering group has been established to review each purchase requisition to provide assurance that the appropriate traceability, testing and/or dedication requirements have been imposed. An enhanced dedication program for upgrading commercial grade equipment for safety-related applications is presently under development.

# <u>Table 1</u>

# NON-TRACEABLE SAFETY-RELATED MCCBS MAINTAINED IN STOCK AS SPARES

Item	<u>No.</u>	Manufacturer	Model No.	Probable Procurement Chain
1.	12	Square D	Q0B150	Electrical Suppliers, Inc. from Stock/Square D
2.	4	Square D	Q0B260	Unknown
3.	2	Square D	A1B130	ECK Supply Co.
4.	9	Square D	A1B20AMP	Electrical Suppliers, Inc. from Square D
5.	2	Square D	A1B260	ECK Supply Co. from Square D
6.	4	Square D	A1B50AMP	ECK Supply Co. from Square D
7.	7	Square D	QOB130AMP	Foster Electric from Square D
8.	1	Square D	Q0B120	Electrical Suppliers, Inc. from Stock/Square D
9.	4	Westinghouse	EB3060	Electrical Suppliers, Inc. from East Coast Panelboard from Westinghouse
10.	6	Westinghouse	EBH3070	Westinghouse Electric Supply Co. (WESCO) from Westinghouse
11.	9	Westinghouse	FB3015	Electrical Suppliers, Inc. from East Coast Panelboard from Westinghouse
12.	9	Westinghouse	FB3020	WESCO from Westinghouse
13.	9	Westinghouse	FB3030	WESCO from Westinghouse
14.	3	Westinghouse	FB3040	WESCO from Westinghouse
15.	3	Westinghouse	FB3040L	WESCO from Westinghouse

Item	<u>No.</u>	Manufacturer	Model No.	Probable Procurement Chain
16.	6	Westinghouse	FB3050	Westinghouse
17.	4	Westinghouse	FB3070	WESCO from Westinghouse
18.	6	Westinghouse	JA3175W	WESCO from Westinghouse
19.	1	Westinghouse	JA3125W	Jarrett Electric
20.	1	Westinghouse	JA3225W	WESCO from Westinghouse
21.	4	Westinghouse	FB3100	Electrical Suppliers, Inc. from East Coast Panelboard or Westinghouse
22.	13	ITE	Q130	Peebles from ITE Electrical Products
23.	2	Heinemann	000222001	Gammametrics from POCO Sales from Heinemann
24.	1	Westinghouse	KA3225	Electrical Equipment co. from Westinghouse
25.	1	Westinghouse	2341D87H27	Westinghouse

TOTAL NUMBER: 123

# <u>Table 2</u>

# INSTALLED NON-TRACEABLE/TRACEABLE MCCBS

Item	No.	Manufacturer	Model No.	Installed Location	Probable Procurement Chain
1.*	16	Square D	Q1B2100VH	Vital Bus Panels' Feeder Breakers (VBI-1,1A; 1-4) (VBII-1,1A; 1-4)	Electrical Suppliers, Inc. from Square D
2.	2	Westinghouse	EHB2020	EDG Control Panel (DC 1A CKT11) (DC 2A CKT6)	Electrical Suppliers, Inc.
3.	2	Westinghouse	HFB3070	Alternate Power Supply for Semi-Vital Bus (1H1-1211; 2H1-1211)	Electrical Suppliers, Inc.
4.	1	Westinghouse	FB3015	Charging Pump Suction Line MOV (01-CH-MOV-1286A)	Electrical Suppliers, Inc. from Electrical Panelboard or Westinghouse
5.	2	Square D	AIB120	Semi-Vital Bus Panel (2SVB1-CKT-16, 26)	(16)-ECK Supply Co. from Square D (26)-Electrical Suppliers, Inc. from Stock/Square D
6.	1	Westinghouse	FB3015	RX Side Fuel Assembly Upender Cabinet (02-FH-BKR-NA)	Electrical Suppliers, Inc. from Electrical Panelboard or Westinghouse
7.	1	Westinghouse	FB3015	Heat Trace Panel #5 (01-CH-HTT-CKT-2)	Electrical Suppliers, Inc. from Electrical Panelboard or Westinghouse
8.	1	Square D	Q0B120	Heat Trace Panel 2A2 (01-CH-HTT-CKT-36)	Electrical Suppliers, Inc. from Stock/Square D

<u>Item</u>	No.	Manufacturer	Model No.	Installed Location	Probable Procurement Chain
9.	1	Westinghouse	FB3040	Emergency Switchgear Room Ventilation Equip. (02-EP-BKR-124B)	WESCO from Westinghouse
10.	2	Westinghouse	KA3225	Control Room Ventilation Chillers (01-VS-E-4B,C)	Electrical Equipment Co. from Westinghouse
11.	1	Westinghouse	EHB3070A	Pressurizer Heater (02-RC-BKR-44)	WESCO from Westinghouse
12.	1	Square D	AIB215	Main Steam Trip Valve (DC Panel 2-1-CKT-8) (02-EPD-PNL-2-1-8)	Electrical Suppliers, Inc. from Stock/Square D
13.	. 1	Square D	AIB220	(DC Panel 1-2-CKT-B) (01-EPD-BKR-PN-1-2)	ECK Supply, Co. from Square D
14.	1	Westinghouse	JA3150W	Control Rod Drive Mechanism Shroud Cool- ing Fan (1-VS-F-60C)	WESCO from Westinghouse
15.	1	Square D	Q0B120	Heat Trace Panel 2A1 (01-CH-HTT-2A154)	Electrical Suppliers, Inc. from Stock/Square D
16.**	1	Square D	Q0B120	Heat Trace Panel 2B3 (02-CH-HTT-2B3-03)	Electrical Suppliers, Inc. from Stock/Square D
17.**	1	Square D	QOB120	Heat Trace Panel 2B1 (01-CH-HTT-2B1-16)	Unknown
18.*	6	Westinghouse	(1) Five Star 480V MCC (6) HFB 20A	Motor Control Center w/ (6) 20 Amp Breakers (DCP 88-33)	Public Service of Indiana from Westinghouse

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# <u>Notes</u>:

\* Traceable

\*\* Installed after 8/88

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Item	No.	Manufacturer	Model No.	Installed Location	Probable Procurement Chain
19.*	4	Westinghouse	FD3150L	EDG Excitation BKR (EWR 88-578)	Spectrum Technologies from Westinghouse
20.*	3 9 15 6	Westinghouse Westinghouse Westinghouse Westinghouse	HFB2100 HFB2050 HFB2030 HFB2020	DC Panels 1A/2A	Systems Control from Westinghouse
21.*	1	Westinghouse	JD3200	Alternate Power Supply to 1-VS-E-4B	Spectrum Technologies from Westinghouse
Total: Non-Traceable - 20 Traceable - 60					

TOTAL NUMBER: 80

## Note:

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\* Traceable