OCTHEAST LITIL LAST LITILITIES BEAVILE CO

General Offices . Selden Street, Berlin, Connecticut

P.O. BOX 270 HARTFORD, CONNECTICUT 06141-0270 (203) 665-5000

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80).<sup>125</sup>

November 27, 1989

Docket Nos. 50-213 A07666 NRC Bulletin No. 88-10

U. S. Nuclear Regulatory Commission Attention: Document Control Desk Washington, DC 20555

References: (1) NRC Bulletin No. 88-10 "Nonconforming Holded Case Circuit Breakers," dated November 22, 1988.

> (2) E. J. Mroczka letter to USNRC, "NRC Bulletin No. 88-10, Nonconforming Molded Case Circuit Breakers," dated June 16, 1989.

Gentlemen:

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## Haddam Neck Plant NRC Bulletin No. 88-10 Nonconforming Molded Case Circuit Breakers (TAC 71319 and 71320)

Ret

Reference (1) requested Licensees to determine if any molded case circuit breakers held as safety-related spares, or, in certain circumstances, installed in safety related systems, could have been potentially refurbished. If documentation is not available tracing the circuit breaker back to the circuit breaker manufacturer (CBM), then the circuit breaker is suspect and must be tested or replaced.

Reference (2) provided our latest update in response to Reference (1). The purpose of this letter is to provide a further update on Haddam Neck's actions which was committed to in Reference (2).

PDR

8912040154

ADOCK

USNRC A07666/Page 2 December 8, 1989

Attachment No. 1 to this letter updates Attachment No. 1 of Reference (2) for Haddam Neck. Several in stock breakers were tested in accordance with Reference (1). Three failed some portion of the test. Data sheets on failures are included as Attachment 2. This completes all actions required by Reference (1). If there are any questions, do not hesitate to contact my staff directly.

Very truly yours,

CONNECTICUT YANKEE ATOMIC POWER COMPANY

E. J. Mróczka Senior Vice President

cc: W. T. Russell, Region I Administrator A. B. Wang, NRC Project Manager, Haddam Neck Plant J. T. Shedlosky, Senior Resident Inspector, Haddam Neck Plant

STATE OF CONNECTICUT

) ss. Berlin

COUNTY OF HARTFORD

Then personally appeared before me, E. J. Mroczka, who being duly sworn, did state that he is Senior Vice President of Connecticut Yankee Atomic Power Company, Licensee herein, that he is authorized to execute and file the foregoing information in the name and on behalf of the Licensee herein, and that the statements contained in said information are true and correct to the best of his knowledge and belief.

My Commission Expires March 31, 1993

Docket Nos. 50-213 A07666

ATTACHMENT NO. 1

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HADDAM NECK PLANT RESPONSE TO NRC BULLETIN NO. 88-10

DECEMBER 1989

Attachment 1 A07666/Page 1

OTY.	SUPPLIER	MFGR.	CHAIN	MODEL NO.	APPLICATION	ABIL	
1	Westinghouse	¥		EB2050	Spare GSU Trans- former	N	•
1	Westinghouse	Ā		FB3020L	Trash Basket Hoist	N	+
1	Westinghouse	¥	1	EH2015	DC Panel A CKT 16	N	**
1	Westinghouse	¥	1	EH2015	DC Panel B CKT19	N	**
1	Electric Wholesalers	V		FB3040L	DH-MOV-310	N	+
1	Electric Wholesalers	Ŵ		FP3040L	FH-MOV-508	N	
1	Electric Wholesalers	V		FA3030	RCP Bearing Lift Pump	N	
1	Electric Wholesalers	V		FB3040L	RC-MOV-512	N	+
1	Vestinghouse	V		HFB3040	RC-MOV-510		+
1	Electric Wholesalers	V		FB3040L	DH-MOV-544	N	+
1	Westinghouse	V		HFD3015	SW-MOV-1	N	+
1	Electric Wholesalers	V		HFA3040	CD-MOV-10	N	+
1	Westinghouse	V	1	EH2015	DC Panel A CKT 17		**
1	Electric Wholesalers	V		FB3015	SS Transformer fan		+
1	Vestinghouse	V		MC3800F	MCC3 Tie Breaker		*
1	Westinghouse	V		MC3800F	MCC4 Tie Breaker	N	*
1	Westinghouse	V		MC3800F	MCC8 Tie Breaker	N	*
2	WESCO	V		EB2020	DC Panels 1C, 1D	N	+
1	VESCO	V		HFD3015	SW-MOV-2	1. S	
1	Electric Wholesalers	Ā		FB3030	Switchgear Room Air Supply Fan	N	+

## HADDAM NECK

\* Determined to be non-safety related.

\*\* Replaced temporarily with a non-traceable breaker which passed the Bulletin 88-10 test program.

+ Traceable spares are being installed during the ongoing refueling outage.

1 Via Voyten Electric

Docket Nos. 50-213 A07666

ATTACHMENT NO. 2

HADDAM NECK PLANT RESPONSE TO NRC BULLETIN NO. 88-10

DECEMBER 1989

AND ARE PARTY IN TRUNK			SPL 10.8-9 Revision 1
		ATTACHMENT 12.1	AUG 30 1989
• •	Circuit Devel		
Molded C	ase Circuit Breat	ker/Motor Circuit Protector	Data Sheet (page 1 01 2)
Breaker Supplies the fo	ollowing load: SPARE	FROM WAREHOUSE .	
Breaker Location (Cub	nicle/Position #): Beune	OR DESCUTED WITH THE LETTOR	"""" "B." AWO #: CY-E9-09326
		Breaker Nameplate Data	
Size/Pating	15 A/	V. (AC or DC ?) N	Number of Poles;
Breaker Type: E	H 2015 N	Manufacturer: WEBANGHOUSE	Setting: N/A
INSPECT the bre	aker per Section 6.2	Comments: NO VOLTACE R	ATTNICS ATTATION TO BRUTKLE.
instruct the ore.	and per beenen on	-	
		Inspection res	sults PASS or FAIL (Circle one)
VERIFY that the	breaker opens and c	loses per step 6.2.4 Results: PA	ASS or FAIL (Circle one)
States in address of the second se	T RESISTANCE	the state of the second s	ole B the Pole C
	First Close:	195.02 mv \$ 115.	Inv & NIA Q
Ambient Temp.	Second Close:	186.15mv Q 113.	85m/ ΩΩ
74 Fa 23.3 C		240.10mv 0 116.	<u>17m<sup>3</sup> Ω</u> Ω
	Pole Averages:	207.20ml st 115.	
ls this statement tr	ue? Highest Pole av	verage. ≤ 1.5 X Lowest Pole ave	erage. Pass or FaiD (circle one)
100% Hold-In			
If rated ≤ 5	60 amps, must hold	100% rated for 1 hour. Pass or 1	Fail (Circle one)
	50 amps, must hold	100% rated for 2 hours. Pass or	r Fail (Circle one)
If rated > 5			
135% Trip Test If rated ≤ 5 If rated > 5	50 amps, must trip < 50 amps, must trip <		t applied. Pass or Fail (Circle one) nt applied. Pass or Fail (Circle one) Circle one)
135% Trip Test If rated ≤ 5 If rated > 5 PERFORM 600	50 amps, must trip < 50 amps, must trip < % Cycle Test per	2 hours with 135% rated current control of the state o	Tircle one)
135% Trip Test If rated ≤ 5 If rated > 5 PERFORM 600 <sup>4</sup> INSTANTANEOU	50 amps, must trip < 50 amps, must trip < % Cycle Test per	• Section 6.5: Pass or Fail (C	Tircle one)
135% Trip Test If rated ≤ 5 If rated > 5 PERFORM 600 INSTANTANEOU LOW (or Fixed)	50 amps, must trip < 50 amps, must trip < % Cycle Test per	• Section 6.5: Pass or Fail (C	Tircle one)
135% Trip Test If rated ≤ 5 If rated > 5 PERFORM 600 <sup>4</sup> INSTANTANEOU LOW (or Fixed) HIGH	50 amps, must trip < 50 amps, must trip < % Cycle Test per US Minimum	2 hours with 135% rated currents Section 6.5: Pass or Fail (C Actual Pole Trip Currents	ircle one) (in amperes) Maximum
135% Trip Test If rated ≤ 5 If rated > 5 PERFORM 600 <sup>4</sup> INSTANTANEOU LOW (or Fixed) HIGH COMPARE the actual	50 amps, must trip < 50 amps, must trip < % Cycle Test per US Minimum al tripping currents to th	2 hours with 135% rated currents Section 6.5: Pass or Fail (C Actual Pole Trip Currents he minimum and maximum allowable licable): Apply "As Found" setting	tircle one) (in amperes) Maximum currents: Pass or Fail (Circle one)
135% Trip Test If rated ≤ 5 If rated > 5 PERFORM 600 <sup>4</sup> INSTANTANEOU LOW (or Fixed) HIGH COMPARE the actual	50 amps, must trip < 50 amps, must trip < % Cycle Test per US Minimum al tripping currents to th r adjustment (if appl	2 hours with 135% rated currents Section 6.5: Pass or Fail (C Actual Pole Trip Currents he minimum and maximum allowable licable): Apply "As Found" setti 300% OVERLOAD Trip Test	tircle one) (in amperes) (in am
135% Trip Test If rated ≤ 5 If rated > 5 PERFORM 600 <sup>4</sup> INSTANTANEOU LOW (or Fixed) HIGH COMPARE the actual In-Service breaker Min. Time	50 amps, must trip < 50 amps, must trip < 50 amps, must trip < % Cycle Test per US Minimum al tripping currents to the r adjustment (if apple	2 hours with 135% rated current Section 6.5: Pass or Fail (C Actual Pole Trip Currents  ne minimum and maximum allowable licable): Apply "As Found" setti 300% OVERLOAD Trip Test ec. B sec. C	int applied. Pass or Fail (Circle one)  (in amperes) Maximum  currents: Pass or Fail (Circle one)  ings(initials or N/A)
135% Trip Test If rated ≤ 5 If rated > 5 PERFORM 600 <sup>4</sup> INSTANTANEOU LOW (or Fixed) HIGH COMPARE the actual In-Service breaker Min. Time	50 amps, must trip < 50 amps, must trip < 50 amps, must trip < % Cycle Test per US Minimum al tripping currents to the r adjustment (if apple	2 hours with 135% rated currents Section 6.5: Pass or Fail (C Actual Pole Trip Currents he minimum and maximum allowable licable): Apply "As Found" setti 300% OVERLOAD Trip Test	int applied. Pass or Fail (Circle one)  (in amperes) Maximum  currents: Pass or Fail (Circle one)  ings(initials or N/A)

3					SPL 10.8-9 Revision 1
		ATT	ACHMENT 12.1		AUG 30 1989
Molded	Case Circuit I	Breaker/Moto	or Circuit Protecto	r Data S	heet (page 2 of 2)
Line to Load, brea Pole to ground, br	ker open PA: eaker open PA:	SS or FAIL	Line to Line.	, breaker c nd, breake	ither PASS or FAIL) losed PASS or FAIL r closed PASS or FAIL
Test Equipment: QA Number Due Date	Ducter 2745 11-3-89	<u>дим</u> 2805 1219/89	·····		************************************
REMOVE breaker	from service;	Wi	N/+ res Marked By:		Wires Verified By:
RETURN breaker (per step 6.1		Returt	vix ned to Service By:	w	ires Verified/Tight By:
Tested By:	maler & C	240.0-	Initials DE	_Date _	9-18-89
Tested By:	and glu	ku g	Initials_ Pro	_Date _	9-18-87
Reviewed By :	Rogn Seo	y		Date _	9-29-89
Approved By:				Date _	

RETESTED BREAKER UNDER REVISED SPLID. 8-9, THE BREAKER FAILED SETTION 6.3 "TEST THE BREAKER CONTACT RESISTANCES."

	AUG 30 1989 r Data Sheet (page 1 of 2)
Molded Case Circuit Breaker/Motor Circuit Protecto Breaker Supplies the following load: SPARC FROM WARCHARS Breaker Location (Cubicle/Position #): BROKER DESIGNATIO WITH THE LETT	r Data Sheet (page 1 of 2)
Breaker Supplies the following load: SPARC FROM WARCHAS	(1-5 01 -)
Breaker Location (Cubicle/Position #): BROAKER DEBIGUATED WITH THE LETT	
States and a state of the state	R "HC" AWO #: CY-89-09236
Breaker Nameplate Data	
Size/Rating: V. (AC or DC ?)	Number of Poles;
Breaker Type: EH3015 Manufacturer: NESTINGHOUSE	Setting: N/+
INSPECT the breaker per Section 6.2. Comments: No Wilmer R	
Inspection res	sults: PASS or FAIL (Circle one)
VERIFY that the breaker opens and closes per step 6.2.4 Results: P/	ASS or FAIL (Circle one)
<b>*</b> / <b>*</b>	ole B Pole C
	SAV Q N/A Q
	7mr 0 Ω
23.3 °C Third Close: 134.1mv c 184	Sand in a
Pole Averages: 140.5 ml d 220	cinv Q V Q
Is this statement true? Highest Pole average. ≤ 1.5 X Lowest Pole ave	rage. Pass of Fail (circle one)
100% Hold-In Test:	
If rated $\leq$ 50 amps, must hold 100% rated for 1 hour. Pass or I	ail (Circle one)
If rated > 50 amps, must hold 100% rated for 2 hours. Pass or	
135% Trip Test:	ran (Cucie one)
If rated $\leq$ 50 amps, must trip < 1 hour with 135% rated current If rated $>$ 50 amps, must trip < 2 hours with 135% rated current	applied. Pass or Fail (Circle one)
If rated > 50 amps, must trip < 2 hours with 135% rated curren	t applied. Pass or Fail (Circle one)
PERFORM 600% Cycle Test per Section 6.5: Pass or Fail (Cir	rcle one)
NSTANTANEOUS Minimum Actual Pole Trip Currents (	in amperes) Maximum
OW (or Fixed)	Maximum
HIGH	
OMPARE the actual tripping currents to the minimum and maximum allowable c	urrents: Pass or Fail (Circle one)
n-Service breaker adjustment (if applicable): Apply "As Found" settin	gs(initials or N/A)
300% OVERLOAD Trip Test	
Ain. Time A sec. B sec. C	sec. Max time
COMPARE the actual tripping currents to the minimum and maximum allowable cu	and the second state of the second state of the second state and the second state of t
19 of 28	

		SPL 10.8-9 Revision 1
Molded Case Circuit	ATTACHMENT 12.1 Breaker/Motor Circuit Protecto	AUG 30 1989 or Data Sheet (page 2 of 2)
Line to Load, breaker open PA Pole to ground, breaker open PA		(circle either PASS or FAIL) , breaker closed PASS or FAIL and, breaker closed PASS or FAIL ove tests:
Due Date     Due Tele	<u>Ъмм</u>	······································
REMOVE breaker from service;	Wires Marked By:	
ETURN breaker to service: (per sup 6.11.5)	Returned to Service By:	N/A
Tested By: Donald A.	0	Wires Verified/Tight By: Date 9-18-89
Fested By: Paul 7/1	litials Pro	Date 9-18-87
Reviewed By :_ Roger tu	nye	Date 9-29-89
Approved By:		Date
CTESTO BROKER WOOR	REVISCO SAL 10.2-9. THE BELAN	COD Environ Set Mart 10 3
Теъг тне Вгичког союте	T RESSIMILS."	
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			SPL 10.8-9 Revision 1
		ATTACHMENT 12.1	AUG 30 1989
Molded Ca	ase Circuit Bro	eaker/Motor Circuit Protector Data Sh	eet (page 1 of 2)
reaker Supplies the fo	llowing load: Sem	RE FROM WAREHOUSE	
reaker Location (Cubi	cle/Position #): B2	EARER DESIGNATED WITH THE LETTER "G."	AWO #: <1-87-072.36
		Breaker Nameplate Data	
ize/Rating:15	A.1 SEE CO	MCNT5V. '(AC or DC ?) Number of	Poles; _2
Breaker Type: El	+2015	Manufacturer: NESTRUMENSE Setti	ng://
NSPECT the brea	ker per Section	6.2. Comments: SGAM WHERE RECUTS BYCK PUZZ	MEET IS CHINATED AND VERY
LAT IN ZANG. NO	NOLTIGE RATINGS A	TACHED TO HE BELAKER.	
		Inspection results PAS	
ERIFY that the b	reaker opens and	d closes per step 6.2.4 Results: PASS or FA	IL (Circle one)
EST CONTAC	T RESISTANC		Pole C
	First Close:	76nv 68.7 mg 2000/14.96 0	N/A D
	Second Close:	16mv/ 1.73 Ω 1220129.7 m Ω	Ω
IL C	Third Close:	201m/ 2.36 0 30 53.7m 0	ΩΩ
	Pole Averages:	15.m / 1. 386 Ω 200/ 5.01 Ω	ΩΩ
s this statement tru	e? Highest Pole	average. ≤ 1.5 X Lowest Pole average. Pas	s of Fail Acircle one)
100% Hold-In T If rated $\leq 5$	Cest: SEE DE 0 amps, must ho	AT PAGE Fix Remarks TAKEN AF	e one)
		ld 100% rated for 2 hours. Pass or Fail (Circ	
If rated > 5	0 amps, must trij 0 amps, must trij	p < 1 hour with 135% rated current applied. p < 2 hours with 135% rated current applied. per Section 6.5: Pass or Fail (Circle one)	Pass or Fail (Circle one)
		Actual Pole Trip Currents (in amper	
	a wununum	Actual Fore The Currents (at an per	
LOW (or Fixed)	+		
HIGH	11		ass or Fail (Circle or e)
COMPARE the actua	I tripping currents to	o the minimum and maximum allowable currents: P	use of t all (choice of c)
In-Service breaker	adjustment (if a	pplicable): Apply "As Found" settings.	(initials or N/A
		300% OVERLOAD Trip Test	companyation in the second
Min. Time	_ A	and the second	ec. Max time
COMPARE the actua	l tripping currents t	to the minimum and maximum allowable currents: P	ass or Fail (Circle one)
		19 of 28 BT AS VARVING CONTACT RESISTANCE	DONILONITO THE THE

						SPL 10.8-9 Revision 1		
Molded	Case Circuit	AUG 30 1989 Data Sheet (page 2 of 2)						
Line to Load, br Pole to ground,	reaker open P. breaker open P.	the 2500V DC ASS or FAIL ASS or FAIL ion resistance me	Line Pole	to Line, to groun	breaker id, break	either PASS or FA closed PASS of er closed PASS of	or FAIL	
Fest Equipment: QA Number Due Date	2745 11-30-87	DAM 2805 12/9/89						
REMOVE break	ker from service;		N/s es Marked By:			مُزَر Wires Verified By:		
RETURN break	Contraction of the second s	second second second ments in the second sec	N/.1 Returned to Service By:			Wires Verified/Tight By:		
	Domail A. Faul glu	Chrip.	Initials Initials	0-1	_Date	<u>9-15-89</u> <u>9-18-89</u> 9-23-19		
Reviewed By :	Kozu D	uny			Date Date			
100 6.3.11.A.	.2							
First and	Pace 1 1.23 R	Pole 2.	-					
izenso Einx	.517 52	1.02 2						
THIRD CLOSE	1.1752	,275A	*******					
le Andereis	.9752	.51552	1					
Ai Fr	BUVE RESULTS MURE FOR CON	CONSTITUTES A	£.					
			20 of 28					