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50-370 William B. McGuire Nuclear Station, Unit 2, Duke Power Co. 05000370

50-413 Catawba Nuclear Station, Unit 1, Duke Power Co. 05000413

50-414 Catawba Nuclear Station, Unit 2, Duke Power Co. 05000414

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SUBJECT: Forwards revised response to NRC Bulletin 88-010,
"Nonconforming Molded-Case Circuit Breakers."

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TITLE: Bulletin Response 88-10 - Nonconforming Molded Case Circuit Breakers.

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April 24, 1989

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555

Subject: Duke Power Company
Oconee Nuclear Station - Docket Nos. 50-269, -270, -287
McGuire Nuclear Station - Docket Nos. 50-369, -370
Catawba Nuclear Station - Docket Nos. 50-413, -414

Revised Response To NRC Bulletin 88-10: Nonconforming Molded-Case
Circuit Breakers

Gentlemen:

By letter dated April 4, 1989, we submitted our response to the subject bulletin. This revision is submitted to provide a correction concerning the status of circuit breakers at our Catawba plant, (see No. 2 below), and to correct a typographical error. Change bars are provided.

Pursuant to the subject bulletin dated November 22, 1988, we have completed the following actions as requested.

- 1) We identified all molded-case circuit breakers (CB) purchased prior to August 1, 1988 that were being maintained as stored spares for safety related applications and commercial grade CBs that were being maintained as stores for use in safety related applications. As discussed with your technical contacts for this bulletin, we have determined that traceability to the CB Manufacturer (CBM) cannot be established for these CBs, and we have elected to exercise our option to not test the CBs in stores. We have removed these CBs from our stores and will, as agreed, maintain them at the site for NRC inspection for a period of one year, (until December 22, 1990). Attachment 1 provides the information requested by the bulletin in a tabular form for CBs affected by this portion of the bulletin.
- 2) We have identified all molded-case CBs that were purchased between August 1, 1983, and August 1, 1988 that were installed in safety related applications. Those CBs that were not traceable to the CBM were replaced with CBs that meet the requirements of the bulletin with the exception of the following CBs.

McGuire - Five CBs installed as spares (1 on Unit 1 and 4 on Unit 2) were administratively removed from service pending the procurement of acceptable CBs. These CBs will be replaced when the new CBs are received. Operability evaluations were written for three other CBs installed on Unit 2 per the bulletin. These CBs will be replaced during the next Unit 2 refueling outage.

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PDR ADOCK 05000269
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Catawba - One CB installed as a spare on Unit 1 was administratively removed from service pending the procurement of an acceptable CB. This CB will be replaced when the new CB is received. Per the bulletin, an operability evaluation was written for one CB installed on the Unit 2 VX system. This CB will be replaced during the current Unit 2 refueling outage. An operability evaluation was also written for a back-up CB installed in the Unit 2 7300 Process System. This CB will be replaced when a new CB is received.

Oconee - Operability evaluations were written for three CBs installed on Unit 1 per the bulletin. These CBs will be replaced during the next Unit 1 refueling outage.

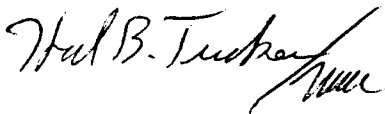
Attachment 1 also provides information requested by the bulletin regarding CBs that are installed.

- 3) As a result of the bulletin, we have tested a small number of CBs. We contracted Multi-Amp Inc. of Dallas, Texas, to perform the testing. Attachment 2 provides the test results as requested by the bulletin for thirteen of these CBs. We are currently expecting the testing results for additional CBs, which we will submit to you when we receive the data.
- 4) The information generated as a result of this bulletin will be documented and maintained for a period of five years from the final completion date of all actions requested by the bulletin.
- 5) We have taken steps to ensure that CBs installed after August 1, 1988, will be procured from a CBM under a 10 CFR 50, Appendix B program, or procured from a CBM or others with verifiable traceability to the CBM, in compliance with applicable industry standards. We will upgrade those CBs purchased commercial grade to safety related using our dedication program.

With the exception of the outstanding items mentioned above, we have fulfilled all the actions required by the bulletin.

Should there be any questions concerning this matter, please contact S.E. LeRoy at (704) 373-6233.

Very truly yours,



Hal B. Tucker

SEL/400/sel

xc: Mr. S.D. Ebnetter, Regional Administrator
U.S. Nuclear Regulatory Commission
Region II
101 Marietta St., NW, Suite 2900
Atlanta, Georgia 30323

Document Control Desk

April 24, 1989

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ATTACHMENT 1
Duke Power Company
McGuire Nuclear Station
IE Bulletin 88-10 Report For Non-Traceable Circuit Breakers

<u>DESCRIPTION</u>		<u>SOURCE INFORMATION</u>		
<u>MANUFACTURER</u>	<u>MODEL NUMBER</u>	<u>SUPPLIER</u>	<u>QUANTITY</u>	<u>SYSTEM INSTALLED</u>
Westinghouse	HFB3040	Nelson Electric	1	2EMXD-4A, Spare
Westinghouse	HFB3040	Nelson Electric	1	2EMXC-4B, Spare
Westinghouse	HFB3090	Nelson Electric	1	2EMXD-5E, Spare
Westinghouse	HFB3090	Nelson Electric	1	2EMXC-5E, Spare
Westinghouse	HFB3090	Wesco	1	EPE, 1EMXB-6E
Westinghouse	HFB3090	Wesco	1	EPE, 2EMXD-6D
Westinghouse	HFB3090	Molded Case	1	EPE, 2EMXD-4C
Westinghouse	HFB3090	Molded Case	1	EPE, 2EMXC-4C
Westinghouse	HFB3100	Molded Case	1	EPE, 2EMXD-3C
Westinghouse	HFB3100	Wesco	1	EPE, 2EMXC-3C
Westinghouse	HFB3100	Wesco	1	EPE, 2EMXC-3D
Westinghouse	HFB3090	Wesco	1	EPE, 2EMXC-6D
Westinghouse	HFB3150	Wesco	1	EPE, 1EMXB-6E
Westinghouse	HFB3150	Wesco	1	EPG, 1EMXB-6E
Westinghouse	CA2225N	Molded Case	1	EPG, 2EVIB-CB2
General Electric	TQD22175	Nelson Electric	1	VA
ITE	CC2-B020	General Signal/Nelson Elec.	1	IPG, 1EKVC-24
Westinghouse	HFB3020	General Signal/Nelson Elec.	2	
Westinghouse	HFB3030	Engineering Sales	2	
Westinghouse	HFB3040	Sola Basic/Nelson Elec.	2	
Westinghouse	HFB3040	Sola Basic/Nelson Elec.	2	
Westinghouse	HFB3060	Westinghouse Elec.	2	
Westinghouse	HFB3060	Westinghouse Elec.	1	
Westinghouse	HFB3060	Westinghouse Elec.	1	
Westinghouse	HFB3070	Sola Basic/Nelson Elec.	1	
Westinghouse	HFB3025	Bryant Supply	2	
Westinghouse	HFB3035	Sola Basic/Nelson Elec.	2	
Westinghouse	HFB3070	General Signal/Nelson Elec.	2	
Westinghouse	HFB3100	Bryant Supply	6	

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<u>MANUFACTURER</u>	<u>MODEL NUMBER</u>	<u>SUPPLIER</u>	<u>QUANTITY</u>	<u>SYSTEM INSTALLED</u>
Westinghouse	HFB3090	Wesco	1	
Gould/ITE	EF3-B050	Mill Power Supply	2	
Westinghouse	HFB3015	Wesco	2	
Westinghouse	HFB3015	Wesco	2	
Westinghouse	HFB3150	Wesco	1	
Westinghouse	HFB3125	General Signal/Nelson Elec.	1	
Westinghouse	HFB3125	Sola Basic/Nelson Elec.	1	
Westinghouse	HFB3060	Wesco	1	
Westinghouse	HFB3060	Sola Basic/Nelson Elec.	1	
Westinghouse	FB-FR	Engineering Sales	2	
Westinghouse	HFB2070	Sola Basic/Nelson Elec.	2	
Westinghouse	HFB2100	Sola Basic/Nelson Elec.	1	
Westinghouse	HFB2125	Sola Basic/Nelson Elec.	1	
Westinghouse	HFB2100	Wesco	2	
Westinghouse	HFB2125	Sola Basic/Nelson Elec.	2	
Westinghouse	HFB2060	Sola Basic/Nelson Elec.	1	
Westinghouse	HFB2060	Wesco	2	
ITE	EF2-B050	ITE Imperial	3	
Westinghouse	HFB2030	Wesco	2	
Westinghouse	HFB2050	Sola Basic/Nelson Elec.	2	
Westinghouse	HFB2020	Sola Basic/Nelson Elec.	1	
Westinghouse	HFB2020	Sola Basic/Nelson Elec.	1	
Westinghouse	HFB2020	Sola Basic/Nelson Elec.	1	
Westinghouse	HFB2040	General Signal/Nelson Elec.	2	
Westinghouse	HFB2040	Sola Basic/Nelson Elec.	2	
Westinghouse	HFB3030	Westinghouse Elec. Corp.	3	
Westinghouse	HFB3040	Wesco	1	
Westinghouse	HFB3040	Westinghouse Elec.	3	
Westinghouse	HFB3100A	Bryant Supply	3	

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McGuire Nuclear Station
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<u>DESCRIPTION</u>		<u>SOURCE INFORMATION</u>		
<u>MANUFACTURER</u>	<u>MODEL NUMBER</u>	<u>SUPPLIER</u>	<u>QUANTITY</u>	<u>SYSTEM INSTALLED</u>
Westinghouse	HFB3090A	General Signal/Nelson Elec.	3	
General Electric	TFK226F200	M.J. Fein/Solidstate	2	
Westinghouse	LA3200PR	Wesco	3	
Westinghouse	LA3200PR	Wesco	2	
Westinghouse	HFB3100	Wesco	1	
Westinghouse	HFB3100L	Wesco	1	
Westinghouse	HFB3090	Wesco	3	
General Electric	PFK226F150	Metric/Sld. St. Cntrl.	1	
Westinghouse	CA2225N	Wesco	1	
Westinghouse	CA2225N	Wesco	1	
General Electric	TQD22175	M.J. Fein/Sld. St. Cntrl.	1	
General Electric	TQD22175	General Electric Co.	2	
ITE	P1515	Comsip Inc.	2	
Westinghouse	HFB1030	Wesco	6	
ITE	CC2-B020	General Signal/Nelson Elec.	4	
ITE	CC2-B030	General Signal/Nelson Elec.	4	
Heinemann	JA1-2240-1	Carrier Bldg. Service	2	
Westinghouse	FB2015	Power Conversion	1	
Westinghouse	FB2035	Power Conversion	1	
Westinghouse	FB2040	Power Conversion	1	
Westinghouse	FB3100SNL	Whiting Corp.	1	
Westinghouse	FB3150SNL	Whiting Corp.	1	
Westinghouse	LA3200	Wesco	10	
General Electric	TQD22Y225	M.J. Fein/Sld. St. Cntrl.	1	
General Electric	TQD22Y225	Mill Power Supply Co.	1	
Westinghouse	HFB3070	General Signal/Nelson Elec.	1	
Westinghouse	HFB3020	General Signal/Nelson Elec.	1	
Westinghouse	HFB3150	General Signal/Nelson Elec.	1	
Westinghouse	HFB3020	General Signal/Nelson Elec.	1	

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<u>MANUFACTURER</u>	<u>MODEL NUMBER</u>	<u>SUPPLIER</u>	<u>QUANTITY</u>	<u>SYSTEM INSTALLED</u>
Westinghouse	HFB3040	General Signal/Nelson Elec.	1	
Westinghouse	HFB3020	General Signal/Nelson Elec.	1	
Westinghouse	HFB3020	General Signal/Nelson Elec.	1	
Westinghouse	HFB3030	General Signal/Nelson Elec.	1	
Westinghouse	HFB3020	General Signal/Nelson Elec.	1	
Westinghouse	HFB3030	General Signal/Nelson Elec.	1	

ATTACHMENT 1
Duke Power Company
Catawba Nuclear Station
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<u>DESCRIPTION</u>		<u>SOURCE INFORMATION</u>	<u>SYSTEM</u>		
MANUFACTURER	MODEL NUMBER	SUPPLIER	QUANTITY	INSTALLED	# INSTALLED
Westinghouse	67E3325	Westinghouse	1		
Westinghouse	67E3326	Westinghouse	1		
Westinghouse	67E3328	Westinghouse	1		
Westinghouse	67E3329	Westinghouse	1		
Heinemann	AM1-Z22-81	Westinghouse	5		
	M55629/1-81				
Westinghouse	BA3020H	Westinghouse	1		
Westinghouse	BAB2020	Wesco & Bryant Supply	2		
Westinghouse	BAB2020	Westinghouse	5		
Westinghouse	BAB2030	Bryant Supply	1		
ITE	CC2B020	Eaton-Cutler Hammer	6	EPG	1
ITE	CC2B030	Eaton-Cutler Hammer	5	EIA	2
				EPE	2
Westinghouse	EB1015	Westinghouse/Air Products	2		
Westinghouse	EB2015	Westinghouse/Air Products	1		
Westinghouse	EHB2100	Wesco	2		
Heinemann	F-511-001	Transamerican Delaval	4		
Heinemann	F511-065	Transamerican Delaval	4		
Heinemann	F511-083	Transamerican Delaval	4		
Westinghouse	FB3070	Solidstate Controls	2		
Westinghouse	HFB1020	Westinghouse	8		
Westinghouse	HFB1020	Westinghouse	5		
Westinghouse	HFB1030	Westinghouse	8		
Westinghouse	HFB1030	Westinghouse	5		
Westinghouse	HFB2020	General Signal	2		
Westinghouse	HFB2040	Westinghouse	2		
Westinghouse	HFB2090	Westinghouse	3	EPD	1
Westinghouse	HFB2090	Westinghouse	5		
Westinghouse	HFB2150	Westinghouse	6		

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<u>DESCRIPTION</u>		<u>SOURCE INFORMATION</u>		<u>SYSTEM</u>	
<u>MANUFACTURER</u>	<u>MODEL NUMBER</u>	<u>SUPPLIER</u>	<u>QUANTITY</u>	<u>INSTALLED</u>	<u># INSTALLED</u>
Westinghouse	HFB2150-1	Westinghouse	2		
Westinghouse	HFB21550ML	Westinghouse	1		
Westinghouse	HFB3020	Westinghouse	3	NI	2
				BB	1
Westinghouse	HFB3020	Wesco	6	VQ	1
				NC	1
				LD	1
				EPE	1
				CA	1
Westinghouse	HFB3020	Westinghouse/Unknown	6	NC	1
				EOC	2
				EOA	2
Westinghouse	HFB3020	Nelson	2		
Westinghouse	HFB3025	Bryant Supply	2		
Westinghouse	HFB3030	Nelson	2		
Westinghouse	HFB3030	Bryant Supply	1		
Westinghouse	HFB3030	Westinghouse	4		
Westinghouse	HFB3030	Nelson	8		
Westinghouse	HFB3030	Nelson	3		
Westinghouse	HFB3030	Nelson	4		
Westinghouse	HFB3040	General Signal	2		
Westinghouse	HFB3040	Westinghouse	4		
Westinghouse	HFB3040	Unknown & Bryant	6	EOC	1
Westinghouse	HFB3040	Nelson	1		
Westinghouse	HFB3040	Nelson	1		
Westinghouse	HFB3040L	Westinghouse	4		
Westinghouse	HFB3050	General Signal	2		
Westinghouse	HFB3050	Westinghouse	3		
Westinghouse	HFB3050	Unknown	1		

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<u>DESCRIPTION</u>		<u>SOURCE INFORMATION</u>		<u>SYSTEM</u>	
MANUFACTURER	MODEL NUMBER	SUPPLIER	QUANTITY	INSTALLED	# INSTALLED
Westinghouse	HFB3050	Nelson	1		
Westinghouse	HFB3060	Nelson	2		
Westinghouse	HFB3060	Westinghouse	4		
Westinghouse	HFB3060	Unknown	5	EOA	1
Westinghouse	HFB3060	Bryant Supply	5		
Westinghouse	HFB3060-1	Westinghouse	2		
Westinghouse	HFB3060A	Bryant Supply	11		
Westinghouse	HFB3060A	Westinghouse	5		
Westinghouse	HFB3090	Bryant Supply	13		
Westinghouse	HFB3090A	Bryant Supply	10		
Westinghouse	HFB3090A	Westinghouse	5		
Westinghouse	HFB3100	General Signal	2		
Westinghouse	HFB3100	Westinghouse	4		
Westinghouse	HFB3100	Westinghouse	4		
Westinghouse	HFB3100	Nelson	1		
Westinghouse	HFB3100A	Westinghouse	5		
Westinghouse	HFB3125	Westinghouse	2	VF VX	1 1
Westinghouse	HFB3125A	Wesco	4		
Westinghouse	HFB3125A	Westinghouse	5		
Westinghouse	HFB3150	Westinghouse	1		
Westinghouse	HFB3150	Nelson	1		
Westinghouse	HFB3150	Unknown	7		
Heinemann	JA2-A3-A	Gammametric	2		
Westinghouse	KB2250	Bryant Supply	3	EPL	2
Westinghouse	LB2400F	Solidstate Controls	2		
Westinghouse	MCP3100	Nelson	1		
GE	TED124020	Mill Power Supply	5		
GE	THQL1130	Armature Winding	12		

ATTACHMENT 1
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Oconee Nuclear Station
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<u>DESCRIPTION</u>		<u>SOURCE INFORMATION</u>		
<u>MANUFACTURER</u>	<u>MODEL NUMBER</u>	<u>SUPPLIER</u>	<u>QUANTITY</u>	<u>SYSTEM INSTALLED</u>
GE	THJK426400WL	Mill Power Supply	1	KSF-2 Inverter HPI
GE	THED136020WL	Mill Power Supply	2	
GE	THED136020WL	Mill Power Supply	2	
GE	TQC1110WL	Bryant Supply	2	
GE	THED1361000WL	Mill Power Supply	1	
GE	THJK426400WL	Mill Power Supply	1	
GE	TKC36800M	Mill Power Supply	1	
GE	TFC36225	Mill Power Supply	1	
Westinghouse	2341087H27	Mill Power Supply	2	
Carrier	17FA999-1007-138	Mill Power Supply	2	
GE	TFJ236150WL	Mill Power Supply	3	
GE	THED136100WL	Mill Power Supply	1	
Westinghouse	CBDB-25	Westinghouse	1	
Westinghouse	CBDB-50	Westinghouse	1	
GE	P1515	Mill Power Supply	3	
GE	TFJJ236150WLRS	Mill Power Supply	1	
GE	TQC1110WL	Bryant Supply	2	
GE	AK2A-25-1	Unknown	2	
GE	AK2A-25-1	Babcock & Wilcox	2	
GE	THED1360202	Mill Power Supply	2	
GE	THED136030WL	Mill Power Supply	1	
GE	THED136040WL	GTE Sylvania/Polytech Serv.	1	
GE	THED136050WL	GTE Sylvania/Polytech Serv.	1	
GE	THED106070WL	GTE Sylvania/Polytech Serv.	2	
GE	THE136100WL	Mill Power Supply	1	
GE	TJC36400G	GTE Sylvania/Polytech Serv.	1	
GE	TKC36800M	GTE Sylvania/Polytech Serv.	2	
GE	THED126020WL	GTE Sylvania/Polytech Serv.	1	
GE	THED126030WL	GTE Sylvania/Polytech Serv.	1	
GE	THED126060WL	GTE Sylvania/Polytech Serv.	1	

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<u>DESCRIPTION</u>		<u>SOURCE INFORMATION</u>		
<u>MANUFACTURER</u>	<u>MODEL NUMBER</u>	<u>SUPPLIER</u>	<u>QUANTITY</u>	<u>SYSTEM INSTALLED</u>
GE	THED126125WL	GTE Sylvania/Polytech Serv.	2	
GE	THKMA21200WL	GTE Sylvania/Polytech Serv.	1	
GE	THJK426400WL	Mill Power Supply	1	
GTE Sylvania	A502-257903-2	GTE Sylvania/Polytech Serv.	2	
GTE Sylvania	A502-421851-11	GTE Sylvania/Polytech Serv.	2	
GTE Sylvania	A502-421852-1	Mill Power Supply	1	
GTE Sylvania	A502-257915-12	GTE Sylvania/Polytech Serv.	1	
ITE Imperial	ET95503	GTE Sylvania/Polytech Serv.	1	
GTE Sylvania	A502-257903-11	GTE Sylvania/Polytech Serv.	2	
GTE Sylvania	A502-257903-10	GTE Sylvania/Polytech Serv.	2	
GTE Sylvania	A502-257903-12	GTE Sylvania/Polytech Serv.	2	
GTE Sylvania	A502-257913-19	GTE Sylvania/Polytech Serv.	1	
GTE Sylvania	A502-257903-15	GTE Sylvania/Polytech Serv.	2	
GTE Sylvania	A502-421851-4	GTE Sylvania/Polytech Serv.	2	
GTE Sylvania	A502-285884-13	GTE Sylvania/Polytech Serv.	2	
GTE Sylvania	A502-285881-2	GTE Sylvania/Polytech Serv.	3	
GTE Sylvania	A502-85885-4	GTE Sylvania/Polytech Serv.	2	
Heinenann Elec.	122130024 EXIDE	Exide National Parts Center	6	
Westinghouse	2341087H27	Westinghouse	2	
Airpax	17FA999-1007-138	Carrier Corp.	2	
Airpax	1942310A14	Babcock & Wilcox	2	
GE	AK-2-15-2	Babcock & Wilcox	2	
ITE Imperial	FJ2-B150 EXD	Exide Power Systems	1	
ITE Imperial	122104027 EXIDE	Exide Power Systems	1	
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ITE Imperial	ET95503	Exide Power Systems	1	
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Oconee Nuclear Station
IE Bulletin 88-10 Report For Non-Traceable Circuit Breakers

<u>DESCRIPTION</u>		<u>SOURCE INFORMATION</u>		
<u>MANUFACTURER</u>	<u>MODEL NUMBER</u>	<u>SUPPLIER</u>	<u>QUANTITY</u>	<u>SYSTEM INSTALLED</u>
ITE Imperial	TJJ436300	Unknown	3	
ITE Imperial	EF2-B030	ITE Imperial Company	1	
Westinghouse	EB3020	Unknown	8	
Westinghouse	DBF-16	Westinghouse	1	
ITE Imperial	5HK	Unknown	1	
ITE Gould	FF3805000-501	Gould/Brown Boveri	5	
ITE Gould	ET99112	Gould/Brown Boveri	2	
GE	TFJ236150WL	GTE Sylvania/Polytech Serv.	3	
GE	THED136100WL	General Electric	1	
GE	TFJ236150WLRS	Mill Power Supply	3	

ATTACHMENT 2
Duke Power Company
Catawba Nuclear Station
IE Bulletin 88-10 Report For Circuit Breakers
That Were Tested Pursuant To The Bulletin

ITEM	<u>DESCRIPTION</u>		<u>SOURCE INFORMATION</u>		TEST	PARAMETER AT WHICH
	MANUFACTURER	MODEL NUMBER	SUPPLIER	PASS/FAILED		FAILURE OCCURRED
001	Westinghouse	HFB3090	Bryant Electric Supply	Failed	Step 2.3	Tripped @ 1 hr. 5 min.
					Step 2.2	Delta Favg > .5 lowest P
002	Westinghouse	HFB3090	Bryant Electric Supply	Failed	Step 2.3	Tripped @ 5 min. 34 sec.
003	Westinghouse	HFB3090	Bryant Electric Supply	Failed	Step 2.3	Tripped @ 40 min. 30 sec.
004	Westinghouse	HFB3090	Bryant Electric Supply	Failed	Step 2.3	Tripped @ 16 min. 27 sec.
005	Westinghouse	HFB3125	WESCO	Passed	N/A	N/A
006	Westinghouse	HFB3125A	WESCO	Failed	Step 2.3	Tripped @ 5 min. 40 sec.
007	Westinghouse	KB2250	Westinghouse	Failed	Step 2.7	Failed 0-0
008	Westinghouse	KB2250F	Westinghouse	Failed	Step 2.5.2	Pole 3 tripped @ 1930 amps
					Highest Setting	
009	Westinghouse	HFB3020	Westinghouse	Passed	N/A	N/A
010	Westinghouse	HFB3020	Westinghouse	Passed	N/A	N/A
011	Westinghouse	HFB3020	Westinghouse	Passed	N/A	N/A
012	Westinghouse	HFB3100	Nelson Electric	Failed	Step 2.7	0-gd
013	Westinghouse	HFB3100	Nelson Electric	Failed	Step 2.3	Tripped @ 34 min.