

Part 21 (PAR)

Event # 52810

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Supplier: TE CONNECTIVITY	Event Date / Time: 06/02/2017 (EDT)
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Region: 1	Docket #:
City: FAIRVIEW	Agreement State: Yes
County:	License #:
State: NC	
NRC Notified by: TERRY DUCKER	Notifications: MEL GRAY R1DO
HQ Ops Officer: HOWIE CROUCH	OMAR LOPEZ R2DO
Emergency Class: NON EMERGENCY	ANN MARIE STONE R3DO
10 CFR Section:	VIVIAN CAMPBELL R4DO
21.21(a)(2) INTERIM EVAL OF DEVIATION	PART 21/50.55 REACTORS EMAIL

PART 21 NOTIFICATION - POTENTIAL DEFECTS IN ETR14 CLASS OF TE CONNECTIVITY RELAYS

TE Connectivity reported that one of their relays, TE Part Number 7-1423177-5, ETR141B3BNC2023004, failed at TVA Labs during normal continuously energized operation. An investigation conducted with TVA Labs identified that a mis-oriented capacitor may have caused the failure. Although the failure occurred with only one part number, all relays in the ETR14 family with date codes from 1604 to 1650 contain the suspect capacitor. A root cause analysis is underway by the vendor.

If you have any questions or require any additional information, please contact me by email or telephone:

Terry Ducker
 Quality Manager
 TE Connectivity
 Aerospace, Defense and Marine Division
 1396 Charlotte Highway
 Fairview, NC 28730

E-mail: duckert@te.com
 Telephone: 828-338-1063
 Fax: 828-338-1101

Quantity Supplied - Customer:

41 - Alabama Power

TE19
 WRR

- 5 - ATC Nuclear
- 3 - Curtiss-Wright Nuclear
- 10 - Curtiss-Wright/QualTech NP
- 2 - Duke Energy Progress/Harris
- 16 - Energy Northwest/Columbia
- 4 - Engine Systems Inc
- 2 - Entergy/Pilgrim
- 39 - Entergy/River Bend
- 25 - Exelon/Limerick
- 2 - Exelon/Oyster Creek
- 12 - Exelon/Peach Bottom
- 2 - GE Hitachi Nuclear Energy
- 2 - Georgia Power/Hatch
- 2 - Nextera Energy Point Beach
- 5 - Talen Energy/Susquehanna
- 2 - TE/Germany
- 4 - TE/UK
- 6 - TVA/Browns Ferry
- 4 - TVA/Sequoyah
- 2 - TVA/Watts Bar Unit 1
- 9 - Xcel Energy/Monticello



Terry Ducker
Quality Manager
TE Connectivity
Aerospace, Defense and Marine Division
1396 Charlotte Highway
Fairview, NC 28730

E-mail: duckert@te.com
Telephone: 828-338-1063
Fax: 828-338-1101

Date: 07 June 2017

To: Operation Center
United States Nuclear Regulatory Commission (NRC)
Fax: (301)816-5151

Subject: TE Connectivity – Part 21 Transfer of Information TE-023

The intent of this letter is to inform the Nuclear Regulatory Commission of an issue that arose with a TE Connectivity relay.

The Tennessee Valley Authority reported a single relay failure of TE part number 7-1423177-5, ETR141B3BNC2023004 failed TVA Labs Analysis during its normal continuously energized operation. A joint investigation was conducted and it is possible that the orientation of a capacitor is likely the cause of the failure assembled by one operator. Based on production records, the date code range of Suspect parts are from 1604 and 1650.

Although the problem was only isolated to one part number. Attachment 1 contains family of part numbers with the same capacitor that is in question.

TE has completed its containment action and a Current investigation to determine root cause is now active under TE reference number 1353162.

If you have any questions or require any additional information, please contact me by email or at the number listed above.

Sincerely,

Terry Ducker
Quality Manager

Attachment 1

Date	Customer	Part Number	Description	PO #	Sales Order	Qty
1/20/2016	Curtiss-Wright/QualTech NP	1-1423177-5	ETR14I3D004	CP00009336	3041699021	8
1/29/2016	ATC Nuclear	2-1423177-5	ETR14I3C004	00387885	3042328274	3
1/30/2016	Exelon/Limerick	1-1423177-5	ETR14I3D004	90 080949	3042563782	4
2/2/2016	Curtiss-Wright/QualTech NP	2-1423177-5	ETR14I3C004	CP00009581	3042230083	2
2/29/2016	Exelon/Limerick	1423177-4	ETR14D3B004	90 079701	3042047291	3
3/4/2016	TE/UK	3-1423177-3	ETR14D3BC2004004	2492726640	3043441386	2
3/15/2016	TE/UK	4-1423177-5	ETR14I3AC2004004	2492726684	3043441392	2
3/17/2016	Xcel Energy/Monticello	1423177-4	ETR14D3B004	00059665	3043074131	3
3/18/2016	Talen Energy/Susquehanna	1423177-4	ETR14D3B004	00635715	3043489781	3
3/18/2016	Entergy/River Bend	1423177-4	ETR14D3B004	10452512/Rev 001	3043850316	13
3/18/2016	TE/Germany	1423177-3	ETR14D3A004	2492726735	3043442185	2
3/22/2016	Exelon/Limerick	1-1423177-5	ETR14I3D004	90 083110	3043380101	3
3/29/2016	Exelon/Limerick	1-1423177-5	ETR14I3D004	90 083110	3043380101	1
4/7/2016	TVA/Sequoyah	1423177-6	ETR14D3C004	3532-1522273/Rev 1	3043609684	4
4/18/2016	Alabama Power	1423177-6	ETR14D3C004	SNA10121953	3043598534	5
4/18/2016	Exelon/Limerick	1-1423177-6	ETR14I3E004	90 081748	3042719974	2
4/28/2016	Energy Northwest/Columbia	1423177-4	ETR14D3B004	00345758/Rev 003	3043960399	10
5/10/2016	Exelon/Limerick	2-1423177-3	ETR14I3G004	90 083808	3044251132	2
5/13/2016	Energy Northwest/Columbia	1423177-3	ETR14D3A004	00345758/Rev 003	3043960399	2
5/17/2016	Energy Northwest/Columbia	1-1423177-4	ETR14I3B004	00345887	3044753067	4
5/18/2016	Georgia Power/Hatch	1423177-6	ETR14D3C004	SNG10126011	3044259962	2
5/26/2016	GE Hitachi Nuclear Energy	2-1423177-7	ETR14B3AC2004004	43704149/Rev 4	3045478421	2
6/3/2016	Xcel Energy/Monticello	1423177-5	ETR14D3BN004	00061006	3044276481	2
6/3/2016	Alabama Power	1423177-6	ETR14D3C004	SNA10134832	3045629785	6
6/7/2016	Exelon/Peach Bottom	3-1423177-0	ETR14D3AC2002004	90 083856/Rev 1	3044575617	10
7/5/2016	TVA/Watts Bar Unit 1	1-1423177-7	ETR14I3N004	3532-1566645	3043850313	2
7/14/2016	Exelon/Limerick	1-1423177-4	ETR14I3B004	90 084102	3043985995	2
7/20/2016	Alabama Power	1-1423177-7	ETR14I3N004	SNA10123874/Rev 1	3044511460	4
8/3/2016	Exelon/Limerick	1423177-4	ETR14D3B004	90 085021	3044999963	2
8/8/2016	Entergy/River Bend	1-1423177-7	ETR14I3N004	2270856	3045093589	4
8/9/2016	ATC Nuclear	1-1423177-2	ETR14D3N004	00405517/Rev 2	3045873288	2
8/23/2016	Alabama Power	1423177-4	ETR14D3B004	SNA10127422/Rev 1	3044558066	10
8/23/2016	Exelon/Limerick	1423177-6	ETR14D3C004	90 087152 / Rev 1	3045605623	2
8/25/2016	Nextera Energy Point Beach	1-1423177-5	ETR14I3D004	02350712/Rev 001	3045281683	2
8/30/2016	Exelon/Limerick	1-1423177-0	ETR14D3G004	90 088348/Rev 1	3046154304	2
8/30/2016	Alabama Power	1423177-3	ETR14D3A004	SNA10128450	3044646007	10
8/30/2016	Entergy/River Bend	2-1423177-0	ETR14B3B004	10476737/Rev 001	3044646007	10
9/19/2016	Entergy/Pilgrim	1423177-4	ETR14D3B004	10481141	3045902336	2
9/19/2016	Entergy/River Bend	2-1423177-0	ETR14B3B004	10478660/Rev 001	3045554814	4
9/27/2016	TVA/Browns Ferry	5-1423177-7	ETR14B3AN004	3532-2246885	3046765559	6
10/6/2016	Entergy/River Bend	1423177-3	ETR14D3A004	10480041/Rev 001	3045813232	3
10/12/2016	Exelon/Peach Bottom	6-1423177-1	ETR14D3CC2002004	90 088329	3046039936	2
10/25/2016	Exelon/Oyster Creek	1423177-4	ETR14D3B004	80 070974	3046084736	2
10/26/2016	Talen Energy/Susquehanna	1-1423177-2	ETR14D3N004	00644075	3046176861	2
11/2/2016	Xcel Energy/Monticello	1423177-4	ETR14D3B004	00062936/Rev 001	3046279015	2
11/2/2016	Xcel Energy/Monticello	1423177-8	ETR14D3E004	00062936/Rev 001	3046279015	2
11/8/2016	Entergy/River Bend	1423177-8	ETR14D3E004	10481151/Rev 001	3046055394	3
11/11/2016	Alabama Power	1-1423177-7	ETR14I3N004	SNA1013665	3045478385	6
11/11/2016	Engine Systems Inc	2-1423177-5	ETR14B3BNC202300	127095/Rev 1	3047408038	4
11/17/2016	Curtiss-Wright Nuclear	1423177-7	ETR14D3D004	CP00011028	3046623773	3
11/22/2016	Entergy/River Bend	1-1423177-7	ETR14I3N004	10485217	3046640370	2
12/7/2016	Duke Energy Progress/Harris	1-1423177-0	ETR14D3G004	03031933/Rev 002	3048071949	2
12/14/2016	Exelon/Limerick	1423177-3	ETR14D3A004	90 089758	3046804040	2

Attachment 2
Transfer of Information per Part 21.21 (b)

(i) Name and address of the individual providing the information:

Terry Ducker, Quality Manager, TE Connectivity, Aerospace Defense and Marine Division, 1396 Charlotte Highway, Fairview, NC USA 28730.

(ii) Identification of the facility, the activity, or the basic component supplied for such facility or such activity that contains a deviation or failure to comply;

Items supplied are TE part number 7-1423177-5, ETR14133BNC2023004. Potential Suspect Date Code Range is 1604 and 1650.

TE Connectivity sold this safety-related item for specified and unspecified applications. See Attachment 1.

(iii) Identification of the firm constructing the facility or supplying the basic component that contains a deviation or a failure to comply:

TE Connectivity, 1396 Charlotte Highway, Fairview NC, USA 28730

(iv) Nature of the defect or safety hazard that could be created by such a deviation or failure to comply:

Intermittent operation of connected equipment under load.

(v) The date on which the information of such a deviation or failure to comply was obtained

TE Connectivity made the determination of the existence of this condition in 2 June 2017.

(vi) In case of a basic component, which contains a deviation or failure to comply, the locations of all such components in use or being supplied?

Customers that purchased affected safety-related items from TE Connectivity for applications are identified in Attachment 1.

(vii) The corrective action which has been, is being, or will be taken; the name of the individual or organization responsible for the action; and the length of time that has been or will be taken to complete the action (note, these are actions specifically associated with the identified deviation or failure to comply:

At this time, product has been put on hold until the investigation is complete.

(viii) Any advice related to the deviation or failure to comply about the facility, activity, or basic component that has been, is being given to purchasers or licensees:

TE Connectivity does not have sufficient information to perform an evaluation for unspecified applications.