General Information or Other (PAR) Event # 46014

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|---|---|---|---|
| **Rep Org:** | TYCO ELECTRONICS | **Notification Date / Time:** | 06/16/2010 15:30 (EDT) |
| **Supplier:** | TYCO ELECTRONICS | **Event Date / Time:** | 05/21/2010 (EDT) |
| | | **Last Modification:** | 06/16/2010 |
| **Region:** | 1 | **Docket #:** | |
| **City:** | ASHEVILLE | **Agreement State:** | Yes |
| **County:** | | **License #:** | |
| **State:** | NC | | |
| **NRC Notified by:** | SCOTT DAUBERT | **Notifications:** | DANIEL HOLODY R1DO |
| **HQ Ops Officer:** | BILL HUFFMAN | | DANIEL RICH R2DO |
| **Emergency Class:** | NON EMERGENCY | | MICHAEL KUNOWSKI R3DO |
| **10 CFR Section:** | | | WILLIAM JONES R4DO |
| 21.21 | UNSPECIFIED PARAGRAPH | | PART 21 E-MAIL GROUP |

TYCO ELECTRONIC RELAY RECALL

The information below is a summary of a report received via facsimile from Tyco electronics:

"During normal assembly processing of nuclear E7000 relays, Tyco Electronics experienced an issue with a component. A retainer ring on the spindle assembly was found to have a hydrogen embrittlement issue that may fracture at some point in this products' life cycle. Further investigation revealed this condition is limited to one specific lot of retainer rings.

"Tyco purged this lot of retainer rings from their inventory and all 'work in process'. Tyco is able to account for all the retainer rings in this lot. Tyco's records indicate that some relays shipped to the [facilities listed below] were made using this specific retainer ring lot.

"Because the retainer ring did not meet stated requirements, Tyco is recalling the specific relays for replacement. Note that only the specific lot numbers listed [below] are affected by this recall. All other lots should function as intended.

"Item supplied are E7000 relays with serial numbers beginning with 1019. Certificates of Conformance stating exact relay description and serial numbers were sent to affected customers with Tyco's June 16, 2010 notification.

Tyco sold this safety-related item for specified and unspecified applications to the customers listed below:

| | | |
|---|---|---|
| South Carolina Electric & Gas | Jenkinsville, SC | 3 Relays |
| Entergy Nuclear Operations, Indian Point Energy Center | Buchanan, NY | 2 Relays |
| Exelon Generation Company/Braidwood | Braidwood, IL | 2 Relays |

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|---|---|---|
| Trentec Curtis-Wright Flow Control | Cincinnati, OH | 1 Relay |
| Ergytech | Houston, TX | 1 Relay |
| Entergy Operations Inc. (Arkansas) | Russellville, AR | 1 Relay |

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Tyco Electronics

**Scott Daubert**
**Quality Assurance Manager**
**Tyco Electronics Global Aerospace**
**Defense and Marine Division**
**CII Relays**
Asheville Operations
1396 Charlotte Highway
Fairview, NC 28730

Telephone: 828-338-1011
Fax: 828-338-1103

**Date:** **June 16, 2010**

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

**Subject:** **Notification of Limited E7000 Relay Recall (CII-016)**

During our normal assembly processing of nuclear E7000 relays, Tyco Electronics experienced an issue with a component. A retainer ring on the spindle assembly was found to have a hydrogen embrittlement issue that may fracture at some point in this products' life cycle. Further investigation revealed this condition is limited to one specific lot of retainer rings.

We purged this lot of retainer rings from our inventory and all "work in process". We are able to account for all the retainer rings in this lot. Our records indicate that some relays shipped to your facility were made using this specific retainer ring lot.

Because the retainer ring did not meet stated requirements, we are recalling the specific relays listed on the attached certificates of conformance for replacement. Note that only the specific lot numbers listed on the attached certificates of conformance are affected by this recall. All other lots should function as intended.

To return these relays, contact your Tyco Electronics Customer Service Representative at 1-800-526-5136 to obtain a Customer Return Authorization number (RMA#) and then follow the standard return process. Please reference "**CII-016**" on RMA paper work. Relays should be returned to my attention.

If you have any questions or require any additional information on this limited recall, please contact me at the numbers listed above.

Sincerely,

*Scott Daubert*
Quality Assurance Manager

Tyco Electronics

**Attachment 1**
**Customers notified by Tyco Electronics regarding this condition.**

| Customer | Location | | Total |
|---|---|---|---|
| South Carolina Electric & Gas | Jenkinsville, SC | | 3 |
| Entergy Nuclear Operations, Indian Point Energy Center | Buchanan, NY | | 2 |
| Exelon Generation Company/Braidwood | Braidwood, IL | | 2 |
| Trentec, Curtis-Wright Flow Control | Cincinnati, OH | | 1 |
| Ergytech | Houston, TX | | 1 |
| Entergy Operations Inc. (Arkansas) | Russellville, AR | | 1 |
| | | **Total** | **10** |

Tyco Electronics

**Attachment 2**
**Transfer of Information per Part 21.21 (b)**

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

Rob Hughes, Quality Engineer, Tyco Electronics – CII of the Global Aerospace and Defense 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;

Item supplied are E7000 relays with serial numbers beginning with 1019. Certificates of Conformance stating exact relay description and serial numbers were sent to affected customers with June 16, 2010 notification.

Tyco sold this safety-related item for specified and unspecified applications. The customers for which Tyco had insufficient information to complete the Part 21 evaluation are listed in Attachment 1.

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

Tyco Electronics, 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:

A retaining ring on the spindle assembly was found to have a hydrogen embrittlement issue that may fracture at some point in this products' life cycle thereby preventing the relay from changing state when activated.

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

Tyco Electronics made the determination of the existence of this condition May 21, 2010. Notice of Limited E7000 Relay Recall was issued to the customers on June 16, 2010.

(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 Tyco Electronics for unspecified 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:

Tyco purged the specific lot of retaining rings failing to meet specification from its inventory and "work in process".

(vii) 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:

Based on our evaluation this issue is expected to have a high potential to produce a significant safety concern. However, Tyco Electronics does not have sufficient information to perform an evaluation for unspecified applications. Therefore customers having received the recall notification should return affected relays for a replacement.