

General Information or Other (PAR)

Event # 40234

Rep Org: FRAMATOME ANP	Notification Date / Time: 10/09/2003 11:22 (EDT)
Supplier: EATON CUTLER HAMMER	Event Date / Time: 10/09/2003 (EDT)
	Last Modification: 10/09/2003
Region: 1	Docket #:
City: CRANBERRY TOWNSHIP	Agreement State: No
County:	License #:
State: PA	
NRC Notified by: FRAN STARR	Notifications: RONALD BELLAMY R1
HQ Ops Officer: MIKE RIPLEY	KERRY LANDIS R2
Emergency Class: NON EMERGENCY	KENNETH O'BRIEN R3
10 CFR Section:	WILLIAM JOHNSON R4
21.21 UNSPECIFIED PARAGRAPH	JACK FOSTER NRR

PART 21 REPORT

A potential safety condition was reported which may exist with the Eaton Cutler-Hammer Type W Vintage Unit plug in stabs. On July 3, 2003, Framatome ANP, Inc - Electrical Products received from Eaton Cutler-Hammer an Eaton Cutler-Hammer Type W Vintage Unit Product Advisory, dated June 27, 2003. The advisory warns that the condition exists when a unit of a particular Manufacturing Date Code range is withdrawn from a Motor Control Center structure. Under this condition, the clip holding the stab finger in place may dislodge. As a result, the stab finger remains plugged onto the vertical bus until the breaker cable connection forces the stab finger off the bus. The potential of a unit being extracted from live bus may cause arcing or single phasing or risk of personal injury, death or property damage.

On July 3, 2003, Framatome ANP, Inc. - Electrical Products determined that the defective Eaton Cutler-Hammer Type W Vintage Unit Plug in Stabs were supplied as a Safety Related component installed in Safety Related Type W MCC Buckets to only one Nuclear Customer. On July 3, 2003, Framatome ANP, Inc. - Electrical Products notified the Point Beach Nuclear Plant (Nuclear Management Company). Corrective actions implemented by Framatome ANP, Inc. - Electrical Products included the replacement of thirteen (13) Type W Stab Assemblies, with new Type W Stab Assemblies manufactured by Eaton Cutler-Hammer with "updated clips" (clips with wings) at the Point Beach Nuclear Plant Site on July 11, 2003.

Affected Plant:
Point Beach

IE19
10/09



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FRAMATOME ANP, Inc.

FAX COVER SHEET

DATE: 10/9/03 **Total Pages including Cover** 8

TO: NRC Operations Center

COMPANY: United States Nuclear Regulatory Commission

TELEPHONE: 301-816-5100 **FAX:** 301-816-5151

FROM: Fran Starr **TITLE:** QA Manager

COMPANY: Framatome ANP, Inc. - Electrical Products

TELEPHONE: 724-779-9800 ext. 1321 **FAX:** 724-779-9844

COMMENTS: See Below

Subject: 10CFR Part 21 NRC Initial Notification

Attached please find Framatome ANP, Inc. – Electrical Products, Letter No. LTR-03-310 which identifies a Potential Safety Condition for the Eaton Cutler-Hammer Type W Vintage Unit Plug in Stabs

Should you have any questions, please contact me at (724) 779-9800 ext. 1321.

Thank You,
Framatome ANP, Inc.

Fran Starr
Quality Manager – Electrical Products

FRAMATOME ANP, Inc. – Electrical Products
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FRAMATOME ANP

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FRAMATOME ANP, Inc.

October 9, 2003

LTR 03-310

Document Control Desk
United States Nuclear Regulatory Commission
Washington, DC 20555

Attention: Director, Office of Inspection and Enforcement

Subject: Potential Safety Condition for Eaton Cutler-Hammer Type W Vintage Unit Plug In Stabs

The following information is provided pursuant to the requirements of 10CFR Part 21 to report a potential safety concern. A potential safety condition may exist with the Eaton Cutler-Hammer Type W Vintage Unit plug in stabs. This condition exists when a unit of a particular Manufacturing Date Code range is withdrawn from a Motor Control Center structure. Under this condition, the clip holding the stab finger in place may dislodge. As a result, the stab finger remains plugged onto the vertical bus until the breaker cable connection forces the stab finger off the bus. The potential of a unit being extracted from live bus may cause arcing or single phasing or risk of personal injury, death or property damage.

Description of Events:

On July 3, 2003, Framatome ANP, Inc. – Electrical Products received from Eaton Cutler-Hammer the attached Eaton Cutler-Hammer Type W Vintage Unit Product Advisory, dated June 27, 2003. The Product Advisory warned that the Type W Vintage Unit plug in stabs manufactured between October 1, 2000 and March 26, 2003 should NOT be removed from the Motor Control Center Structure with the structure bus energized. The attachment to the Product Advisory, dated June 25, 2003 indicates that the results of the Eaton Cutler-Hammer investigation / evaluation determined that the clips were out of specification tolerance from the intended design; specifically, the top "wings" of the spring clip. The attachment also outlined the corrective action(s) implemented by Eaton Cutler-Hammer for replacement stabs.

On July 3, 2003, Framatome ANP, Inc. – Electrical Products determined that the defective Eaton Cutler-Hammer Type W Vintage Unit Plug in Stabs were supplied as a Safety Related component installed in Safety Related Type W MCC Buckets to only one Nuclear Customer. On July 3, 2003, Framatome ANP, Inc. – Electrical Products notified the Point Beach Nuclear Plant (Nuclear Management Company). Corrective actions implemented by Framatome ANP, Inc. – Electrical Products included the replacement of thirteen (13) Type W Stab Assemblies, with new Type W Stab Assemblies manufactured by Eaton Cutler-Hammer with "updated clips" (clips with wings) at the Point Beach Nuclear Plant Site on July 11, 2003.

On August 14, 2003, Framatome ANP, Inc. Electrical Products was notified by the Point Beach Nuclear Plant that while performing their pre-installation bucket check / inspection on the Safety Related Type W MCC Buckets supplied by Framatome ANP, Inc. – Electrical Products during June 2003, (outside of the Date Code range of the Product Advisory) some of the stab assemblies, which were manufactured by Eaton Cutler-Hammer with the new / updated clips, were found to have one or two (of three) stabs loose. Further inspection by the Point Beach Nuclear Plant revealed that each clip for the loose stab was not positioned within the phenolic stab assembly correctly. The quality status of all new / updated Type W Stab Assemblies manufactured by Eaton Cutler-Hammer and supplied by Framatome ANP, Inc. – Electrical Products to the Point Beach Nuclear Plant site were rendered as Indeterminate / suspect.

On August 20, 2003, the manufacturer, Eaton Cutler-Hammer confirmed that the updated clip (clip with wings) utilized as a result of the corrective action(s) to prevent recurrence associated with the Eaton Cutler-Hammer Product Advisory were utilized to produce the Type W (replacement) Stab Assemblies and were nonconforming. The nonconforming clip could cause the stab to separate from the housing.

FRAMATOME ANP, Inc.
130 Commonwealth Drive, Warrendale, PA 15086
Tel: 724-779-5827 Fax: 724-779-5930
Email: Fran.Starr@framatome-anp.com



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FRAMATOME ANP, Inc.

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Director, Office of Inspection and Enforcement
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LTR-03-310

Further investigation by Eaton Cutler-Hammer determined that the root cause of the failure, as identified by the Point Beach Nuclear Plant, was due to:

- Clip not in accordance with the drawing due to the worn stamping die
- Inadequate insertion of the clip into the stab housing
- Insufficient assembly instructions for the stab assembly
- Insufficient quality check in place to test the overall assembly, and
- Drawing missing / requiring additional tolerance dimensions / material specification

Immediate corrective action(s) implemented by Eaton Cutler-Hammer included:

- Rework of the stamping die
- Insertion tool designed / implemented to the manufacturing floor for clip insertion
- Operation Methods Sheets established in the stab assembly manufacturing area
- Personnel training
- Tolerance dimensions established

On September 12, 2003, at the Point Beach Nuclear Plant, immediate corrective actions implemented by Eaton Cutler-Hammer, in conjunction with enhanced inspection activities by Framatome ANP, Inc. – Electrical Products involved the replacement of suspect stab assemblies for all Safety Related Type W MCC Buckets (supplied by Framatome ANP, Inc. – Electrical Products) not installed in Motor Control Centers. All remaining Safety Related Type W MCC Buckets, supplied by Framatome ANP, Inc. – Electrical Products, that are currently installed in Motor Control Centers at the Point Beach Nuclear Plant will be removed for replacement of suspect stab assemblies when Point Beach Nuclear Plant can de-energize the Motor Control Center for safe bucket removal.

The supply of the Type W Stab Assembly, as Safety Related, by Framatome ANP, Inc. – Electrical Products is isolated to only one Nuclear Customer (i.e. Nuclear Management Company), however, based on the events described, the Eaton Cutler-Hammer Type W Stab Assembly manufactured / produced and supplied prior to the Eaton Cutler-Hammer recent corrective actions may create a potential safety condition (i.e. personnel safety issue) to any facility receiving Type W MCC Buckets from any source other than Framatome ANP, Inc. – Electrical Products. As an obligation to the Nuclear Industry, Framatome ANP, Inc. – Electrical Products feels that this potential safety concern should be reported under 10CFR Part 21.

For additional information please contact Pat Patterson, Project Manager - Framatome ANP, Inc. – Electrical Products at (724) 779-9800 ext. 1317 / E-mail: laurence.patterson@framatome-anp.com.

Sincerely,
Framatome ANP, Inc. - Electrical Products

Fran Starr
Manager, Quality Assurance

Attachment: Eaton Cutler-Hammer Type W Vintage Unit Product Advisory, dated June 27, 2003

cc:	Gary Gibson – FANP	Emily A. Mayhew - FANP
	Laurence Patterson – FANP	Tara W. Werner - FANP
	Dan Livermore – FANP	Bill Boes – Eaton Cutler-Hammer
	Dan Mikow – FANP	Gary Klann – Eaton Cutler-Hammer
	William Orga – FANP	Deborah Renaud – Eaton Cutler-Hammer
	Jim Mallay – FANP	Fax Cox – Eaton Cutler-Hammer

FL: md

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Cutler-Hammer

2900 Doc Bennett Rd.
Fayetteville, NC 28390
tel: (910) 677-5206
fax: (910) 677-5297

June 27, 2003

To: Valued Cutler-Hammer Inc. Customer
Re: Type W Vintage Unit Product Advisory

Product Advisory

Type W Vintage Unit Product Advisory

Description

A potential safety condition may exist with Cutler-Hammer Type W Vintage Unit plug in stabs. The condition exists when a unit of a particular Manufacturing Date Code range is withdrawn from a Motor Control Center structure. Under this condition, the clip holding the stab finger in place may dislodge. As a result the stab finger remains plugged onto the vertical bus until the breaker cable connection forces the stab finger off the bus. The operator must exert extra force to remove the unit. The issue only affects Type W Stabs manufactured during the date ranges stated below, and does not affect any other Cutler-Hammer manufactured plug in stab.

⚠ Warning ⚠

Type W Vintage Unit plug in stabs manufactured between October 1, 2000 and March 26, 2003 should NOT be removed from the Motor Control Center structure with the structure bus energized. The potential of a unit being extracted from live bus may cause arcing or single phasing in risk of property damage, personal injury or death.

Corrective Actions

If you have received Type W Vintage plug in stab units between October 1, 2000 and March 26, 2003 please do one of the following:

- If you are able to power down your bus system, remove the affected unit from the vertical bus. Contact Fayetteville's warranty administrator, Debbie Renaud at 910-677-5206 for a replacement stab assembly.
- If you are unable to power down your bus system at this time, wait until your next scheduled maintenance power down to extract the units.

Cutler-Hammer continuously strives to produce the highest quality products. We apologize for any inconvenience this may have caused you.

Sincerely,

Bill Boes
Product Line Mgr.
Power and Control Systems

Cutler-Hammer

2900 Doc Bennett Road
Fayetteville, NC 28306
(910) 483-2222 Fax: (910) 677-5297



June 25, 2003

Jim Lepin – E&I Superintendent
Georgia-Pacific Wauna Mill
PO Box 2185
Clatskanie, OR 97016

Cc: C-H Portland Service Center Jim Avery
Cc: C-H Portland Sales – Scott Anderson
Cc: C-H Portland Sales - Dave Durocher
Cc: C-H Fayetteville - Bill Boes

Subject: Georgia Pacific Wauna – Type W Stab Failures

In response to the Type W stab clips dislodging from the stab housing, Cutler-Hammer Fayetteville would like to offer and update on both our activity and progress since the return of this product and of corrective actions established regarding the issue.

Five stab assemblies were received from the G-P Wauna mill with at least one stab finger out of each stab molding. Some stab fingers and holding clips for these stab assemblies were also returned. Upon inspecting the stab clips it is evident that the clips are out of specification tolerance from the intended design; specifically, the top "wings" of the spring clip has been cut or sheared off completely (see digital picture attached to this letter).

Evaluation:

The non-conforming clips are shortened by at least .040 inches allowing the clip to be dislodged from the stab housing. This is comparable to the G-P reported incident. Cutler-Hammer conducted a pull test on a returned stab finger that had remained in the stab housing and found the remaining stabs separated from the stab assembly at over 350-Ft lbs., well within the subassembly design criteria. The remaining clips were not cut off as much as the loose clips. We conclude that upon first removal of the bucket this issue will occur if the clip is cut off greater than .040 inches.

Rework:

During Oct 2001 the spring clip was identified as non-conforming material. The vendor was notified of the non-conformity. Corrected parts were received and approved in Feb 2002. The corrective action for the supplier stated "rework was being done to the existing parts in the warehouse". We may have reworked parts here as well. As best as can be determined, the reworked parts were used until March 2003 (our current stock has been checked to print and conforms to updated specifications). Form records of shipments by general order number, All G-P shipments occurred during the time frame of reworked parts. We are determining if other customers received modified parts. Within this specified time window, G-P Wauna was Fayetteville's largest customer for Type W units.

Containment and Permanent corrective action is detailed in the 8D report attached to this email. The replacement stabs provided to G-P have been sampled before shipment. Minimum pull force of 290-Ft lbs. was recorded.

Cutler-Hammer has implemented additional process checks in assembly to detect out of specification holding clips via a pull force test. We are also initiating a product advisory for this issue per the Eaton Corporate Advisory Procedure.

GP Type W cover.doc (Faye Cox)

Thank you for communicating this issue to us and allowing Eaton | Cutler-Hammer to replace the stabs in your facility. We are willing to work with your operations as necessary to assure a safe and orderly change out of Type W stab assemblies with the updated holding clips. If you have any additional questions please contact us at 910-677-5381.

Sincerely,

Faye Cox
Quality Engineer
Eaton | Cutler-Hammer
Fayetteville, NC

Dan Yount
Quality Manager
Eaton | Cutler-Hammer
Fayetteville, NC

Corrective Action Request

	Source: Field Failure	Date: 5/20/03
To: Cutler Hammer	Due Date: 5/23/03	Revised Due Date:
Description of Nonconformance: The spring clip (112B146H01) of the individual stabs failed to hold the stab finger into the stab housing.		
Stabs on a type W unit remained plugged onto the vertical bus when the unit was pulled out.		
Priority:	<input type="checkbox"/> Critical	<input checked="" type="checkbox"/> Major
Cause of Nonconformance:		
The spring clip (112B146H01) of the individual stabs failed to hold the stab finger into the stab housing. The clip was not to print.		
Improper rework had been performed to the clip. Engineering instruction for rework was NOT given to the production floor.		
Incoming inspection process was not utilized.		
Corrective Action Response:		
<ol style="list-style-type: none"> 1. The stabs are being replaced on site with correct spring clips installed. 2. The vender was notified and correct parts were received. Oct 2001; however, they continued to send in old stock until March 03. 3. Receiving inspection process is now mandatory on all part changes. 4. The clip drawing was missing dimensions on the print. Those dimensions are being added. 5. Processes now in place to properly instruct disposition of nonconforming material. <ul style="list-style-type: none"> • "On hold" form is now used for suspect material in production and/or shipping. The form is typically used when a material sort is possible (i.e. date coded material) and Engineering issues sort or rework instruction. • "Material deviation" form is used when material can be used substituted of correct part or reworked. Engineering issues test or rework instruction. 		

The picture depicts a correct clip from current stock and a clip returned from the field.

