General Information or Other (PAR) Event # 42678

Rep Org:	THERMO ELECTRON CORPORATION	**Notification Date / Time:**	06/30/2006 22:13 (EDT)
Supplier:	THERMO ELECTRON CORPORATION	**Event Date / Time:**	06/30/2006 (CDT)
		Last Modification:	06/30/2006
Region:	4	**Docket #:**	
City:	Sugar Land	**Agreement State:**	Yes
County:		**License #:**	
State:	TX		

NRC Notified by:	BARRY NICHOLSON	**Notifications:**	MICHAEL SHANNON	R4
HQ Ops Officer:	JOHN KNOKE		THOMAS DECKER	R2
Emergency Class:	NON EMERGENCY		JOHN MADERA	R3
10 CFR Section:				
21.21	UNSPECIFIED PARAGRAPH			

PART 21 - DEFECTIVE PAPERLESS DATA ACQUISATION RECORDERS

"On May 3, 2006, Progress Energy (CP&T) Brunswick Nuclear Plant notified Thermo Electron that, during preventive maintenance on a Safety Related CSVC recorder, the rechargeable backup battery was found. To have separated. Progress Energy also indicated that a similar failure had been found on a Non-Safety Related recorder prior to this incident. Neither recorder had failed while in service. Both are believed to have been in service approximately six (6) years with the original hack-up batteries installed.

"Progress Energy requested that Thermo Electron evaluate the failures to determine a recommended course of action and determine whether or not a Part 21 Notification was appropriate. Thermo Electron organized an engineering team to immediately begin an investigation of the failures. Thermo engineers solicited the services of the battery manufacturer in their investigation.

"The back-up battery installed on the CSVC is a NiCad sealed package. As the batteries age, the potential exists whereby if the batteries were fully discharged, which could occur during an outage or a shut down condition, a reverse charging situation may occur when the recorders are brought back on-line. If a reverse charging condition occur, the byproduct is hydrogen gas which could be sufficient to cause the battery to split open. This is not a normal condition, but could occur in batteries that have been in service for a number of years. There is no apparent hazardous condition within the recorder as a result of this failure and the recorder would continue to function properly while under power.

"There have been no failures reported in any nuclear safety-related application of CSVC recorders while in operating mode. Should the battery fail, it will not cause the recorder to present or record any erroneous data. However, should a recorder lose power after such a battery failure has occurred, the system configuration would be lost.

IE19

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"Corrective Action : Thermo Electron has determined that a recommended replacement interval for the rechargeable battery should be documented to prevent the potential for this condition to occur in the future. The battery packs as originally installed on the CSVC are no longer available. A replacement has been identified which has been tested and verified to be suitable for the back-up battery application. This replacement does not compromise the original qualifications of the CSVC recorder. The battery pack (Thermo Part Number 1063-0200-001, Revision A) should be available for purchase within thirty (30) days. Thermo Electron recommends that utilities with CSVC recorders that have been in service greater than three (3) years with original batteries installed consider replacing the batteries at the next maintenance interval. The recommended replacement cycle for the replacement battery pack shall be three (3) years from the date the recorder is placed in service or the battery was replaced.

"Utilities have the option of purchasing batteries for replacement at their facility or returning the CSVC Recorders to Thermo Electron for battery replacement. Customers may contact Thereto Electron for spare parts or to request return for service."

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Thermo
ELECTRON CORPORATION

Facsimile

To: NRC Operations Center

Fax: (301) 816-5151

From: Barry Nicholson

Phone: (301) 816-5100

Date: June 30, 2006

Total Pgs: 5

Message: Attached is a Part 21 notification related to Thermo Electron's Model CSVC series recorders. A hard copy of this communication is being forwarded in the mail. If you need immediate assistance with this notification, I can be contacted at (713) 272-2236.

Process Instruments | 1410 Gillingham Lane | Sugar Land, TX 77478-2890 | 713-272-0404 713-272-2272 fax | www.thermo.com

Thermo
ELECTRON CORPORATION

THIS IS A 10CFR PART 21 NOTIFICATION

Contacts: Barry Nicholson
Director of Quality Assurance

June 30, 2006

US Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

Subject: Thermo Electron CSVC Series Recorders

This letter provides notification of a potential defect associated with Thermo Electron CSVC series paperless data acquisition recorders. These recorders were manufactured in accordance with the Thermo Electron 10CFR50 Appendix B Quality Program from August of 1998 through December of 2003, at which time the product was discontinued. The recorders are used for data collection and reporting purposes.

Situation

On May 3, 2006, Progress Energy (CP&L) Brunswick Nuclear Plant notified Thermo Electron that, during preventive maintenance on a Safety Related CSVC recorder, the rechargeable back-up battery was found to have separated. Progress Energy also indicated that a similar failure had been found on a Non-Safety Related recorder prior to this incident. Neither recorder had failed while in service. Both are believed to have been in service approximately six (6) years with the original back-up batteries installed.

Progress Energy requested that Thermo Electron evaluate the failures to determine a recommended course of action and determine whether or not a Part 21 Notification was appropriate. Thermo Electron organized an engineering team to immediately begin an investigation of the failures. Thermo engineers solicited the services of the battery manufacturer in their investigation.

The back-up battery installed on the CSVC is a NiCad sealed package. As the batteries age, the potential exists whereby if the batteries were fully discharged, which could occur during an outage or a shut down condition, a reverse charging situation may occur when the recorders are

brought back on-line. If a reverse charging condition occurs, the by-product is hydrogen gas which could be sufficient to cause the battery to split open. This is not a normal condition but could occur in batteries that have been in service for a number of years. There is no apparent hazardous condition within the recorder as a result of this failure and the recorder would continue to function properly while under power.

There have been no failures reported in any nuclear safety-related application of CSVC recorders while in operating mode. Should the battery fail, it will not cause the recorder to present or record any erroneous data. However, should a recorder lose power after such a battery failure has occurred, the system configuration would be lost.

Corrective Action

Thermo Electron has determined that a recommended replacement interval for the rechargeable battery should be documented to prevent the potential for this condition to occur in the future. The battery packs as originally installed on the CSVC are no longer available. A replacement has been identified which has been tested and verified to be suitable for the back-up battery application. This replacement does not compromise the original qualifications of the CSVC recorder. The battery pack (Thermo Part Number 1063-0200-001, Revision A) should be available for purchase within thirty (30) days. Thermo Electron recommends that utilities with CSVC recorders that have been in service greater than three (3) years with original batteries installed consider replacing the batteries at the next maintenance interval. The recommended replacement cycle for the replacement battery pack shall be three (3) years from the date the recorder is placed in service or the battery was replaced.

Utilities have the option of purchasing batteries for replacement at their facility or returning the CSVC Recorders to Thermo Electron for battery replacement. Customers may contact Thermo Electron for spare parts or to request return for service as follows:

Customer Service Department
1410 Gillingham Lane
Sugar Land, TX 77478
(800) 437-7979

Potentially Affected Safety Related Recorder Population

The following list identifies those nuclear utilities that have purchased nuclear safety-related CSVC Recorders affected by this notification. Thermo Electron will notify these utilities under separate cover regarding this notification.

Part Number / Serial Number	Ship Date	Customer	Shipped To	Purchase Order
CSVC3170	4/25/2003	Progress Energy CP&L	Shearon Harris Nuclear Plant	00107260
CSVC3169	4/25/2003	Progress Energy CP&L	Shearon Harris Nuclear Plant	00107260
CSVC3168	12/8/2002	Progress Energy CP&L	Shearon Harris Nuclear Plant	00097937
CSVC3167	12/10/2002	Progress Energy CP&L	Shearon Harris Nuclear Plant	00097937
CSVC3166	12/8/2003	Progress Energy CP&L	Shearon Harris Nuclear Plant	00097937
CSVC2944	4/3/2000	Progress Energy CP&L	Brunswick Nuclear Plant	1028953
CSVC2777	11/17/1999	Progress Energy CP&L	Brunswick Nuclear Plant	1008882
CSVC2776	11/17/1999	Progress Energy CP&L	Brunswick Nuclear Plant	1008882
CSVC2775	11/17/1999	Progress Energy CP&L	Brunswick Nuclear Plant	1008882
CSVC2774	11/17/1999	Progress Energy CP&L	Brunswick Nuclear Plant	1008882
CSVC2773	11/17/1999	Progress Energy CP&L	Brunswick Nuclear Plant	1008882
CSVC2772	11/17/1999	Progress Energy CP&L	Brunswick Nuclear Plant	1008882
CSVC2655	6/8/1999	Progress Energy CP&L	Brunswick Nuclear Plant	1M1495AF
CSVC2654	6/8/1999	Progress Energy CP&L	Brunswick Nuclear Plant	1M1495AF
CSVC2653	6/8/1999	Progress Energy CP&L	Brunswick Nuclear Plant	1M1495AF
CSVC2652	6/8/1999	Progress Energy CP&L	Brunswick Nuclear Plant	1M1495AF
CSVC2651	6/8/1999	Progress Energy CP&L	Brunswick Nuclear Plant	1M1495AF
CSVC2650	6/8/1999	Progress Energy CP&L	Brunswick Nuclear Plant	1M1495AF
CSVC2649	6/8/1999	Progress Energy CP&L	Brunswick Nuclear Plant	1M1495AF
CSVC2648	6/8/1999	Progress Energy CP&L	Brunswick Nuclear Plant	1M1495AF
CSVC2484	8/26/1998	Progress Energy CP&L	Shearon Harris Nuclear Plant	9C2498DA
CSVC2483	8/26/1998	Progress Energy CP&L	Shearon Harris Nuclear Plant	9C2498DA
CSVC2428	8/7/1998	Entergy Operations	River Bend Station	RB980360
CSVC2427	8/7/1998	Entergy Operations	River Bend Station	RB980360
CSVC2426	8/7/1998	Entergy Operations	River Bend Station	RB980360
CSVC2425	8/7/1998	Entergy Operations	River Bend Station	RB980360

Part Number / Serial Number	Ship Date	Customer	Shipped To	Purchase Order
CSVC2424	8/7/1998	Entergy Operations	River Bend Station	RB980360
CSVC2423	8/7/1998	Entergy Operations	River Bend Station	RB980360
CSVC2422	8/7/1998	Entergy Operations	River Bend Station	RB980360
CSVC2421	8/7/1998	Entergy Operations	River Bend Station	RB980360
CSVC2420	8/7/1998	Entergy Operations	River Bend Station	RB980360
CSVC2418	8/7/1998	Entergy Operations	River Bend Station	RB980360
CSVC2417	8/7/1998	Entergy Operations	River Bend Station	RB980360
CSVC2416	8/7/1998	Entergy Operations	River Bend Station	RB980360
CSVC3111	12/8/2000	TVA	Sequoyah Nuclear Plant	P-00N2H-266304-000
CSVC3110	12/8/2000	TVA	Sequoyah Nuclear Plant	P-00N2H-266304-000
CSVC3109	12/8/2000	TVA	Sequoyah Nuclear Plant	P-00N2H-266304-000
CSVC3143	2/5/2001	WISCONSIN ELEC.	Point Beach Nuclear Plant	90 181967
CSVC3136	11/20/2000	WISCONSIN ELEC.	Point Beach Nuclear Plant	4500359952
CSVC2849	2/3/2000	WISCONSIN ELEC.	Point Beach Nuclear Plant	4500275626
CSVC2848	2/3/2000	WISCONSIN ELEC.	Point Beach Nuclear Plant	4500275626
CSVC2847	2/3/2000	WISCONSIN ELEC.	Point Beach Nuclear Plant	4500275626
CSVC2846	2/3/2000	WISCONSIN ELEC.	Point Beach Nuclear Plant	4500275626

Should you have any questions regarding the above, please contact the undersigned.

Sincerely,

Barry Nicholson
Director of Quality Assurance

cc: Gerard Abraham