

May 28, 2010

**VIA FACSIMILE**

U.S. Nuclear Regulatory Commission  
Operations Center  
Fac. (301) 816-5151

**VIA REGULAR MAIL**

Document Control Desk  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555-001

**VIA OVERNIGHT DELIVERY**

U.S. Nuclear Regulatory Commission  
11555 Rockville Pike  
Rockville, MD 20852-2746

***Subject: Interim Report - Inability to Complete 10 CFR Part 21 Evaluation regarding Post Corrosion for DCU Batteries***

The Purpose of this letter is to provide the NRC a report in general conformity to the requirements of 10 CFR Part 21.21(a) (2). C& D Technologies, Inc. (C&D) received a report from a non-domestic customer enterprise which is not a U.S. licensee (as defined in 10 CFR Part 21.2) on 30 March 2010 concerning cracks in positive post seals in C&D 3DCU-9 batteries. In one case a cell's post was reported to have been broken off. Despite C&D's request for return of the allegedly defective battery(ies), they have not been returned so as to allow C&D to complete a root cause technical evaluation and affirm whether there is any defect in the manufacturing process or whether the reported conditions may be due to user abuse of product, improper maintenance, or other negligence or error. As a precautionary measure, C&D has chosen to treat this customer's report in the same manner as if the report involved a defect claim by parties regarding matters subject to 10 CFR Part 21. Thus, C&D is submitting this report to the NRC and is notifying it's customers that are US-licensee's utilizing C&D DCU batteries of such report, and is initiating an action plan to evaluate the reported potential defect and determine whether it could pose a substantial safety hazard for any US licensee using such batteries.

Required Information as per 10 CFR Part 21.21(d) (4) follows.

- (i) *Name and address of the individual or individuals informing the Commission.*

Jeffrey Graves, PhD [or designate]  
President and Chief Executive Officer  
C&D Technologies, Inc.  
1400 Union Meeting Road  
Blue Bell, PA 19422-0858

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- (ii) *Identification of the facility, the activity, or the basic component supplied for such facility or such activity within the United States which fails to comply or contains a defect.*

DCU Product line batteries 3DCU-7, 2DCU-9 and 3DCU-9, manufactured in the period January 1993 through May 2008 (Battery manufacturing date is on the battery label). Note: C&D has not completed its evaluation of the reported potential defect and whether it could pose a substantial safety hazard at any US licensee using such batteries.

- (iii) *Identification of the firm constructing the facility or supplying the basic component which fails to comply or contains a defect.*

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- (iv) *Nature of the defect or failure to comply and the safety hazard which is created or could be created by such defect or failure to comply.*

The defects reported by a non-US customer enterprise have not been fully evaluated and may or may not indicate a potential defect which could create a substantial safety hazard..

- (v) *The date on which the information of such defect or failure to comply was obtained.*

30 March 2010.

- (vi) *In the case of a basic component which contains a defect or fails to comply, the number and location of these components in use at, supplied for, being supplied for, or may be supplied for, manufactured, or being manufactured for one or more facilities or activities subject to the regulations in this part.*

DCU Batteries used at Nuclear Plants in 1E Applications\*

Utility	Plant Name	Battery Model	Qty of Batteries
AEP - Indiana Michigan Power	DC Cook	3DCU-9	80
Constellation Energy	Nine Mile Pt.	3DCU-9	20
Entergy	Grand Gulf	3DCU-9	20
PPL	Susquehanna	3DCU-7	32
Energy Northwest	Columbia	3DCU-9	40
Energy Northwest	Columbia	2DCU-9	8
TVA	Sequoyah	3DCU-9	20

\* may include batteries that were made outside of the suspect time range and batteries that have since been replaced by different models

- (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.*

Concurrent Actions underway to complete evaluation:

- a) Upon return of batteries from the non-US customer enterprise, C&D shall conduct full battery testing and assessment to identify any failure modes present and their causes - maximum estimated completion date = 7 days from receipt of returned batteries.
- b) In conjunction with licensees identified in section (vi), C&D will recommend maintenance assessment of all DCU batteries at these locations to determine their status and specifically the presence of any evidence of potential defects via visual examination, maintenance records review, and where possible load testing. For any cells exhibiting the presence of potential defect, C&D shall further recommend that they be returned for breakdown testing and analysis - estimated completion dates = 7 days from receipt of returned batteries, depending upon licensee timing considerations.

- (viii) *Any advice related to the defect or failure to comply about the facility, activity, or basic component that has been, is being, or will be given to purchasers or licensees.*

The non-US customer enterprise has been notified to return the problem batteries for breakdown analysis at C&D. U.S. licensees using batteries possibly containing the alleged defect have been notified of the filing of this report with recommendations that they examine their batteries for any signs of problems. See attached.

- (ix) *In the case of an early site permit, the entities to whom an early site permit was transferred.*

Not Applicable

If you have any questions or wish to discuss this matter or this report, please call or email Matthew Frick, Quality Director, C&D Technologies, Inc., tel. 215.619.7849, mfrick@cdtechno.com.

Sincerely,



Jeffrey Graves, PhD  
President and Chief Executive Officer

Atch: Form of C&D letter to Users of C&D Model DCU Batteries entitled Possible Problem with DCU batteries dated 28 May 2010.

# **C&D TECHNOLOGIES, INC.**

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**P o w e r   S o l u t i o n s**

Nuclear Product Management  
1400 Union Meeting Road  
Blue Bell, PA 19422  
Phone: (215) 775-1314  
Fax: (215) 619-7887

**VIA CERTIFIED MAIL**

May 28, 2010

To: User of C&D Model DCU Batteries in 1E Applications

Subject: Possible Issue with DCU Batteries

To Whom It May Concern:

Recently, C&D Technologies, Inc. (C&D) received a report from a non-domestic customer enterprise concerning reported cracks in positive post seals in C&D 3DCU-9 batteries, and in one case, the alleged shearing of a positive terminal while torquing connectors. We have requested that this battery be returned so we can evaluate the cause and determine if other batteries or other models could be at risk of a similar occurrence.

Although the reporting customer enterprise is not a Licensee (as defined by 10 CFR 21) and C&D has not yet received the battery(ies) in question so as to allow us to complete a root cause technical evaluation and affirm whether there is any defect in the manufacturing process of the battery(ies), or whether the reported conditions may be due to user abuse of product, improper maintenance, or other negligence or error, as a precautionary measure we have made report to the NRC and are providing this notice to users of the following models of the DCU product line.

As part of this notice C&D recommends that 3DCU-7, 2DCU-9 and 3DCU-9 battery models be inspected for cracks and corrosion to determine if there may be any potential issues or concerns at your location. All other models of C&D batteries have terminal posts with a completely different design and are not applicable to this notification.

C&D recommends inspection of these batteries as soon as possible, consisting of the following:

1. Visual inspection: Closely inspect the terminals on the batteries for indication of a suspect battery. Signs of significant corrosion can include corrosion deposit under or around the bushing where the terminal comes through the cover; misalignment or tilting of the terminals or intercell connectors, or any indication of a break in the post to terminal or intercell connectors. If there is no evidence of corrosion, then the battery is not suspect and no further testing is needed. Otherwise, further testing is required.
2. Internal ohmic readings (data can be collected while the battery is on line on float charge in a fully charged condition): If baseline values have been previously established for your batteries, then a change of greater than 50% from the baseline indicates that the battery should be replaced. In the absence of baseline values, a variation of greater than three standard deviations from the group mean (average) would indicate that the battery should be replaced.

(Continued)

3. Terminal Maintenance (can be performed while batteries are on line): Any unusual movement, twisting, or deformation of a terminal during terminal maintenance may indicate a weak connection between the terminal post and terminals. If these are noted, the battery should be replaced.

4. Load test (to be performed when the battery is disconnected from load): Load testing per your duty cycle will detect high resistance connections between terminal posts and connectors. Variations in voltage performance between batteries can indicate if a terminal post's current carrying capability is compromised.

C&D recommends replacement for any batteries exhibiting conditions of concern in accordance with applicable warranty terms and conditions. Do not hesitate to contact the undersigned if you have any questions.

Regards,

Larry A. Carson  
Nuclear Product Manager  
C&D Technologies, Inc.  
Direct: 215-775-1314  
lcarson@cdtechno.com

cc: Matthew Frick, C&D Director of Quality