

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

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**P o w e r   S o l u t i o n s**

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October 27, 2014

VIA FACSIMILE

Nuclear Regulatory Commission  
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US Nuclear Regulatory Commission  
Washington, DC 20555-0001

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US Nuclear Regulatory Commission  
11555 Rockville Pike  
Rockville, MD 20852-2746

Subject: Update to Final Report - 10CFR Part 21 Evaluation Regarding Misaligned Separators in LCR-25 Standby Batteries, Revision 1, Issued 09/22/14

The purpose of this letter is to update a report provided to the NRC on 09/22/14 regarding misaligned separators in Class 1E battery products. We are revising Section II for the models of the product affected, and Section VIII for the advice provided for customers. These revisions are provided below:

***(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.***

The products affected include LCUN and LCU model lines in addition to the previously reported LCR, KCR, and LCY products.

***(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.***

Based on experience gained through site visits and review of products that completed product life C&D is changing the criteria for inclusion in the scope of this Part 21 report. The change increases the allowable separator misalignment. The change is described in the attached customer communication.

IEI9  
NRC

If you have any questions or wish to discuss this matter or this report, please contact:

Robert Malley  
VP Quality and Process Engineering  
bmalley@cdtechno.com  
(215) 619-7830

Sincerely,



Christian Rheault  
President and Chief Executive Officer  
C&D Technologies, Inc.

Attachment – C&D Letter to Users of LCR, KCR, LCUN, LCU and LCY batteries entitled  
“Update on Separator Misalignment in C&D Batteries” dated 10/27/14

Cc: D. Anderson  
J. Miller  
R. Malley  
S. DiMauro  
L. Carson

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

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P o w e r   S o l u t i o n s

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October 27, 2014

Customer Name and Address (see attached list)

Ref: Separator Misalignment LCR, KCR, LCUN, LCU and LCY batteries

Dear Sir/Madam:

C&D Technologies issued a Part 21 notification to the NRC on 09/22/14 regarding misaligned separators in our Class 1E battery products. After review with several battery operators, further inspection of aged Class 1E batteries both at our facilities and at operator sites, and further technical analysis we are updating the Part 21 report with the following recommendations and revisions.

**Scope of Product Affected:** Due to an oversight, two product lines (LCUN and LCU) were omitted from the original Part 21 report. These are now included in the population, as they have the same basic construction as the KCR and LCR batteries in the original report.

**Criteria and Action Plan:** The original criteria called for customer action if the separator overlap between two plate edges was less than 1/8". After the original release, C&D has had the opportunity to review batteries returned from Class 1E applications after completion of normal life (>20years service) as well as populations of batteries in service for more than 13 years. These cells had conditions where there was less than 1/8" separator overlap since the date of manufacture, with no evidence of performance degradation or formation of any type of short path between the plates. Based on this additional experience we are changing the criteria for action.

**Criteria:** Cells where the separator is flush to both plate edges, or where the plate edges are exposed to each other without separator between the plates. This does NOT include cases where the positive plate edge only is flush or extends past the separator edge and the negative plate is within the separator. This occurs often in older cells experiencing normal positive plate growth.

**Action:** The action is to measure and monitor the cell voltage and to perform visual inspections on a monthly basis. Voltage trending and visual inspection will determine if a short is developing in the affected area. A voltage of 2.12V indicates a lower than normal voltage requiring action per our Installation and Operation manual, this includes individual cell charging or equalization or replacement. Please contact C&D with the inspection and voltage data for further instructions.

The original report is attached for your reference.

**C&D Contacts:** Further information on this issue can be obtained from:

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Office Phone 215-775-1314  
Email: lcarson@cdtechno.com

Robert Malley – VP Quality and Process Engineering  
Office Phone 215-619-7830  
Email: bmalley@cdtechno.com

Best Regards,

Larry Carson  
Nuclear Product Manager  
C&D Technologies, Inc.

cc: C. Rheault – President and CEO  
D. Anderson – VP General Counsel  
J. Miller – VP Operations  
R. Malley – VP Quality and Process Engineering  
J. Anderson – VP New Technology and Battery Design  
L. Carson – Nuclear Product Manager  
S. DiMauro – Quality Systems Manager