



U.S. Department
of Transportation

**Pipeline and
Hazardous Materials Safety
Administration**

400 Seventh Street, S.W.
Washington, D.C. 20590

NOV 25 2005

Mr. Ray Lundy
Vice President
Technical Operations
Bellatrix Systems, Inc.
1015 SW Emkay Dr.
Bend, OR 97702-1010

Ref. No.: 05-0206

Dear Mr. Lundy:

This is in response to your September 06, 2005 letter regarding the exceptions for lithium batteries as specified in the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180). Specifically, you ask if four cells, each with 0.6 grams of lithium, in a battery holder would qualify for the lithium battery exception from the HMR in § 173.185(b) which requires each battery with a solid cathode to contain less than 2.0 g of lithium content.

The answer is no. The definition for "battery" as described by the UN is applicable to the lithium battery provisions in § 173.185. In the United Nation's Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria, Fourth Revised Edition, the word "battery" means one or more cells that are electrically connected together by a "permanent means," including case, terminals, and markings. Based on your attached images, your cells are electrically connected together and, therefore, constitute a "battery." However, the cells in your attachment appear to be liquid cathode. Therefore, the liquid cathode limitations in § 173.185(b)(1) and (b)(2) apply. The limitation in paragraph (b)(1) specifies that each cell with a liquid cathode may not contain more than 0.5 g of lithium content and the limitation in paragraph (b)(2) specifies that a battery with a liquid cathode may not contain more than 2.0 g



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173.185(b)(1)

of lithium content. Furthermore, if the battery is contained in equipment in accordance with § 173.185(f), the battery must meet the requirements in paragraph (c).

I hope this information is helpful. If you have further questions, please do not hesitate to contact this office.

Sincerely,

A handwritten signature in cursive script that reads "Hattie L. Mitchell". The signature is written in dark ink and is positioned below the word "Sincerely,".

Hattie L. Mitchell
Chief, Regulatory Review and Reinvention
Office of Hazardous Materials Standards

9/9/05

INFOCNTR <PHMSA>

From: Ray Lundy [rlundy@bellatrix.com]
Sent: Tuesday, September 06, 2005 6:10 PM
To: INFOCNTR <PHMSA>
Subject: Fw: Battery Holder photos.

Satterthwaite

§ 173.185 (b)(1)
Lithium Batteries
05-0206



IMG_0361.jpg (120 KB)
IMG_0360.jpg (134 KB)

Dear Sir or Madam,

We are interested in shipping product within the United States which will include a battery holder containing four (4) lithium "AA" size batteries. The total content of lithium in each AA battery is 0.6 grams. Each AA battery outputs 3.6 volts and they will be placed in parallel with a battery isolator between each cell. Attached please find photos of a prototype of the proposed holder. The holder is to be mounted under a clear plastic panel.

Since the batteries are individually packed and the holder and panel display them clearly to inspectors, our question is this: Will we be allowed to ship these units without restriction, or will they fall under the 2 gram rule and require hazardous shipping?

Thank you for your reply.

Ray Lundy

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