



U.S. Department
of Transportation
**Research and
Special Programs
Administration**

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

JUN 4 2004

Ms. Laura Lewis Owens
Alston & Bird LLP
One Atlantic Center
1201 West Peachtree Street
Atlanta, Georgia 30309-3424

Ref. No. 04-0141

Dear Ms. Owens:

This is in response to your letter of May 25, 2004 requesting confirmation that discharged lithium ion batteries as described in your letter are not subject to the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) when transported by highway in the United States. In your letter you state that the subject batteries contain one cell and that the equivalent lithium content of the cell is calculated to be 0.26 grams.

You indicate that these lithium ion batteries are part of a voluntary recall that Verizon Wireless is in the process of implementing in cooperation with the Consumer Product Safety Commission. The batteries, which are counterfeit, are susceptible to overcharging and may overheat during or soon after charging. Under the proposed recall program, Verizon Wireless would request that a customer cease charging the battery and leave the phone on to allow the phone to discharge for three days prior to return shipment. A customer would place the discharged battery in a strong fiberboard box, provided by Verizon Wireless. You state that the packaging material and configuration complies with the requirements in 49 CFR 173.185(b)(4) which requires that lithium batteries be packaged in manner to prevent short circuits. The customer would return the battery to Verizon Wireless via ground shipment by U.S. mail. You further state that you are working with the U.S. Postal Service (USPS) to ensure that transportation is limited to ground shipments and that such shipments will comply with any additional requirements of the USPS.

Under 49 CFR 173.185(b), a lithium ion cell that contains 1.5 grams or less equivalent lithium content and a lithium ion battery that contains 8 grams or less equivalent lithium content are not subject to the requirements of HMR if they comply with the provisions in 49 CFR 173.185(b)(3), (4) and (5). In addition, 49 CFR 173.21(c) states that electrical devices which are likely to create sparks or generate a dangerous quantity of heat are forbidden for transportation unless packaged in a manner which precludes such an occurrence. As the entity causing these batteries to be transported, it is the responsibility of Verizon Wireless to ensure compliance with the applicable provisions of the HMR. The procedures which you have described, if effectively communicated to the persons returning these batteries, appear adequate to ensure that these batteries are eligible for the



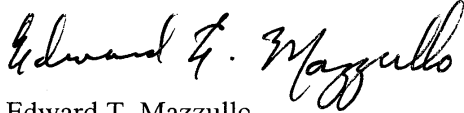
040141

173.185

exceptions provided in 49 CFR 173.185(b) and are not forbidden for transportation under the provisions of 49 CFR 173.21(c).

I trust this satisfies your inquiry. If we can be of any further assistance, please contact us.

Sincerely,

A handwritten signature in black ink that reads "Edward T. Mazzullo". The signature is written in a cursive style with a large, stylized initial 'E'.

Edward T. Mazzullo
Director, Office of Hazardous
Materials Standards

ALSTON & BIRD LLP

One Atlantic Center
1201 West Peachtree Street
Atlanta, Georgia 30309-3424

404-881-7000
Fax: 404-881-7777
www.alston.com

Laura Lewis Owens

Direct Dial: 404-881-7363

E-mail: lowens@alston.com

May 25, 2004

VIA: FACSIMILE & UNITED PARCEL SERVICE

Mr. Frits Wybenga
Deputy Associate Administrator for Hazardous Materials Safety
Research and Special Programs Administration
Department of Transportation
DHM-1
400 7th St., S.W.
Washington, DC 20590-0001

**Re: Request for Confirmation of Non-Applicability of the Hazardous
Materials Regulations (40 C.F.R. Parts 171-185)**

Dear Mr. Wybenga:

I write on behalf of Verizon Wireless to request the Department of Transportation's confirmation that discharged lithium ion batteries, as described below, are not subject to the federal Hazardous Materials Regulations, 40 C.F.R. Parts 171-185 (the "HMR") when transported by ground in strong packagings. In voluntary cooperation with the U.S. Consumer Product Safety Commission ("CPSC"), Verizon Wireless is in the process of implementing a program for the voluntary exchange of certain lithium ion batteries that may be counterfeit. The CPSC has requested that Verizon Wireless notify the Department of Transportation (DOT) of Verizon Wireless' proposed battery exchange program. That program and Verizon Wireless' conclusions as to the regulatory status of the transportation of such discharged batteries are described below.

Background

The subject batteries bear the external outward appearance of LG Electronics ("LG") TM-510 batteries used in LG's TM-510 model cellular telephone. Each battery contains one lithium ion cell. Because the counterfeit batteries may be susceptible to overcharging, they may overheat during or soon after charging. Verizon Wireless proposes to alert its customers to these possibilities, and has proposed to the CPSC a program whereby a customer may exchange a discharged counterfeit battery for a replacement battery.

Bank of America Plaza
101 South Tryon Street, Suite 4000
Charlotte, NC 28280-4000
704-444-1000
Fax: 704-444-1111

90 Park Avenue
New York, NY 10016
212-210-9400
Fax: 212-210-9444

3201 Beechleaf Court, Suite 600
Raleigh, NC 27604-1062
919-862-2300
Fax: 919-862-2260

601 Pennsylvania Avenue, N.W.
North Building, 10th Floor
Washington, DC 20004-2601
202-756-3300
Fax: 202-756-3333

Under that proposed program, Verizon Wireless would request that a customer immediately cease charging the recalled battery and leave the phone on to allow the phone to discharge for three (3) days prior to return shipment. A customer would exchange a discharged battery for a replacement battery by placing the discharged battery in a strong fiberboard box provided by Verizon Wireless and returning the battery to Verizon Wireless via ground shipment by U.S. mail. A specimen of this packaging is attached hereto as Exhibit "A". Verizon Wireless is working with the U.S. Postal Service ("USPS") to ensure that transportation will be limited to the ground and that such shipments will satisfy any additional requirements under USPS regulations.

Regulatory Status of the Batteries Under the HMR

Under the HMR, most lithium batteries are regulated as Class 9 materials. However, subject to the satisfaction of certain conditions, 49 C.F.R. § 173.185(b) provides an exception to the HMR's requirements for lithium ion cells and batteries. Specifically, § 173.185(b)(1) and (2) except from regulation a lithium ion cell containing not more than 1.5 grams of "equivalent lithium content" and a lithium-ion battery containing an aggregate quantity of not more than 8.0 grams of equivalent lithium content.

Equivalent lithium content is calculated to be 0.3 times the rated capacity in ampere-hours of a lithium ion cell. *See id.* § 173.185(a). In turn, "[t]he lithium-equivalent content of a battery equals the sum of the grams of lithium-equivalent content contained in the component cells of the battery." *Id.* If a lithium ion battery satisfies the equivalent lithium content limits of § 173.185(b)(1) and (2), then it is not subject to regulation under the HMR, provided that it is (i) packed in such a way so as to prevent short circuits, and (ii) packed in a strong packaging. *See id.* § 173.185(b)(4).¹

Relying on information provided by LG and analysts with the engineering firm Exponent, and with the assistance of Andy Altemos with HMT Associates, Verizon Wireless has investigated the application of 49 C.F.R. §§ 173.185(b) and 173.21(c) to the return shipment of the batteries. After a review of the applicable regulations, Verizon Wireless has been advised that the return shipment of the discharged batteries (i) should not be subject to the HMR, and (ii) should not run afoul of § 173.21(c)'s prohibition on offering for transportation electrical devices that are likely to create sparks or generate a dangerous quantity of heat. While batteries qualifying for § 173.185's exception may be transported by any mode, Verizon Wireless nevertheless intends to limit the return shipment of batteries solely to ground transport.

¹ The engineering firm Exponent has advised Verizon that the lithium ion batteries at issue do not contain liquid or solid cathodes. Thus, the conditions set forth at § 173.185(b)(3) and (5) should not apply to their transportation.

Mr. Frits Wybenga
May 25, 2004
Page 3

First, the subject batteries' equivalent lithium content should fall below the limits established in 49 C.F.R. § 173.185(b)(1) and (2). Verizon Wireless has obtained confirmation from LG that a standard LG lithium ion cell has a rated capacity of 0.875 ampere-hours. Verizon Wireless also has obtained independent confirmation from Exponent that a rated capacity of 0.875 ampere-hours is a typical rating for a lithium ion cell used in a cellular telephone, which based on the regulations is calculated to have a lithium-equivalent content of 0.26 grams. Under any scenario, therefore, we are advised that the equivalent lithium content of the cells subject to the exchange program is expected to fall below the 1.5 grams limit contained in the HMR.

Similarly, because the lithium ion batteries subject to exchange each contain only one lithium ion cell, we are advised that the aggregate equivalent lithium ion content of an exchanged battery also is expected to fall short of the DOT's 8.0 grams limit on aggregate equivalent lithium ion content. Indeed, according to Exponent, no cellular telephone battery currently in use is known to have a rated capacity that could cause the equivalent lithium content limitations of § 173.185(b)(1) and (2) to be exceeded.

Second, Verizon Wireless intends to ship the batteries in accordance with the conditions of § 173.185(b)(4), which requires batteries to be packed in strong packaging in such a way as to prevent short circuits. For the return ground shipment of discharged batteries, Verizon Wireless intends to provide rigid, good quality packaging that are able to contain and protect the battery under conditions normally incident to transportation. Batteries will be packed one battery per package, and the packaging should prevent significant movement of the battery during transportation. Further, Verizon Wireless does not intend to include any electrically conductive materials in the packaging that would cause or contribute to a short circuit. Exponent has advised Verizon Wireless that, when so packaged and when the batteries are in a discharged state, they should present little or no risk of short circuiting. In light of the foregoing, the lithium ion batteries subject to exchange should not be subject to regulation under the HMR. For similar reasons, the shipment of the batteries should not be forbidden by operation of 49 C.F.R. § 173.21(c).

Consequently, Verizon Wireless requests DOT's confirmation that return shipments of discharged lithium ion batteries, as described above, should not be subject to regulation under the HMR when transported by ground in strong packaging. We look forward to the DOT's response to this request. In the meantime, please do not hesitate to contact me or Verizon Wireless should you require further information or have any questions.

Very truly yours,

Laura L. Owens

Laura Lewis Owens

