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

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

DEC 5 2003

Mr. David Newman
Engineering Project Manager, Accessories
Thales Communications, Inc. USA
22605 Gateway Center Drive
Clarksburg, MD 20871

Ref. No. 03-0279

Dear Mr. Newman:

This is in response to your letter dated November 4, 2003 regarding the classification of lithium batteries under the Hazardous Materials Regulations (HMR: 49 CFR Parts 171-180). Specifically, you ask if lithium cells that are assembled into packs, which you refer to as "soft packs," can be transported as Class 9 materials in accordance with § 173.185(j) without performing UN testing.

The HMR govern the transportation of hazardous materials in commerce. Under § 173.22 of the HMR, it is the shipper's responsibility to properly classify a hazardous material in accordance with the hazard class definitions in Part 173 or determine that the material is not subject to these regulations. This determination must be based on the characteristics and properties of the product in the form in which it will be offered for transportation. With the exception of Class 1 materials, such determinations are not required to be verified by this office. Generally, manufacturers have the information needed to properly classify the materials and products they produce. In some cases it may be necessary to have a material tested; however, generally, testing for the purpose of classification is not required by the HMR.

In order for your material to be transported under the provisions of § 173.185(j) it must be a lithium battery that is being shipped for testing purposes. A lithium battery or cell consists of four main components:

1) a positive electrode that receives electrons from the external circuit when the cell is discharged,
2) a negative electrode that donates electrons to the external circuit as the cell discharges,
3) Lithium which provides a mechanism for charge to flow between positive and negative electrodes, and
4) a separator which electrically isolates the positive and negative electrodes.

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As you indicated in your letter, the "soft pack" contains several lithium ion cells that are shipped from your sub-contractor in New Jersey to your facility in Maryland for QA/QC testing. If each cell contains the components listed above then, even though the cells are not contained in the final plastic housing, the configuration would meet the description of "Lithium battery, UN 3090" and could be shipped under the provisions of § 173.185(j) without performing UN testing.

I hope this satisfies your request.

Sincerely,

Susan Gorsky
Senior Transportation Regulations Specialist
Office of Hazardous Materials Standards

Mr. Edward Mazzullo
Director of Hazardous Materials Standards
Research and Special Programs Administration
U.S. Department of Transportation
400 7th Street, SW
Washington, DC 20590

4 Nov 03

Supko
§173.185(j)
Lithium Batteries
03-0279

Re: Testing Lithium ion Battery Packs

Dear Mr. Mazzullo:

As the engineering project manager of accessories at Thales Communications, Inc. USA, in Clarksburg MD, I am responsible for the engineering of Lithium Ion batteries for our hand-held two way radio products that are used extensively by the U.S. military.

We are beginning the process of testing the batteries pursuant to the requirements of the ICAO Technical Instructions (2003-2004 Edition) and UN Manual of Tests and Criteria. Therefore, I am writing to request clarification from your office on "in-process" material.

There are three conditions, or "state-of-build" in which the batteries are shipped.

A. The lithium ion cells are shipped from the cell manufacturer to our sub-contractor in N.J.
B. Our subcontractor assembles the cells into "packs" including a safety circuit that are then shipped from N.J. via ground transport to our facility in Maryland for in-house QA/QC testing. These "packs" are not finished products since they do not contain plastic housings. (These are sometimes referred to as "soft packs.") When the "soft packs" are in this condition, they are shipped in multi-pack containers and packaged in such a way to prevent short-circuits.
C. We conduct the QA/QC tests on the "soft packs" received from our subcontractor prior to placing them in plastic housings. We then assemble and seal the cell packs into a plastic housing and ship the finished product to our customers around the world.

For condition A, the cell manufacturer, such as Panasonic or Moli, is responsible for the UN cell testing. For condition C, we plan to do the required UN testing on the finished battery pack.

My question is, for condition B; does UN testing need to be done on the "soft packs" prior to shipping them by ground to our facility or can they simply be shipped as Class 9 hazardous materials pursuant to 49 CFR 173.185(j)?

I greatly appreciate your assistance in this matter and look forward to your response.

Sincerely,

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