



U.S. Department of Transportation
**Pipeline and Hazardous Materials
Safety Administration**

1200 New Jersey Avenue, SE
Washington, DC 20590

JUN 15 2015

L'Gena Shaffer
Technical Consultant
Currie Associates, Inc.
10 Hunter Brook Lane
Queesbury, NY 12804

Ref. No.: 15-0061

Dear Ms. Shaffer:

This is in response to your letter dated March 25, 2015 letter, requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) relating to packaging of lithium battery powered equipment. You request confirmation of your understanding that lithium batteries contained in equipment are not subject to the requirements for outer packagings when the equipment provides equivalent protection for the lithium battery.

Your understanding of the requirements of § 173.185(b)(4) is correct. Lithium batteries installed in equipment may be transported unpackaged provided the equipment provides equivalent protection for the cells and batteries. When equipment containing lithium batteries is placed in an outer package § 173.185(b)(4)(ii) requires the equipment to be secured against movement and be packed so as to prevent accidental operation during transport.

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

Sincerely,

A handwritten signature in black ink, appearing to read "Duane A. Pfund". The signature is fluid and cursive, with a large, sweeping flourish at the end.

Duane Pfund
International Standards Coordinator
Standards and Rulemaking Division

Goodall, Shante CTR (PHMSA)

*Leary
173.185(a)(4)
Batteries
15-0061*

From: Ciccarone, Michael CTR (PHMSA)
Sent: Thursday, March 26, 2015 10:18 AM
To: Hazmat Interps
Subject: FW: Interpretation request - 173.185(a)(4)
Attachments: 03252015_interp 173.185(a)(4)FINAL.pdf

Shante/Alice,

Please submit this for a formal letter of interpretation.

Thanks,

Mike

From: Currie Associates L'Gena Shaffer [<mailto:lgena@currieassociates.com>]
Sent: Wednesday, March 25, 2015 3:13 PM
To: Betts, Charles (PHMSA); PHMSA HM InfoCenter
Cc: Currie Associates L'Gena Shaffer; Currie Associates, Chris Yakush
Subject: Interpretation request - 173.185(a)(4)

Mr. Betts and HMIC,

Attached please find an interpretation request to clarify if outer packaging is necessary for larger pieces of equipment with lithium batteries installed §173.185(a)(4).

Feel free to contact me if you have any questions.

Best regards,

L'Gena Shaffer, CDGP

Technical Consultant
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Queensbury, NY 12804
O: 770-253-0220
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This information is intended to provide interpretative and authoritative information in regard to the subject matter covered as a service to our members and has been answered to the best of our ability based on the information provided to us. We do not guarantee the accuracy or completeness of any such interpretation or information, however, nor do we warrant that compliance with any advice we provide will guarantee compliance with any legal or regulatory requirements. Our statements or opinions do not convey legal interpretation and government authorities or legal counsel should be contacted for such a response.



March 25, 2015

U.S. Department of Transportation
PHMSA Office of Hazardous Materials Standards
Attn: PHH-10
East Building
1200 New Jersey Avenue, SE.
Washington DC 20590-0001
Phmsa.hm-infocenter@dot.gov

RE: Request for interpretation on §173.185(g) compared to ICAO TI PI 967, IMDG PI P903 and ADR PI P903

Dear Standards Office:

Currie Associates, Inc. requests the Pipeline and Hazardous Materials Safety Administration (PHMSA) provide a clarification on the provisions found in 49CFR 173.185(a)(4) of the lithium battery regulations. Specifically, we wish to confirm that a lithium ion battery contained in equipment which provides equivalent protection as described in §173.185(a)(4)(i) is not subject to the requirements for outer packaging in (a)(4)(ii).

Consider a product having lithium ion batteries ranging in size from 1 kg to 5 kg installed in a large metal rack cabinet enclosure. The metal cabinets may weigh in excess of 50 kg and would typically be shipped on specially-designed pallets and anchored for transport.

An exemption from outer packaging for lithium ion batteries contained in equipment is provided in the International Civil Aviation Organization Technical Instructions for the Safe Transport of Dangerous Goods (ICAO TI) in Packing Instruction 967, in the Agreement for Dangerous Goods by Road (ADR) in Packing Instruction P903, and the International Maritime Dangerous Goods (IMDG) Code in Packing Instruction P903.

49CFR §173.185(a)(4) currently states:

- “(4) When lithium cells or batteries are contained in equipment:*
- (i) The outer packaging must be constructed of suitable material of adequate strength and design in relation to the capacity and intended use of the packaging, **unless the lithium cells or batteries are afforded equivalent protection by the equipment in which they are contained; [emphasis added]***
 - (ii) Equipment must be secured against movement within the outer packaging and be packed so as to prevent accidental operation during transport; and*
 - (iii) Any spare lithium ion cells or batteries packed with the equipment must be packaged in accordance with paragraph (b)(3) of this section.*

The current text can be interpreted as if sub-subparagraphs (i), (ii) and (iii) of subparagraph (4) are all required. The exemption from strong outer packaging in sub-subparagraph (i) is contradicted in sub-subparagraph (ii) which states “...within the outer packaging”.

As indicated in the preamble to the Final Rule, HM-224F was intended and published to harmonize the Hazardous Materials Regulations (HMR) lithium battery requirements with the international regulations.

The ICAO TI, ADR, and IMDG Code do not require strong outer packaging when lithium ion batteries are contained in equipment provided the equipment itself provides adequate protection. These regulations are permitted for use by the HMR per 49 CFR, Part 171, Subpart C. However, for transport by ground in the U.S. the HMR appears to be more restrictive by requiring outer packaging.

ICAO TI Packing Instruction 967, Section I, additional requirements states:

*"The equipment must be packed in strong outer packagings constructed of suitable material of adequate strength and design in relation to the packaging's capacity and its intended use **unless the battery is afforded equivalent protection by the equipment in which it is contained.**"*

IMDG Code, P903, paragraph (4) states in part:

"For cells or batteries contained in equipment:

...

Large equipment can be offered for transport unpackaged or on pallets when the cells or batteries are afforded equivalent protection by the equipment in which they are contained."

...

ADR P903 allows for cells or batteries contained in equipment:

"...to be offered for carriage unpackaged or on pallets when the cells or batteries are afforded equivalent protection by the equipment in which they are contained."

Therefore, we wish to confirm it is not PHMSA's intention to omit this exception to outer packaging when lithium ion batteries are afforded equivalent protection by the equipment in which they are contained.

I can be reached at 770-253-0220 or by email at lgena@currieassociates.com if you have any questions. Thank you for your assistance.

Sincerely,



Technical Consultant
Currie Associates, Inc.