



U.S. Department  
of Transportation

**Pipeline and Hazardous  
Materials Safety  
Administration**

1200 New Jersey Avenue, SE  
Washington, DC 20590

NOV 12 2019

Frits Wybenga  
Dangerous Goods Transport Consulting, Inc.  
15108 Red Clover Drive  
Rockville, MD 20853

Reference No. 19-0057

Dear Mr. Wybenga:

This letter is in response to your April 20, 2019, letter requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to approvals for the transportation of lithium batteries with a mass exceeding 35 kg on cargo aircraft. Specifically, you ask about requirements for obtaining approval of the Associate Administrator in accordance with both the HMR and International Civil Aviation Organization Technical Instructions for the Safe Transport of Dangerous Goods by Air (ICAO TI).

We have paraphrased and answered your questions as follows:

- Q1. You ask whether an approval, as defined in § 105.5, is required for Associate Administrator authorization to transport a lithium battery with a mass exceeding 35 kg on a cargo aircraft.
- A1. The answer is yes. As mentioned in your request, special provision A54 (see § 172.102) specifies that “irrespective of the quantity limits in Column 9B of the § 172.101 table, a lithium battery, including a lithium battery packed with, or contained in, equipment that otherwise meets the applicable requirements of § 173.185, may have a mass exceeding 35 kg if approved by the Associate Administrator prior to shipment.” As defined in §§ 105.5 or 107.1, an approval includes a competent authority approval, which is issued by the Associate Administrator, the Associate Administrator’s designee, or as otherwise prescribed in the HMR, to perform a function for which prior authorization by the Associate Administrator is required. Therefore, in order to transport a lithium battery with a mass exceeding 35 kg, an approval by the Associate Administrator is required.

Furthermore, as per the definition of a competent authority approval in §§ 105.5 or 107.1, the approval may be issued as either a special permit or approval. PHMSA has begun issuing these approvals as special permits as they provide additional flexibility and allow for party status of special permit holders and potential applicants. If you have further

questions regarding issuance of approvals or special permits, please contact the Office of Approvals and Permits at (202) 366-4511.

Q2. You ask whether an approval issued by PHMSA is required when transporting a lithium battery with a mass exceeding 35 kg on a cargo aircraft to the United States from outside the United States and authorized for transport in accordance with the ICAO TI, including an approval issued by the State of Origin.

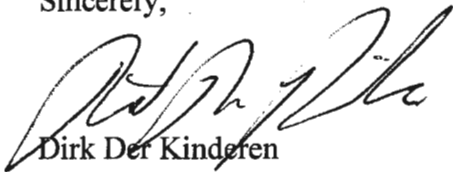
A2. The answer is yes. United States variation US 3 from the ICAO TI states that "lithium cells or batteries including when packed with equipment or contained in equipment transported in accordance with Special Provision A99...may not be transported to, from, or within the United States aboard a passenger or cargo aircraft without the prior approval of the appropriate authority of the U.S." Therefore, when transporting a lithium battery with a mass exceeding 35 kg on a cargo aircraft to the United States from outside the United States and authorized for transport in accordance with the ICAO TI, including an approval issued by the State of Origin and special provision A99, a U.S. competent authority approval is required.

Q3. You ask whether an approval issued by PHMSA is required when transporting a lithium battery with a mass exceeding 35 kg on a cargo aircraft in accordance with ICAO TI Special Provision A99.

A3. The answer is yes. See A2.

I hope this information is helpful. Please contact us if we can be of further assistance.

Sincerely,



Dirk Der Kinderen  
Chief, Standards Development  
Standards and Rulemaking Division

Meller

19-0057

**Dodd, Alice (PHMSA)**

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**From:** Kelley, Shane (PHMSA)  
**Sent:** Tuesday, April 23, 2019 4:49 PM  
**To:** Hazmat Interps  
**Cc:** Pfund, Duane (PHMSA); Leary, Kevin (PHMSA); Geller, Shelby (PHMSA)  
**Subject:** Fwd: Request for interpretation - UN3840 batteries exceeding 35kg on cargo  
**Attachments:** interp request 35kg batts.pdf

Please process as a request for interpretation.

I would like Shelby assigned as it will strengthen her purview of the lithium battery arena.

Shelby - Kevin can likely help you understand some of the background. Please also touch base with myself and Duane once you have had a chance to review as this one has some nuance to it. We should discuss the overall approach before you start any drafting.

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**From:** Frits Wybenga <fwybenga@dg-transportation.com>  
**Sent:** Saturday, April 20, 2019 11:08 AM  
**To:** Kelley, Shane (PHMSA)  
**Cc:** Paquet, Ryan (PHMSA); Pfund, Duane (PHMSA)  
**Subject:** Request for interpretation - UN3840 batteries exceeding 35kg on cargo

Hi Shane – please accept the attached request for a letter of interpretation. I believe clarification is needed with respect to PHMSA authorization of batteries in excess of 35kg on cargo. In my opinion, the regulations do not support what is being required. If I am wrong please correct me.

I am finding that based on what I believe to be incorrect application, the process continues to become more complex. People need to move these batteries efficiently. The increasing complexity serves to make US industry less competitive.

I believe there is a need for a better understanding for all of us (PHMSA and people on the outside) of what is actually in the regs.

There are limits on the extent to which PHMSA may regulate lithium batteries by air based on the FAA authorization bill which I understand to still be applicable. In addition, the WH just issued a memo concerning nonregulatory government policy. It discourages agencies from acting on policies that are not based on regulation.

Thanks - Frits

Frits Wybenga

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# Dangerous Goods Transport Consulting, Inc

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April 20, 2019

Associate Administrator for Hazardous Materials Safety  
(Attention: Standards, PHH-10)  
Pipeline and Hazardous Materials Safety Administration  
U.S. Department of Transportation  
East Building, 2<sup>nd</sup> Floor, E23-406 1200  
New Jersey Avenue, SE.  
Washington, DC 20590-0001

Dear Mr. Kelly:

I am writing to confirm my understanding of requirements for cargo air transport of a tested lithium ion battery or battery assembly (hereafter referred to as battery) in full compliance with the regulations except for a mass in excess of 35 kg.

## **Regulatory Background**

Lithium ion batteries are regulated by the HMR and the ICAO TI under the shipping name and ID number, UN3480 Lithium Ion Batteries.

### *Transport by Air under the HMR*

The HMT lists UN3840 and limits the mass of lithium ion batteries on cargo aircraft to 35 kg. It further assigns special provisions A54. Special provision A54 *provides* for transport of batteries in excess of 35 kg if *approved* by the Associate Administrator.

Under §105.5 the term “approval” is a “written authorization, including a competent authority approval, issued by the Associate Administrator, the Associate Administrator's designee, or as otherwise prescribed in the HMR, to perform a function for which *prior authorization by the Associate Administrator is required* under subchapter C of this chapter (49 CFR parts 171 through 180).” Procedures for filing an application for approval are found in §107.705.

An approval is different from a “special permit” which “means a document issued by the Associate Administrator, the Associate Administrator's designee, or as otherwise prescribed in the HMR, under the authority of 49 U.S.C. 5117 *permitting a person to perform a function that is not otherwise permitted* under subchapter A or C of this chapter, or other regulations issued under 49 U.S.C. 5101 et seq.” Procedures for filing an application for a special permit are in §107.105.

#### *Transport under Part 171 Subchapter C*

Under Part 171, Subpart C, transport of lithium ion batteries in accordance the ICAO TI is authorized as may be limited by §171.23 and §171.24. There are no added limitations in these paragraphs applicable to tested and approved lithium ion batteries, including ones in excess of 35 kg. (Note: US variation 3 in the ICAO TI is only applicable to prototype batteries.)

#### *Transport under the ICAO TI*

The ICAO TI also provide for transport of lithium ion batteries on cargos aircraft under UN3840 and in packing instruction 965 limit the mass of such batteries to 35 kg. Like the HMR, the ICAO TI also include a provision for batteries exceeding 35 kg, if *approved by the appropriate authority of the State of Origin* (see A99).

#### **The required document for authorizing transport of a battery exceeding 35 kg under the HMR.**

It is my understanding that an *approval* is needed from PHMSA to allow a battery exceeding 35 kg in that a *prior authorization by the Associate Administrator is required* under subchapter C, where, in this case, A54 of subchapter C sets out the required prior authorization. Since A54 makes provision for transport of batteries in excess of 35 kg, a special permit is not required in that transport of a battery in excess of 35kg is not a *function that is not otherwise permitted* under subchapter A or C.

When transport by cargo aircraft is in accordance with the ICAO TI for purposes of domestic or international transport under Part 171 Subpart C, where the U.S. is the State of Origin, a competent authority approval (under the ICAO TI termed as an *approved by the appropriate authority of the State of Origin*) is required and an *approval* by PHMSA serves as that approval.

Whether the document issued is an “approval” or a “special permit” is important in that different provisions apply to approvals and special permits under Part 107.

**Question 1:** Is it correct that an *approval* document as defined in §105.5 is the appropriate document in the case of an Associate Administrator authorization for transport of a lithium ion battery in excess of 35 kg on a cargo aircraft?

*Note that while PHMSA has in the past issued approvals for batteries in excess of 35 kg, for unexplained reasons and without notice, PHMSA now employs special permits for this authorization. See for example, Special Permit number 20805 listed in PHMSA's Special Permit Notice published in the Federal Register on April 15, 2019.*

**The need for a document from PHMSA for transport of a battery exceeding 35 kg when transport is from outside the US to the US?**

For transport under the ICAO TI in accordance with Part 171 Subpart C, it is my understanding that no additional restrictions apply to the transport of lithium ion batteries exceeding 35 kg beyond compliance with the provisions of the ICAO TI. For a battery exceeding 35 kg shipped from outside the US to the US, its transport will have to have been *approved by the appropriate authority of the State of Origin*. Any requirement for an additional approval by the Associate Administrator in the case of foreign shipments to the US would seem to exceed the requirements of the ICAO TI as they affect lithium ion batteries and I am unaware of any provision in the HMR for such a separate approval.

**Question 2:** Is it correct that, for a battery exceeding 35 kg transported by cargo aircraft from outside the US and authorized for transport in accordance with the ICAO TI, including an approval issued by the State of Origin, that no further approval by PHMSA is required?

**The need for relief from the HMT 35kg limitation when transport is in accordance with the ICAO TI.**

For transport in accordance with the ICAO TI in accordance with Part 171 Subpart C, PHMSA staff has in the past advised that a special permit is needed in the case of cargo aircraft transport of a lithium ion battery exceeding 35kg based on the HMT 35 kg restriction. PHMSA special permits authorizing batteries in excess of 35kg cite the 35kg limit in the HMT.

For a shipment of a lithium ion battery consigned in accordance with the ICAO TI as provided by Part 171 Subpart C, I am unaware of a need to take the provisions of the HMT into account unless there is a relevant restriction in §171.23 or §171.24. Even though both the HMR and the ICAO TI include a 35kg limit and provide for relief by way of an approval, it is only the ICAO TI limitation and not the HMT limitation that needs to be addressed through an approval by the State of Origin in the case of ICAO TI transport.

**Question 3:** Is it correct that for authorized transport in accordance with the ICAO TI only an approval based on ICAO Special Provision A99 is needed?

I appreciate your consideration of this request for interpretation. As our society increasingly shifts to electric vehicles employing lithium ion battery assemblies in excess of 35 kg, I am sure that you can appreciate the need for a correct understanding of the questions posed.

As PHMSA is repeatedly confronted with new requests for approvals for batteries exceeding 35kg, a timely clarification would be in the best interest of PHMSA and industry which has a need to transport batteries in a rapidly developing and highly competitive and global field. Please contact me if there is any need for clarification on my questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Frits Wybenga". The signature is fluid and cursive, with a prominent initial "F" and a long, sweeping underline.

Frits Wybenga  
Dangerous Goods Transport Consulting, Inc.