



U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

1200 New Jersey Avenue SE
Washington, DC 20590

NOV 14 2012

Ms. Kathy McConnell
K & P Trucking, Inc.
P.O. Box 2306
Platte City, MO 64079

Ref. No.: 12-0209

Dear Ms. McConnell:

This responds to your September 14, 2012 email regarding the transportation requirements for wet (electric storage) batteries under the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180). Specifically, you ask for clarification of procedures that satisfy the requirement of § 173.159(e)(2) that batteries must be loaded or braced to prevent damage and short circuits in transit and § 177.834(a) that provides general requirements for securing packages in a motor vehicle.

In your incoming letter you provide a detailed description of your loading and bracing procedures for wet (electric storage) batteries. Specifically, a third-party professional contracted by your client uses the following procedure of assembling battery pallet loads on a motor vehicle: (1) the batteries are loaded two layers high on the pallet with honeycomb cardboard placed on top; (2) the pallets and batteries are then wrapped tightly four times around with stretch wrap extending to the top of the pallet load to anchor the entire load; and (3) a third layer of batteries is placed on top of the cardboard and wrapped tightly with stretch wrap four times, overlapping the bottom layers. The trailers used to transport pallets of batteries have brace boards attached to the flooring at the front nose of the trailer and that the trailer is loaded as follows: two pallets are placed side-by-side in the nose of the trailer up against the brace boards; one or two single pallets are loaded in the center of the trailer adjacent to the original two pallets; and two side-by-side pallets are loaded adjacent to the center pallet(s). This pattern is continued towards the rear of the trailer, and ending with two side-by-side pallets. The final two pallets are secured by either two load locks or a second brace board attached to the floor.


It is the opinion of this office that the method of loading or bracing the palletized batteries described in your letter satisfies the requirements of § 173.159(e)(2) so long as no damage or short circuit occurs in transit. However, this requirement is a performance standard, so that if the batteries are capable of shifting to the extent of causing damage or short circuit, this method of loading or bracing would not satisfy § 173.159(e)(2). For highway or rail transport electric storage batteries containing electrolyte or corrosive battery fluid shipped in

accordance with § 173.159(e)(2) are not subject to any other requirements of Subchapter C of the HMR including those provided in § 177.834(a).

Note that motor carriers may be subject to additional requirements to protect against shifting and falling of cargo under the Federal Motor Carrier Safety Regulations in 49 CFR Part 393, Subpart I.

I hope 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 "Robert Benedict". The signature is written in a cursive style with a large initial "R" and "B".

Robert Benedict
Chief, Standards Development
Standards and Rulemaking Division

Drakeford, Carolyn (PHMSA)

Winter
§173.159(e)
§177.834(a)

From: INFOCNTR (PHMSA)
Sent: Monday, September 17, 2012 2:15 PM
To: Drakeford, Carolyn (PHMSA)
Subject: FW: Request for an Interpretation of 49 CFR 177.834(a) and 173.159(e)

Batteries ~ Loading / Unloading

Carolyn,

We received the following request for a formal letter of interpretation.

Thanks,
Victoria

From: Traci_pratt [mailto:Traci_pratt@KPTRUCKING.COM]
Sent: Friday, September 14, 2012 1:07 PM
To: INFOCNTR (PHMSA)
Subject: Request for an Interpretation of 49 CFR 177.834(a) and 173.159(e)

Our company, K & P Trucking, Inc., hauls the following cargo in 53' dry vans:

UN2794, Batteries, wet, filled with acid, Class 8, PGill

Aside from listing the description of the product, the Bill of Lading notes the following exception:

Not subject to regulations per 49 CFR 173.159(e)

As a commercial carrier, we are aware that both the shipper and carrier are responsible for compliance with all applicable requirements of the HMR, including 49 CFR 177.834(a), and it is our desire to have an interpretation of our handling of the above noted cargo.

The cargo transported by our vehicles are loaded by a third party professional warehouse/distribution center contracted by our client. Each trailer is loaded according to specifications designed to meet federal and state regulations. Each shipment is loaded based on an individual diagram which details the configuration of how pallets are to be placed inside the trailer based on the quantity and weights. The diagram is designed to address axle loads and movement of freight.

Both the shipper and hauler make sure that the used batteries are properly packaged to meet the exception 49 CFR 173.159(e) requirements to be considered non-hazardous material. Batteries are loaded 2 layers high on the pallet with honeycomb cardboard placed on top. The pallet and batteries are then wrapped tightly 4 times around with stretch wrap, making sure to catch the top of pallet to help anchor the load. A third layer is placed on the cardboard on top, then wrapped tightly, with stretch wrap, 4 times around overlapping bottom layers.

The trailers used to transport pallets of batteries have a brace board attached to the flooring at the front nose of the trailer. Two pallets are placed, side by side, in the nose of the trailer up against the braceboard. One or two single pallets, abutting against the original two pallets, are placed down the center of the trailer followed by two side by side pallets. This continues towards the rear of the trailer ending with 2 side by side pallets, which are then secured to prevent movement toward the rear of the

trailer. The rear securement is either 2 load locks or often a second brace board attached to the floor against the final two pallets.

Loaded pallets are not stacked on top of each other. The height is uniform among the pallets and the height is minimal due to the limitation of stacking batteries to only 3 layers. Pallets are abutted against each other to prevent movement. The weight is evenly distributed. A sample Bill of Lading shows 19 pallets with a gross weight of 44,236 LBS, which averages 2,328 LBS for each pallet.

We feel that requirements in 177.834(a) are met when the packages of hazardous material are secured in a manner that precludes their movement within the vehicle under conditions which include starting, stopping, cornering, accident avoidance and different road conditions. Are we in compliance in securing our loads by blocking with other freight, installing a brace board in the nose of the trailer, and using either load locks or brace board at the rear of the trailer?

We have available copies of the Bills of Ladings and a disc showing photos of the inside of a loaded trailer. *same freight - batteries*

Thank you for your time and consideration in addressing this concern.

Kathy McConnell
K & P Trucking, Inc.
(816) 858-2611
email ppratt@kptrucking.com