



March 23, 2015

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Office of Hazardous Materials Safety
Pipeline and Hazardous Materials Safety Administration
U.S. Department of Transportation
1200 New Jersey Avenue SE
Washington, DC 20590-0001

**Re: Docket No. PHMSA-2013-0225 (HM-218H): Miscellaneous Amendments to HMR,
Notice of Proposed Rulemaking**

Dear Mr. Suchak;

The Battery Council International (BCI)¹ is pleased to submit these comments in response to the Pipeline and Hazardous Materials Safety Administration's (PHMSA) proposal on miscellaneous amendments to the Hazardous Materials Regulations (HMR) to update and clarify certain regulatory requirements. 80 Fed. Reg. 3788 (January 23, 2015).

As a general matter, BCI supports authorization of certain packagings for shippers who prepare for transport and offer into transportation damaged wet electric storage batteries as a new paragraph in section 173.159. However, as explained in more detail below, BCI believes that PHMSA's proposed language does not fully address the needs of industry and shippers, nor does it capture all of the packagings previously approved by PHMSA in letters of interpretation. Therefore, BCI has also provided alternative language for PHMSA's consideration.

1. PHMSA's Proposal Does Not Capture Packaging Authorized in PHMSA's
January 2010 Interpretation Letter to BCI and Current Industry Practices

The NPRM states that proposed new paragraph 173.159(j) is based on a 2006 letter of interpretation. Letter to John Ramsey, May 23, 2006, Ref. No. 06-0031 (Attachment A). However, that 2006 letter of interpretation only represents one of the packaging methods previously approved by PHMSA. In 2006 and 2010, PHMSA provided additional letters of interpretation approving a different packaging method that utilizes strong polyethylene bags.

¹ BCI is a non-profit trade association whose members are engaged in the manufacture, distribution, and reclamation of lead batteries. BCI members account for over 98% of U.S. lead battery production and over 97% of its recycling (*i.e.*, secondary lead smelting) capacity. Our industry promotes lead-acid battery recycling by collecting and recycling lead batteries, encouraging the enactment of mandatory lead battery recycling laws, and supporting ongoing consumer and industry education efforts.

Letter to Battery Council International, Jan. 7, 2010, Ref. No. 09-0227 (Attachment B); Letter to Paul Ackerman, Apr. 20, 2006, Ref. No. 06-0062 (Attachment C).

The 2010 letter specifically approved the use of the packaging and shipping method using a strong plastic polyethylene battery shipping bag that is common practice in the industry:

According to your [request] letter, the standard practice for handling damaged electric storage batteries entails placing each damaged battery into an individual heavyweight polyethylene bag closed with an adjustable plastic tie. The battery is then securely placed onto a pallet with intact electric storage batteries. Each pallet may contain between 50 and 70 batteries. The pallet of batteries is then secured with stretch wrap and offered for transportation under the provisions in § 173.159(e).

...

Provided the damaged battery is not visibly leaking when offered for transportation in commerce and fluid is not likely to leak from the battery during normal conditions of transport, the use of a securely closed heavyweight polyethylene bag as described in your letter is an acceptable means to protect against leakage of battery fluid. [Ref. No. 09-0227]

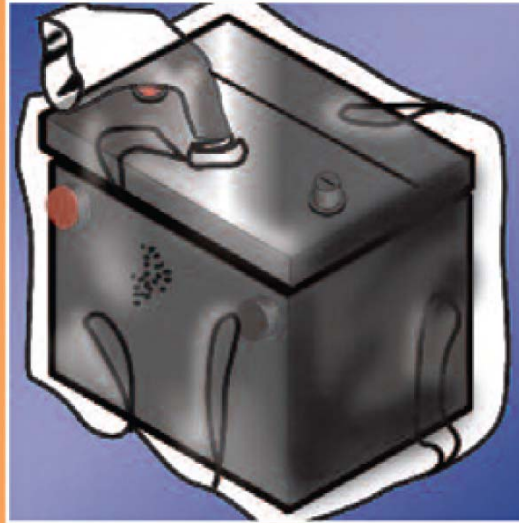
Placement of damaged batteries in heavyweight polyethylene bags was subsumed in the second of “three acceptable methods” described by PHMSA in the 2010 letter:

1. Drain the battery of fluid to eliminate the potential for leakage during transportation;
2. Repair and/or package the battery in such a manner that leakage is not likely to occur under conditions normally incident to transportation; or
3. Transport the damaged or leaking battery in accordance with § 173.3(c). [Ref. No. 09-0227]

Based on the 2010 letter and BCI members’ considerable experience shipping damaged batteries, BCI has developed and circulated a comprehensive shipping guidance for our members that addresses the packaging and transport of lead-acid batteries on pallets that also may include damaged wet electric storage batteries. The guidance is attached as Attachment D, and is available to the public on BCI’s website.² The portion relevant to damaged batteries is excerpted below:

² <http://batteryCouncil.org/?Transportation>.

8. Damaged batteries that are not visibly leaking electrolyte must be put in heavyweight polyethylene plastic bags (minimum: 6 mil), properly sealed with plastic tie and placed in the middle of the top layer.



BCI's guidance material has proven to be a very effective tool to ensure the safe transport of palletized lead-acid batteries. Consistent with PHMSA's prior letters of interpretation, BCI's guidance recommends that damaged wet electric storage batteries that are not visibly leaking be put in a heavyweight polyethylene plastic bag with a minimum thickness of 6 millimeters. The bag must be properly sealed with a plastic tie before being placed in the middle of the top layer of the pallet. BCI is unaware of any incident involving the transportation of damaged lead-acid batteries that involved the proper use of the polyethylene bag method of packaging and shipping.

Unfortunately, the language proposed in the NPRM in sections 173.159(j)(2) and (j)(3) does not appear to be consistent with the above-described industry practices or PHMSA's 2010 letter. Namely, sections (j)(2) and (j)(3) would require the use of intermediate *and* outer packaging, rather than a single strong polyethylene bag, and would also require the use of nonreactive absorbent material. While BCI recognizes that these packaging methods are appropriate in some circumstances, the industry's experience shows that the industry-standard single polyethylene bag method is sufficient to prevent leakage of the battery acid during transportation.

Furthermore, changing the standard industry practice will be highly disruptive, costly, and will lead to considerable confusion. BCI's packaging guidelines are widely used by both BCI members and non-members when transporting batteries. To promote the widespread, safe transportation of batteries, BCI distributes the guidelines free of charge to retailers, battery distributors, and members of the public. And many BCI members require their retail partners to adhere to the guidelines when returning used lead-acid batteries for recycling. Thus, changes in PHMSA's approved transportation methods for damaged lead-acid batteries will have impacts far beyond just battery manufacturing and recycling companies. Reeducating all of the participants in the lead-acid battery supply chain will be a time-consuming process.

Moreover, BCI is not aware of any incidents or problems associated with the transport of damaged wet electric storage batteries that were packaged using polyethylene bags in accordance with the HMR and BCI's guidance document. There is no need, and it would be arbitrary, to

eliminate the industry's ability to use the safe and effective polyethylene bag method PHMSA has previously approved. It is important that PHMSA's final rule authorize all of the packaging and shipping methods approved under both of the 2006 letters and the 2010 letter. BCI's proposed language to do so is included at pages 6 and 7 below.

2. PHMSA Should Clarify That Batteries Packaged in Accordance with Proposed 49 C.F.R. § 173.159(j) Qualify for the 49 C.F.R. § 173.159(e) Exception

As described in detail above, damaged lead-acid batteries shipped in accordance with the shipping practices described in PHMSA's existing body of letters of interpretation qualify for the section 173.159(e) exception. However, PHMSA's current proposal does not amend section 173.159(e) to clearly incorporate batteries shipped under the proposed section 173.159(j) into that exception.

Thus, it is unclear whether damaged wet electric storage batteries packaged in accordance with the proposed section 173.159(j) may be combined (*e.g.*, placed on same pallet) with undamaged lead-acid batteries offered for transport in accordance with the exception in section 173.159(e), as is currently the industry-standard practice. This uncertainty over how shippers may utilize these two stand-alone provisions in section 173.159 will lead to confusion which should be avoided.

BCI's guidance document clearly shows how damaged wet electric storage batteries may be safely packaged and packed with undamaged batteries. Therefore, we request that PHMSA include language in the Final Rule that states damaged wet electric storage batteries packaged in accordance with section 173.159(j) may be packed with undamaged wet electric storage batteries and offered for transport in accordance with the exception found at section 173.159(e). BCI's proposed language to do so is included at pages 6 and 7 below.

3. PHMSA's Proposed 49 C.F.R. §§ 173.159(j)(2) and(j)(3) Should Be Combined

As currently written, proposed section 173.159(j) provides shippers four options for packaging damaged wet electric storage batteries. However, it is unclear how a shipper could comply with the packaging requirement in section 173.159(j)(2) without also complying with section 173.159(j)(3). That is, section 173.159(j)(2) states a battery may be packed in a leak proof "intermediate package." By definition, "intermediate packaging" is packaging that "encloses an inner packaging or article and is itself enclosed in an *outer packaging*." See 49 C.F.R. § 171.8 (emphasis added). Likewise, the packaging requirements in section 173.159(j)(3) state "Place the intermediate packaging in a leak proof *outer packaging* that conforms to the general packaging requirements of subpart B of this part." (emphasis added).

BCI believes it was PHMSA's intent to require shippers to comply with sections 173.159(j)(2) and 173.159(j)(3), if that is the shipping option they choose. BCI requests clarification on this point to better understand PHMSA's intent. BCI's proposed language to clarify this language is included at pages 6 and 7 below.

4. BCI's Suggested Changes to 49 C.F.R. § 173.159(e) and Proposed § 173.159(j)

As previously noted, BCI supports PHMSA's intent to include a packaging provision in 49 C.F.R. § 173.159 that authorizes the transport of damaged wet electric storage batteries. In order to address the issues noted above, we request the revisions marked below to 49 C.F.R. § 173.159(e) and the proposed § 173.159(j):

49 C.F.R. § 173.159(e) When transported by highway or rail, electric storage batteries containing electrolyte or corrosive battery fluid are not subject to any other requirements of this subchapter, if all of the following are met:

- (1) No other hazardous materials may be transported in the same vehicle;
- (2) The batteries must be loaded or braced so as to prevent damage and short circuits in transit;
- (3) Any other material loaded in the same vehicle must be blocked, braced, or otherwise secured to prevent contact with or damage to the batteries; ~~and~~
- (4) Damaged batteries meet one of the packaging requirements in paragraph (j) of this subpart; and
- ~~(45)~~³

Proposed 49 C.F.R. § 173.159(j)⁴ Damaged electric storage batteries incapable of retaining battery fluid inside the outer casing during transportation may be transported by highway or rail, provided the batteries are transported in non-bulk packaging, meet the requirements of paragraph (a) of this section, and are prepared for transport under one or more of the following conditions:

- (1) Drain the battery of fluid to eliminate the potential for leakage during transportation;
- (2) Individually pack the battery in a leak proof intermediate package with sufficient nonreactive absorbent material capable of absorbing the release of any electrolyte and; ~~(3)~~ place the intermediate packaging in a leak proof outer packaging that conforms to the general packaging requirements of subpart B of this part; ~~or~~
- (3) When packaged with other batteries or materials (e.g., on pallets or non-skid rails) and secured to prevent movement during transport, pack the battery in leak proof packaging to prevent leakage of battery fluid from the packaging under conditions normally incident to transportation; or
- (4) Pack the battery in a salvage packaging in accordance with the provisions of § 173.3(c) of this part.

³ BCI reiterates its support for a PHMSA proposed rule that would amend the "single shipper" requirement of the current section 173.159(e)(4) to allow multiple shippers, and has omitted the current text of that paragraph solely to avoid confusion while both rulemakings are pending. *Hazardous Materials: Reverse Logistics*, 79 Fed. Reg. 46,748 (Aug. 11, 2014). BCI's comments on that rulemaking are available from Regulations.gov as Docket No. PHMSA-2011-0143-0065.

⁴ BCI notes that a separate, pending PHMSA proposed rule also includes a different proposed new section 173.159(j) related to nickel cadmium batteries. BCI takes no position on that proposal, and expects that PHMSA will codify the two proposals with non-conflicting numbering. See *Hazardous Materials; Adoption of Special Permits, Notice of Proposed Rulemaking*, 80 Fed. Reg. 5340 (Jan. 30, 2015).

These proposed changes clarify the use of the 49 C.F.R. § 173.159(e) exception by authorizing the transport of undamaged wet electric storage batteries and damaged batteries packaged in accordance with the proposed 49 C.F.R. § 173.159(j); corrects what BCI understands to be an error in the NPRM by combining 49 C.F.R. §§ 173.159(j)(2) and (j)(3); and adds a new packaging paragraph (3) that would enable BCI members to continue packaging damaged wet electric storage batteries consistent with the letter issued to BCI in January 2010 and BCI's industry-standard guidance materials.

* * * *

If you have questions about this submittal, please contact David Weinberg, BCI's legal counsel, at 202.719.7102 or dweinberg@wileyrein.com, or Mr. Weinberg's colleague, George Kerchner, at 202.719.4109 or gkerchner@wileyrein.com.

Respectfully submitted,

Timothy J. Lafond

Tim J. Lafond, P.E.
BCI Environmental Committee Chairman

ATTACHMENT A



U.S. Department
of Transportation

**Pipeline and
Hazardous Materials Safety
Administration**

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

MAY 23 2006

Mr. John Ramsey
15170 Tomahawk
Yukon, OK 73099

Reference No.: 06-0031

Dear Mr. Ramsey:

This is in response to your February 6, 2006 letter requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 100-180). Specifically, you ask if a person may use the exception in § 173.159(e) for damaged electric storage batteries placed within a compatible leakproof container.

Damaged wet electric storage batteries are not eligible for the exception in § 173.159(e) if the damage has rendered them incapable of retaining battery fluid inside the outer casing during transportation. However, a damaged battery may be shipped under the exception § 173.159(e) if: (1) it has been drained of battery fluid to eliminate the potential for leakage during transportation; (2) it is repaired and/or packaged in such a manner that leakage of battery fluid is not likely to occur under conditions normally incident to transportation; or, (3) the damaged or leaking battery is transported under the provisions of § 173.3(c). Battery fluid that has leaked from the battery, or that has been drained from the battery prior to transportation must be classed, packaged and described as appropriate for the liquid, and may not be transported in the same transport vehicle as batteries shipped under the exception in § 173.159(e).

I hope this information is helpful. Please contact us if you require additional assistance.

Sincerely,


John A. Gale
Chief, Standards Development
Office of Hazardous Materials Standards



060031

173.159(e)

INFOCNTR <PHMSA>

From: lbmac@peoplepc.com
Sent: Monday, February 06, 2006 4:12 PM
To: INFOCNTR <PHMSA>
Subject: Batteries

leary
§173.159(e)
Batteries
06-0031

I called the information center and spoke to, I believe it was Jessica, and asked a question. The question dealt with the battery exception in 173.159(e). I asked if a person found a leaking battery could they put the battery in a leak proof container such as a plastic box and ship it under 173.159(e). (All other requirements of 173.159(e) would be met) I was told that it would not be a violation to ship a leaking battery as described above. I later called John Gail and asked if the information I got was correct. He confirmed that there would be no violation to ship a leaking battery in a compatible, leak proof container. The person I was getting the clarification for wanted it confirmed in writing. Would it be possible for your office to confirm the above in writing. Either by e-mail or letter. My e-mail address is ramsey576@peoplepc.com. My phone number is 405-255-0312. My mailing address is John Ramsey, 15170 Tomahawk, Yukon, Ok. 73099
Thanks
John Ramsey

2/7/2006

ATTACHMENT B



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

1200 New Jersey Avenue, SE
Washington, DC 20590

JAN - 7 2010

Mr. Timothy J. Lanfond
Chair, Environmental Committee
Battery Council International
Wiley Rein LLP
1776 K Street NW
Washington, DC 20006

Ref. No. 09-0227

Dear Mr. Lanfond:

This is in response to your October 6, 2009 letter requesting clarification on the applicability of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) to the transportation of damaged electric storage batteries shipped for recycling by motor vehicle.

According to your letter, the standard practice for handling damaged electric storage batteries entails placing each damaged battery into an individual heavyweight polyethylene bag closed with an adjustable plastic tie. The battery is then securely placed onto a pallet with intact electric storage batteries. Each pallet may contain between 50 and 70 batteries. The pallet of batteries is then secured with stretch wrap and offered for transportation under the provisions in § 173.159(e).

In a previous letter to Mr. Paul Ackerman dated April 20, 2006, this office stated that a damaged electric storage battery is not eligible for the exceptions in § 173.159(e) if the damage has rendered it incapable of retaining battery fluid inside the outer casing during transportation. Following are three acceptable methods to transport damaged batteries that have the potential for leakage:

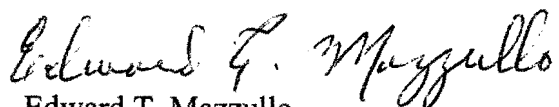
1. Drain the battery of fluid to eliminate the potential for leakage during transportation;
2. Repair and/or package the battery in such a manner that leakage is not likely to occur under conditions normally incident to transportation; or
3. Transport the damaged or leaking battery in accordance with § 173.3(c).

In your letter, you suggest that when an electric storage battery is damaged to the extent that it cannot retain the battery fluid, the fluid typically drains from the battery before transportation in commerce begins. However, you note that some residual fluid may remain in the battery. Provided the damaged battery is not visibly leaking when offered for

transportation in commerce and fluid is not likely to leak from the battery during normal conditions of transport, the use of a securely closed heavyweight polyethylene bag as described in your letter is an acceptable means to protect against leakage of battery fluid. Note that batteries packaged in this manner must still be properly handled and secured on the vehicle in order to prevent the release of fluid from the battery itself.

I hope this information is helpful, please contact us if you require additional assistance.

Sincerely,

A handwritten signature in cursive script that reads "Edward T. Mazzullo". The signature is written in black ink and is positioned above the printed name and title.

Edward T. Mazzullo
Director, Office of Hazardous
Materials Standards

**Battery Council
International**



Leary
§ 171.3
§ 173.159
Batteries
09-0227

WASHINGTON OFFICE
Wiley Rein LLP
1776 K Street NW
Washington, D.C. 20006
Tel. 202.719.7000
Fax 202.719.7207

October 6, 2009

Mr. Edward Mazzullo
Office of Hazardous Materials
Pipeline and Hazardous Materials Safety Administration
U.S. Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Re: Packaging Procedures for Damaged Lead Acid Batteries

Dear Mr. Mazzullo:

I am writing to follow-up on our August 5, 2009 meeting at your office regarding the use of poly bags to ensure the safe transport of damaged lead acid batteries being shipped for recycling by motor vehicle.

The Battery Council International (BCI) is a trade association that represents virtually all of the nation's lead acid battery manufacturers and the overwhelming majority of used battery recyclers. With this letter we request your confirmation that the practices described below are appropriate.

On April 2, 2006, you wrote to Mr. Paul Ackerman (Ref. No. 06-0062) regarding the proper packaging of damaged batteries pursuant to the exception provided in 49 CFR 173.159(e). You recognized three appropriate mechanisms for shipping damaged batteries that have the potential for leakage:

- 1) the battery has been drained of battery fluid;
- 2) the battery has been repaired and/or packaged in such a way that leakage of battery fluid is not likely to occur under conditions normally incident to transportation; or
- 3) the damaged or leaking battery is transported under the provisions set out in 49 CFR 173.3(c).

The lead battery recycling industry recycles more than 110 million such batteries annually. Most of these are collected from "big box" retailers and similar large volume collectors. The industry historically has followed the approaches understood to be consistent with your above-quoted interpretation, and has never had a problem with damaged batteries. To the contrary, BCI has polled its members who supply and collect for recycling the vast majority of lead acid batteries and found the following:

- One company, which ships and/or transports about 43,000 truckloads of used batteries a year, reviewed its files (including reports filed via Chemtrec) for the last two years. It found 10 incidents involving leaking batteries, none of which related to batteries contained in poly bags. All 10 involved minor accidents or stress due to pallet-packaging errors (which since have been corrected).
- Another company, which ships and/or transports about 59,000 truckloads of used batteries a year, and typically does not use poly bags, had no citations for leakage. It reports that it only sees acid leakage onto truck floors rarely, when a pallet has not been securely stretch-wrapped and batteries fall off the pallet.
- A third company, which arranges for the shipment of 5 million used batteries (about 4,500 truckloads) a year, and uses poly bags when the batteries appear damaged, has not had any reports of leaking from them. It reports only seeing occasional reports of leakage from transported batteries, and then only when loads have been damaged as a result of an accident.

During our meeting on August 5th, we discussed whether it is appropriate for large scale collectors to ship by motor vehicle damaged batteries from which acid leakage previously has occurred, where those batteries have been placed into strong poly bags that are properly closed with an adjustable plastic tie and secured, placed with intact used batteries on pallets and then stretch wrapped. The industry believes such handling is fully consistent with the second clause set forth in your April 2nd letter to Mr. Ackerman. We thus now seek confirmation of this fact.

In the circumstances of concern, the battery casing may no longer be completely intact (as would be the case, for example, with a new battery). When the unit's casing was damaged, liquid acid contained in the battery would have drained out. This typically has occurred long before the batteries were received at a retailer or other large volume collector for recycling, although occasionally damage and leakage occur at the collector's location. As noted above, a historic practice often has been to put these damaged batteries with no visibly leaking electrolyte into poly bags that are properly closed with an adjustable plastic tie, securely place those bagged batteries onto pallets with undamaged used batteries, and stretch wrap the entire pallet. This is documented on the attachment.

The reason the industry believes it appropriate to address the possibility that there may be some residual acid in a previously-damaged battery is this: Lead acid batteries contain not only free liquid (*i.e.*, acid), but also elements that, in normal use, absorb acid. A small quantity of free liquid also may remain in a damaged battery, even though most of its content has previously drained. Bagging of the damaged batteries with no visibly leaking electrolyte protects against further release of these residual amounts. The resulting liquids constitute only a minimal amount of the battery's prior content. The bags are not used to ship quantities of acid otherwise removed from the batteries.

Mr. Edward Mazzullo
October 6, 2009
Page 3

We would appreciate your confirmation that the practices documented in the attachment are appropriate in the circumstances described, and fully comply with DOT's hazardous materials regulations applicable to transportation of used lead acid batteries by motor vehicle.

Thank you.

Sincerely,

A handwritten signature in black ink, reading "Timothy J. Lafond". The signature is written in a cursive style with a long horizontal flourish extending to the right.

Timothy J. Lafond
Chair, BCI Environment Committee

cc: Committee Members
David B. Weinberg, Wiley Rein LLP
George Kerchner, Wiley Rein LLP

Recommended Industry Practices for Palletizing Junk Batteries

Procedures

- Step 1) The Department of Transportation (DOT) specifies that junk batteries are to be stacked on pallets in good condition. A piece of cardboard must be placed on an empty pallet before stacking first layer of junks. **Do not use CHEP pallets for junk battery returns.**
- Step 2) A piece of cardboard must be placed between each layer and on top. Batteries should not be stacked more than 3 layers high. Each pallet may contain 50-70 junk batteries total.
- Step 3) Arrange batteries so that terminals do not touch that could lead to a short circuit
- Step 4) Load batteries 2 layers high, then shrink wrap. Wrap tightly 3 or 4 times around, making sure to catch top of pallet to help anchor load.
- Step 5) Load third layer and place honeycomb cardboard on top. Shrink wrap entire load. Wrap tightly 3 or 4 times around overlapping bottom layers.

NOTE: Full wheel weight buckets and damaged batteries should be stacked on the top layer of the junk pallet in the middle.

NOTE: Damaged batteries that are not visibly leaking electrolyte should be placed in strong poly bags and properly closed with an adjustable plastic tie. Batteries also should be properly secured.

DO NOT STACK PALLETS OF BATTERIES ON TOP OF EACH OTHER

Store's Responsibilities

- Return your junk batteries and wheel weights to your battery vendor (do not sell them locally)
- Strip labels off or spray paint the warranty returns and junks to prevent theft
- Junk batteries should be palletized and ready for pick-up prior to the arrival of the truck
- During inventory battery deliveries must still be signed for
- Place DNI (Do Not Inventory) tag on top of battery pallets
- Junk battery pallets should be moved to the same location batteries are delivered to

ATTACHMENT C



U.S. Department
of Transportation

**Pipeline and
Hazardous Materials Safety
Administration**

APR 20 2006

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

Mr. Paul D. Ackerman
DLA Piper Rudnick Gray Cary US LLP
1200 Nineteenth Street N.W.
Washington, D.C. 20036-2412

Ref. No. 06-0062

Dear Mr. Ackerman:

This is in response to your March 10, 2006 letter requesting clarification on the applicability of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) to the transportation of electric storage batteries. You provide three different transportation scenarios. Specifically, you ask if your electric storage batteries satisfy the exceptions in § 173.159 when they are offered and transported under the conditions described in each scenario. Each scenario is summarized, and the answer for each scenario is provided as follows:

Scenario 1: A facility ships (1) used non-spillable wet electric storage batteries that meet all the conditions of the exception in § 173.159(d); and, (2) used wet electric storage batteries (i.e. not “non-spillable”) that are loaded and transported in accordance with all of the conditions of the exception in § 173.159(e). The “non-spillable” wet electric storage batteries and the wet electric storage batteries are placed into the same outer packaging for transportation. The batteries are offered for transportation by highway only.

Answer 1: Your understanding is correct. Both the used “non-spillable” wet electric storage batteries and the wet electric storage batteries meet the exceptions in § 173.159. Placing both types of batteries in the same outer packaging does not preclude the use of the exceptions in § 173.159.

Scenario 2: Assume the same facts set forth in Scenario 1, except the used wet electric storage batteries, which are not “non-spillable,” are not loaded and transported in a manner that complies with § 173.159(e) (e.g., the transport vehicle carries other materials not shipped by the company that is shipping the batteries).

Answer 2: Your understanding is correct. The “non-spillable” wet electric storage batteries are excepted from the requirements of the HMR in accordance with the exception in § 173.159(d). However, the wet electric storage batteries, which are not “non-spillable,” are not eligible for the exception in § 173.159(e) and must be placed in packagings authorized by §§ 173.159(b) or (c), and they must be offered and transported



060062

173.159

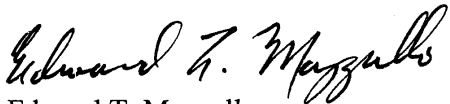
in accordance with all applicable requirements of the HMR (e.g., marking, labeling, shipping papers). Both battery types may be placed in the same outer packaging provided the outer packaging is authorized in §§ 173.159(b) or (c), and the completed package is properly marked and labeled.

Scenario 3: Assume the same facts set forth in Scenario 1, except some of the used wet electric storage batteries show signs of leakage or potential leakage (e.g., corrosion or damage). The facility individually places any damaged or leaking battery into a strong plastic polyethylene battery shipping bag to prevent any release of battery fluid during transportation. The batteries are then packaged along with the other used wet electric storage batteries as described in Scenario 1.

Answer 3: The undamaged wet electric storage batteries are not subject to the requirements of the HMR. See Answer 1. Damaged batteries are not eligible for the exception in § 173.159(e) if the damage has rendered them incapable of retaining battery fluid inside the outer casing during transportation. However, a damaged battery may be shipped under the exception § 173.159(e) if: (1) it has been drained of battery fluid to eliminate the potential for leakage during transportation; (2) it is repaired and/or packaged in such a manner that leakage of battery fluid is not likely to occur under conditions normally incident to transportation; or, (3) the damaged or leaking battery is transported under the provisions of § 173.3(c). Battery fluid that has leaked from the battery, or that has been drained from the battery prior to transportation must be classed, packaged and described as appropriate for the liquid, and may not be transported in the same transport vehicle as batteries shipped under the exception in § 173.159(e).

I hope this information is helpful. Please contact us if you require additional assistance.

Sincerely,



Edward T. Mazzullo
Director, Office of Hazardous
Materials Standards



**PIPER RUDNICK
GRAYCARY**

Eichenlaub
§173.159
Batteries
06-0062

DLA Piper Rudnick Gray Cary US LLP
1200 Nineteenth Street, N.W.
Washington, D.C. 20036-2412
T 202.861.3900
F 202.223.2085
W www.dlapiper.com

410 580 3001

PAUL D. ACKERMAN
paul.ackerman@dlapiper.com
T 202.861.3908 F 202.689.7439

March 9, 2006

FACSIMILE AND U.S. MAIL

Edward T. Mazzullo, Director
Department of Transportation
Pipeline and Hazardous Materials Standards Administration
Office of Hazardous Materials Standards
Room 8421
400 7th Street, S.W.
Washington, DC 20590-0001

Re: Transportation of Electric Storage Batteries

Dear Mr. Mazzullo:

We are writing to request written confirmation of our interpretation of the hazardous material regulations (HMRs) applicable to the transportation of used wet electric storage batteries containing electrolyte acid or alkaline corrosive battery fluid. The batteries at issue are typical automobile and equipment batteries which have been removed from vehicles or equipment and are being shipped by highway for reclamation. With respect to such shipments, we ask that you please confirm that the following interpretations are consistent with 49 C.F.R. § 173.159 and other related provisions of the HMRs:

Scenario No. 1: A facility ships (i) used non-spillable wet electric storage batteries that meet all of the conditions set forth in the exception found at 49 C.F.R. § 173.159(d) and (ii) used regular wet electric storage batteries (*i.e.*, not "non-spillable") which are loaded and transported in accordance with the conditions set forth in the exception found at 49 C.F.R. § 173.159(e). For efficiency, the used non-spillable and regular batteries are shipped together in a single package that complies with either the specification packaging requirements set forth in 49 C.F.R. § 173.159(b) or the authorized non-specification packaging requirements set forth at 49 C.F.R. § 173.159(c).



Edward T. Mazzullo, Director
March 9, 2006
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Interpretation: The act of combining the shipment of used non-spillable and regular wet electric storage batteries in a single specification or approved non-specification package, as described above, does not change the applicability of the regulatory exceptions authorized by 49 C.F.R. §§ 173.159(d) or (e). In other words, the shipment of used non-spillable electric storage batteries described above would remain subject to the exception found at 49 C.F.R. § 173.159(d). Likewise, the concurrent shipment of used regular electric storage batteries described above would remain subject to the exception found at 49 C.F.R. § 173.159(e). Combining the batteries into a single package does not negate either exception so long as the respective conditions for each exception are met.

Scenario No. 2. Assume the same facts set forth in Scenario No.1, except that the used regular wet electric storage batteries are not loaded and transported in a manner that complies with 49 C.F.R. § 173.159(e) (e.g., the transport vehicle carries other materials not shipped by the company that is shipping the batteries).

Interpretation: The act of combining the shipment of used non-spillable and regular wet electric storage batteries in a single specification or approved non-specification package does not change the applicability of the regulatory exception authorized by 49 C.F.R. § 173.159(d) for the non-spillable batteries. Under Scenario No. 2, the concurrent shipment of used regular electric storage batteries remains subject to the HMRs and the shipper will comply with all applicable requirements in the regulations (i.e., shipping paper, marking, labeling). However, combining the regular batteries with the non-spillable batteries into a single package does not negate the exception for the non-spillable batteries found at 49 C.F.R. § 173.159(d) so long as the conditions set forth in that exception are met.

Scenario No. 3: Assume the same facts set forth in Scenario No.1, except that prior to shipment the facility inspects the batteries and notes that one or more of the batteries show signs of leakage or potential leakage (e.g., corrosion or damage). The facility individually packs any damaged or leaking battery into a strong plastic polyethylene battery shipping bag to prevent any release of battery fluid during shipment. The batteries are then packaged along with the rest of the used batteries as described in Scenario No. 1 and shipped by highway for reclamation.

Interpretation: The shipment of used regular electric storage batteries described in Scenario 3 remains subject to the regulatory exceptions authorized by 49 C.F.R. §§ 173.159(d) and (e). In other words, the act of using secondary



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preventative packaging on certain batteries that are part of a shipment that is exempt from the HMRs under 49 C.F.R. §§ 173.159(d) or (e) has no bearing on whether either exception applies.

* * * * *

We appreciate any priority that you can give in responding to this request. Please contact me if you have any questions or need additional information.

Very truly yours,

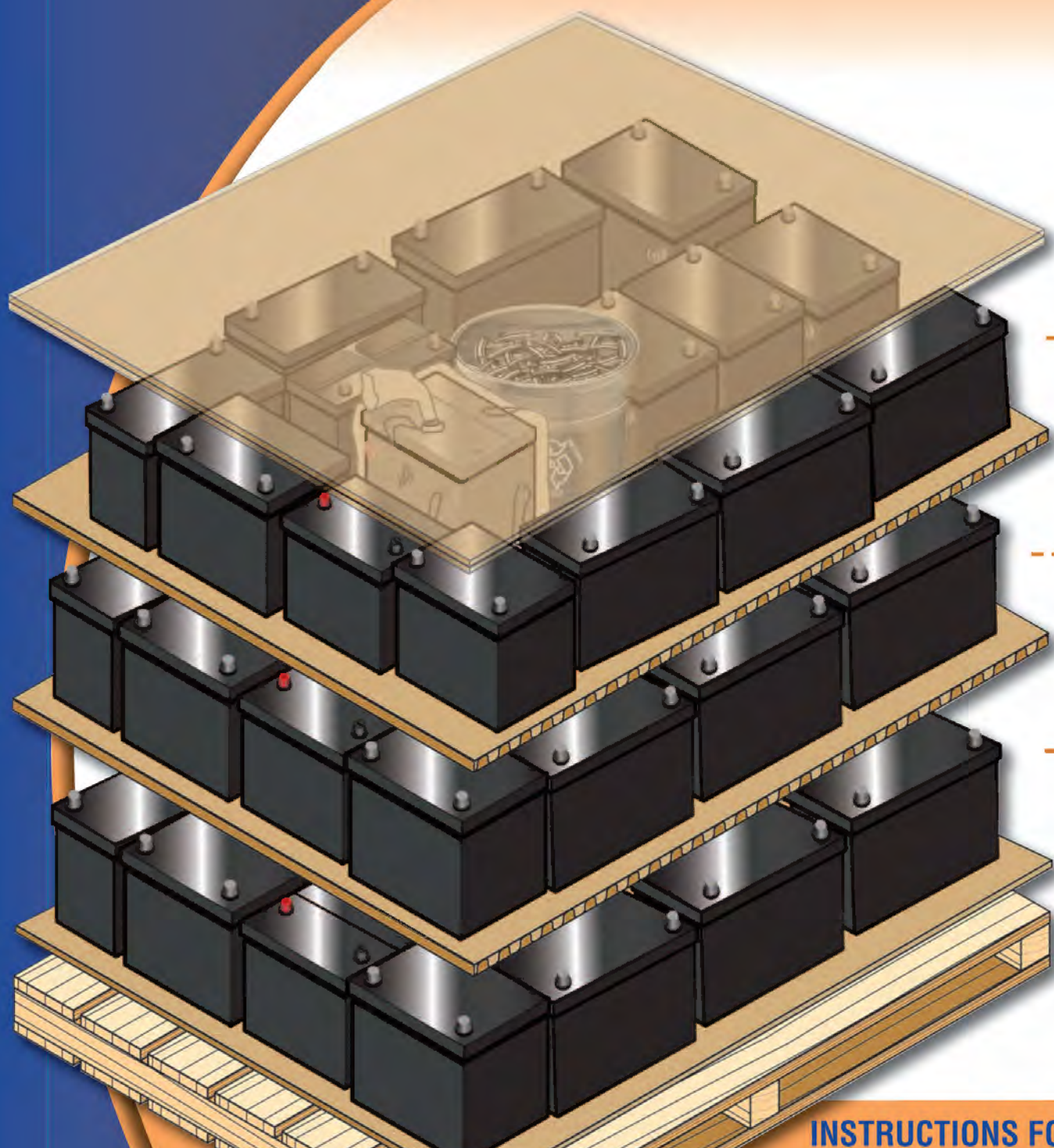
A handwritten signature in black ink, appearing to read "Paul D. Ackerman". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Paul D. Ackerman

ATTACHMENT D

13841026.2

Stacking and Wrapping Used Batteries on Pallets



WAFFLEBOARD OR SHEETS OF CARDBOARD*

BATTERIES

WAFFLEBOARD PREFERRED*

(MINIMIZES POTENTIAL FOR POST PENETRATION AND SHORT CIRCUIT)

BATTERIES

WAFFLEBOARD PREFERRED*

(MINIMIZES POTENTIAL FOR POST PENETRATION AND SHORT CIRCUIT)

BATTERIES

CARDBOARD

PALLET

* See item 4 and 7 under Stacking Pallet Instructions

IMPORTANT GENERAL HANDLING REQUIREMENTS

Before handling batteries, please read and adhere to all of the following requirements:

- Wear the appropriate personal protection equipment.
- Handle all returned batteries with the same responsible care as new batteries.
- Keep batteries upright at all times. Do not tip over on side or upside down.
- Do not throw or drop batteries. Put batteries carefully down on pallet.

IMPORTANT PALLET SPECIFICATIONS

- Maximum pallet sizes: 44" x 48" or 40" x 48"
- Maximum weight per pallet: Approx. 3600 lbs.
- Maximum layers per pallet: 3
- Only lead-acid batteries may be returned
- Pallet must be constructed with a minimum of three bottom boards and durable enough to handle the battery load.
- Stack return battery pallet using pallet provided with new shipment if possible.



INSTRUCTIONS FOR WRAPPING PALLET

All batteries must be secured to the pallet with stretch wrap. Stretch wrap works best if it is pulled tight before stretching it around the corners. Figure 4 shows a properly wrapped pallet.

1. Start with the stretch wrap turned sideways to create a rope effect (see fig. 1). Wrap around the top layer twice.*
2. Still using the rope effect, wrap the top layer twice* again, crossing over the top each time to form an "X-pattern." This will pull the batteries towards the center to prevent batteries from falling off of the pallet, a DOT requirement.
3. Hold the stretch wrap open (see fig. 2 and 3), wrap around the bottom layer twice*, being sure to catch the edges of the pallet.
4. Finally, after placing cardboard on top of the batteries, wrap around the top layer twice* with the stretch wrap in the open effect and tear at the last corner.

* Wrap as many times as necessary to stabilize the load

These guidelines are to assist in compliance with Federal DOT safety regulations. Please assist the driver in complying with the law.

Failure to comply with the guidelines can result in refusal by the carrier to accept material. In addition, failure to comply can result in fines and penalties from federal, state, and local authorities.



Figure 4



Figure 1

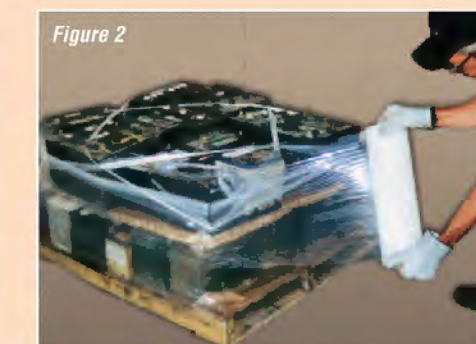


Figure 2



Figure 3

INSTRUCTIONS FOR STACKING PALLET

1. Select a sturdy pallet with no broken or missing boards. Be sure there are no nails sticking up, which could puncture the batteries. Stack return battery pallet using pallet provided with new shipment if possible.
2. Place a layer of cardboard on the pallet to prevent the batteries from sliding off of the pallet.
3. Make the first layer of batteries level and as close together as possible. If some of the batteries are shorter, they should be placed in the center of layers. Any taller batteries should be placed on the top layer.
4. Place waffleboard (preferred) or sufficient cardboard (multiple sheets if necessary) between all layers, including the top layer of batteries to prevent the possibility of puncturing the batteries above and short circuit. Place cardboard on top of pallet.

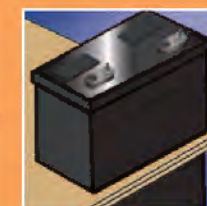
5. Side terminal batteries must be stacked so the posts are facing away from each other and not facing towards the outside of the pallet. Side terminals must never touch.



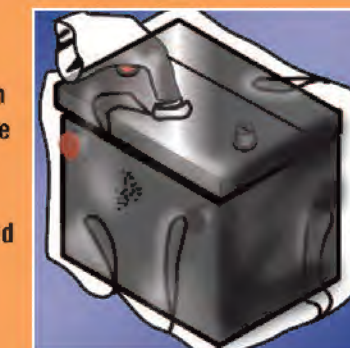
6. Top posts must be positioned toward the outside of the pallet so the layer above it leans toward the center. Make sure that no batteries are overhanging the waffleboard or sheets of cardboard.



7. Stud post batteries (Marine, Group 31, Golf Car) should be on the top layer. If this is not possible, you will need extra layers of cardboard between the layers of batteries to prevent punctures. This is also important when stacking three layers high.



8. Damaged batteries that are not visibly leaking electrolyte must be put in heavyweight polyethylene plastic bags (minimum: 6 mil), properly sealed with plastic tie and placed in the middle of the top layer.



9. Lead wheel weights must be put in a plastic bucket and covered. The bucket shall be placed in the center of the top layer with the handle secured to avoid contact with battery terminals.

