



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

1200 New Jersey Avenue, SE
Washington, DC 20590

February 24, 2022

Heidi Countermine
Project Logistics Manager
Eos Energy Storage
3920 Park Ave.
Edison, NJ 08820

Reference No. 21-0103

Dear Ms. Countermine:

This letter is in response to your November 11, 2021, letter requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to electric storage batteries. Specifically, you seek confirmation that the shipment of your company's electric storage batteries is eligible for the exception from the requirements of the HMR as currently specified in § 173.159(e).

In your letter, you state that your company manufactures an electric storage battery and loads the product into a fully enclosed energy storage system—i.e., a custom-built ISO container—under certain conditions including the following:

- The batteries are classified and described as “UN2794, Batteries, wet, filled with acid, *electric storage*, 8”.
- Each individual battery is enclosed in plastic housing with no exposed terminals.
- The batteries are loaded and braced into individual slots in the steel racks of the custom-built container, and provide a photograph illustrating this manner of loading and bracing.
- No other hazardous materials are shipped in or with this fully enclosed container.
- The motor vehicle or rail car will not contain any other commodities.

Based on the information and photographs provided, it is the opinion of this Office that the details provided of shipments of these batteries meet the requirements provided in § 173.159(e) for exception from the requirements of the HMR.

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

Sincerely,

A handwritten signature in blue ink, appearing to read "Dirk Der Kinderen". The signature is fluid and cursive, with a prominent initial "D".

Dirk Der Kinderen
Chief, Standards Development Branch
Standards and Rulemaking Division

Casey

21-0103

From: [INFOCNTR \(PHMSA\)](#)
To: [Hazmat Interps](#)
Subject: FW: Interpretation Request - Eos Energy Storage Batteries, UN 2794
Date: Friday, November 12, 2021 2:19:57 PM
Attachments: [image004.png](#)
[image006.png](#)

Hello,

Below is a request for letter of interpretation.

Thanks,

Jonathon, HMIC

From: Heidi Countermine <hcountermine@eose.com>
Sent: Friday, November 12, 2021 2:14 PM
To: INFOCNTR (PHMSA) <INFOCNTR.INFOCNTR@dot.gov>
Subject: RE: Interpretation Request - Eos Energy Storage Batteries, UN 2794

CAUTION: This email originated from outside of the Department of Transportation (DOT). Do not click on links or open attachments unless you recognize the sender and know the content is safe.

Per request, our mailing address for letter of interpretation is:

Eos Energy Storage
3920 Park Ave.
Edison, NJ 08820

Heidi Countermine | Project Logistics Manager | C: 518 488 4114
[eose.com](#) + [LinkedIn](#) + [Twitter](#)

From: Heidi Countermine
Sent: Thursday, November 11, 2021 9:32 AM
To: 'infocntr@dot.gov' <infocntr@dot.gov>
Subject: Interpretation Request - Eos Energy Storage Batteries, UN 2794

Hello,

I am writing to request a formal interpretation on the requirements for shipping a Battery Energy System over the road under the 173.159(e) exemption in the 49 CFR. If exemption applies, I understand I would not need placards on the truck or hazmat data on the bill of lading.

I believe we have met all requirements for shipping under this exemption, but would like clarification if I am understanding the exemption correctly for our product.

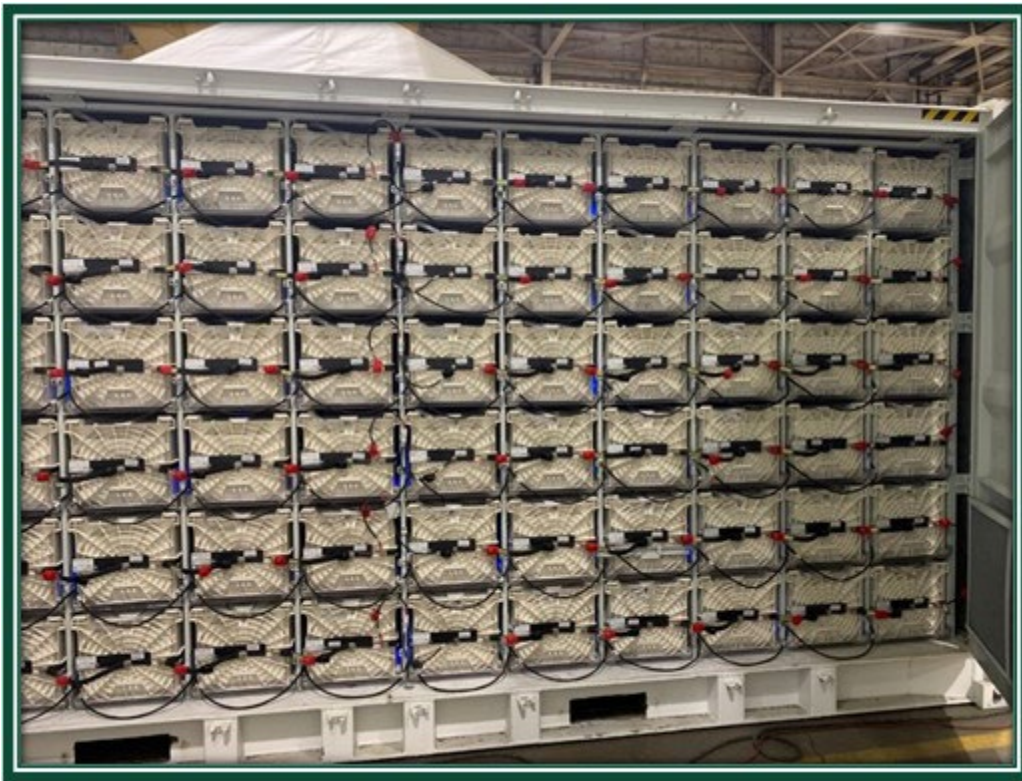
My company, Eos Energy Systems, manufactures an electric storage battery and loads this product into a fully enclosed energy storage system unit with the following conditions:

- Batteries are classified as UN 2794, Batteries, wet, filled with acid, Class 8
- The battery contains a proprietary non-flammable aqueous electrolyte solution containing **zinc bromide**
- The batteries are shipped fully discharged, at a voltage less than 5 volts
- Each individual battery is enclosed in plastic housing with no exposed terminals, as demonstrated in Image #1 below
- The energy storage system is a custom built 20' ISO container with steel racks affixed inside. The batteries are loaded and braced into individual slots in the steel racks as demonstrated in Image #2 below
- No other hazardous materials are shipped in or with this fully enclosed unit
- The transport vehicle will not contain any other commodities

IMAGE # 1



IMAGE # 2



Best Regards,

Heidi Countermine
Project Logistics Manager

518 488 4114 Mobile

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Thank you for your cooperation.