



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

1200 New Jersey Avenue, SE
Washington, DC 20590

May 9, 2025

Jared Hurst
Director of Quality
LiveView Technologies
802 E. 1050 S.
American Fork, UT 84003

Reference No. 25-0002

Dear Mr. Hurst:

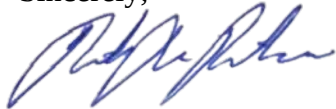
This letter is in response to your January 10, 2025 email requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to the shipment of equipment using solar, battery, and fuel cell technology. In your email, you state that your company manufactures mobile monitoring units that use hazardous materials; specifically, Class 9 lithium ion batteries and Class 3 methanol fuel cell cartridges. You note that these units utilize both solar panels and a fuel cell generator to charge the lithium ion batteries that provide power to operate the system. Based on § 172.101 hazardous materials table entry “UN3528, Engine, internal combustion, flammable liquid powered *or* Engine, fuel cell, flammable liquid powered *or* Machinery, internal combustion, flammable liquid powered *or* Machinery, fuel cell, flammable liquid powered, 3” and the associated packaging and transportation requirements found in § 173.220, you believe an accurate classification and description of your equipment is “UN3528, Machinery, fuel cell, flammable liquid powered, 3.”

You further explain that these mobile monitoring units contain three lithium ion batteries, each weighing 50 lbs. (22.7 kg), which are securely installed upright in a battery holder and protected against damage and short circuit and have a 100 percent state of charge (SOC) when transported. Moreover, you explain that these mobile monitoring units also contain four fuel cell cartridges each filled with 7.4 gallons (28 liters) of methanol, which serves as the fuel source for the generator to charge the lithium ion batteries when solar charging is not available. The fuel cells are securely housed within the units, compliant with Occupational Safety and Health Administration (OSHA) standards and designed to prevent damage and spills. You seek confirmation that “UN3528” and the associated packaging requirements are appropriate, that it is acceptable to transport these units as described as cargo on a motor vehicle or vessel, and that

these units are excepted from HMR requirements regarding shipping papers, emergency response information, placarding, hazmat training, and record retention.

In accordance with § 173.22 of the HMR, it is the shipper's responsibility to properly classify and describe a hazardous material. However, based on the information provided, it is the opinion of this Office that your mobile monitoring units are appropriately classified and described using "UN3528, Machinery, fuel cell, flammable liquid powered, 3." Additionally, as required in § 173.220(d), lithium batteries contained in vehicles, engines, or mechanical equipment must be securely fastened in the battery holder and protected to prevent damage and short circuits and each lithium battery must be of a type that has successfully passed each test in the UN Manual of Tests and Criteria as specified in § 173.185. Furthermore, lithium batteries with a SOC of 100 percent are permitted for highway and vessel transport. For fuel cells within the equipment, they must be secured and protected to avoid damage to the fuel cell. Equipment (other than vehicles, engines, or mechanical equipment) such as consumer electronic devices containing fuel cells (*e.g.*, fuel cell cartridges) should be described as "Fuel cell cartridges contained in equipment" and transported in accordance with the requirements found in § 173.230. Finally, shipments made under the provisions of § 173.220(h) are not subject to any other requirements (*i.e.*, shipping paper, emergency response information, placarding, training, or record retention) when transported by motor vehicle or rail car. Note, for transportation by vessel, these units would still be subject to labeling and shipping paper requirements (please see § 176.906).

Sincerely,

A handwritten signature in blue ink, appearing to read "Dirk Der Kinderen", written in a cursive style.

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

From: [INFOCNTR \(PHMSA\)](#)
To: [Dodd, Alice \(PHMSA\)](#)
Cc: [Hazmat Interps](#)
Subject: FW: Interpretation Request
Date: Monday, January 13, 2025 2:09:16 PM

Hello Alice,

Please see the below interpretation request. Let us know if you need anything.

Sincerely,
Janaye

From: Jared Hurst <jared.hurst@lvt.com>
Sent: Friday, January 10, 2025 4:30 PM
To: INFOCNTR (PHMSA) <INFOCNTR.INFOCNTR@dot.gov>
Subject: Interpretation Request

You don't often get email from jared.hurst@lvt.com. [Learn why this is important](#)

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.

Department of Transportation,
Pipeline and Hazardous Materials Safety Administration

I'm writing to obtain clarification on shipment of machinery.

Location: Utah

Country: US

Mailing Address:

802 E. 1050 S.

American Fork, UT 84003

Requesting validation regarding U.S.-Canada Regulations for shipping machinery:

1. LiveView Technologies (lvt.com) is a company that makes Mobile Monitoring Units that utilize Class 3 fuel (Methanol) and Class 9 batteries (Lithium) with solar power and generator to operate a video surveillance system for customers that want to monitor their property. Based on the regulations UN3528 and HMR 49 CFR 173.220 reference ID 11-0060, the HMR consultant at DOT verbally confirmed to us that LVT's product is considered machinery containing a generator. Is this correct?

2. Transported as cargo on a transport vehicle or vessel:

a. The unit contains 3 batteries (50 pounds / 22.7 kg) each.

- Batteries are securely installed in an upright position in the battery holder and protected to prevent damage and short circuit.

Batteries are transported in the machinery at a 100 percent charge. Is this acceptable?

b. The unit contains 4 fuel cell cartridges of methanol (7.4 gallons / 28 liters) each.

- The methanol is the fuel source for the generator.

- Fuel cell is securely contained in the equipment, meets the OHSA requirements and protected to prevent any damage and securely closed to prevent spills.

It is concluded that the following is not applicable:

- a. Shipping papers
- b. Emergency response information
- c. Placarding
- d. Formal training or retention of training records

Is this correct?

Regards,

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JARED HURST, *Director of Quality*

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