

UNMARKED RISK: Alternative Fuel Vehicle Hazards



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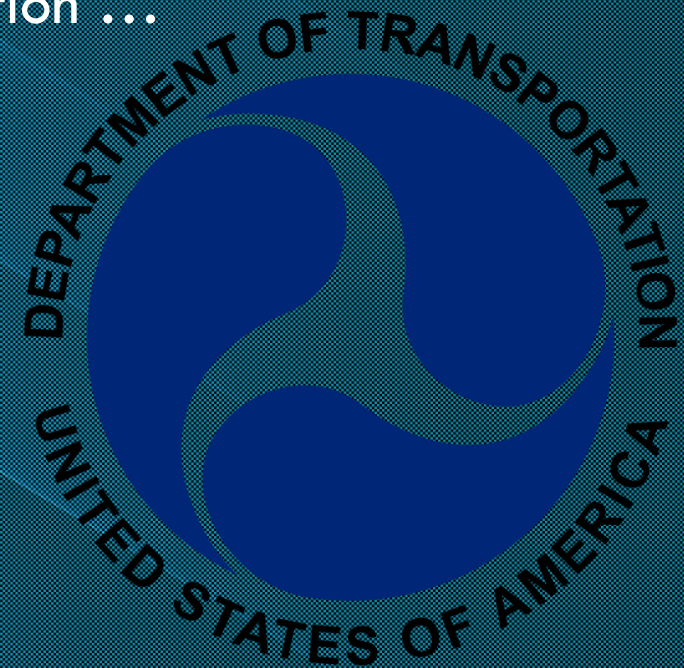




HAZMAT PLACARDING



- 49 CFR § 172.504(a)
 - Except as otherwise provided in this subchapter, each bulk packaging, freight container, unit load device, transport vehicle or rail car containing any quantity of a hazardous material must be **placarded** on each side and each end with the type of placards specified in tables 1 and 2 of this section ...

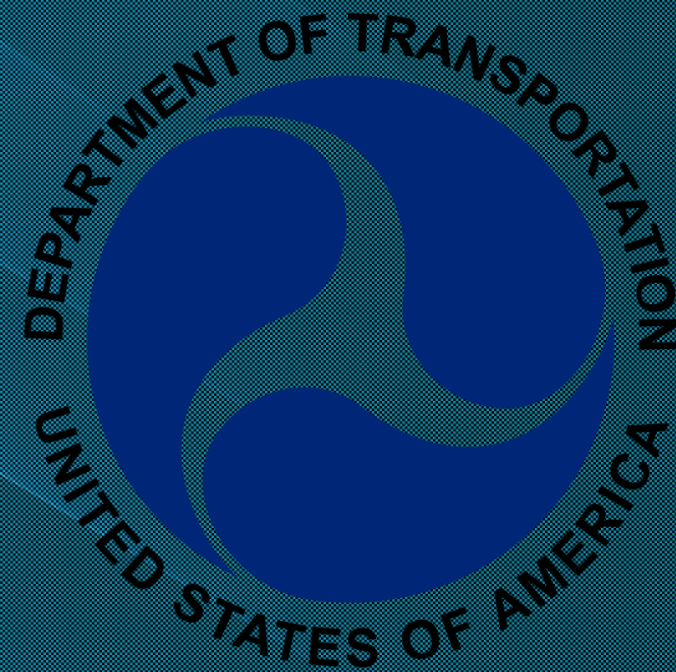




“NON ODORIZED” LABELING

- 49 CFR § 172.328(e)
 - No person may offer or transport a cargo tank with unodorized LPG unless legibly marked **NON-ODORIZED** or **NOT ODORIZED** on two opposing sides near the proper shipping name (or placards). The marking can stay on tanks used for both types.

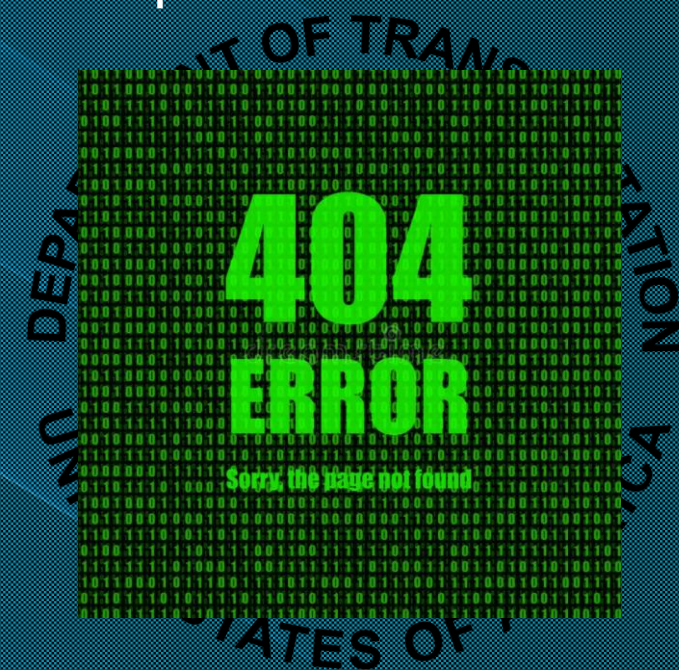
Marked on 2 Sides



ALTERNATIVE FUEL PLACARDING



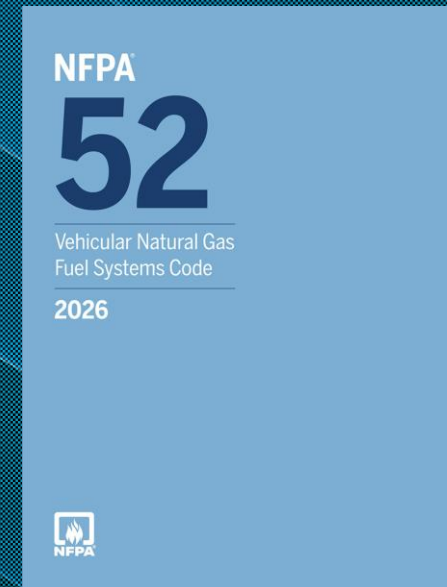
- ...
- 49 CFR § 172.504(a)
 - The fuel in an alternative fuel vehicle's own fuel system (or battery pack) is not cargo — it is the fuel that powers the vehicle. Therefore, no DOT placards are required on the vehicle itself.



ALTERNATIVE FUEL PLACARDING



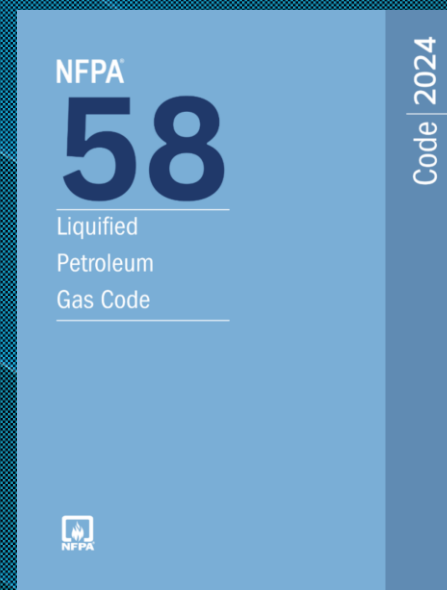
- NFPA 52 (2026 ed.) {16 TAC §13.201 2013 ed.}
 - 16.2.11.1 – Each CNG or LNG vehicle shall be identified with a permanent, diamond shaped label located on the exterior vertical surface or near-vertical surface on the lower right rear of the vehicle and inboard from any other markings.





ALTERNATIVE FUEL PLACARDING

- NFPA 58 (2024 ed.) {16 TAC §14.2801 2017 ed.}
 - 12.14.4 – All LP-Gas-fueled motor vehicles shall be identified by a weather-resistant diamond-shaped label affixed to its exterior vertical, or near vertical, lower right rear surface, but not attached to its bumper.
 - 12.14.4.2 – The label marking shall consist of a border and the word PROPANE in the letters...





ALTERNATIVE FUEL PLACARDING

- SAE J2578
 - 4.13.2 – Hydrogen-Fueled vehicles shall be identified by a blue diamond-shaped label with “H₂” or “CH₂” in the center.
 - It should be placed on the lower rear of the vehicle
 - The label is meant to be highly visible to emergency responders



ALTERNATIVE FUEL PLACARDING



- ELECTRIC VEHICLE MARKING



ALTERNATIVE FUEL PLACARDING



- ELECTRIC VEHICLE MARKING





ALTERNATIVE FUEL PLACARDING

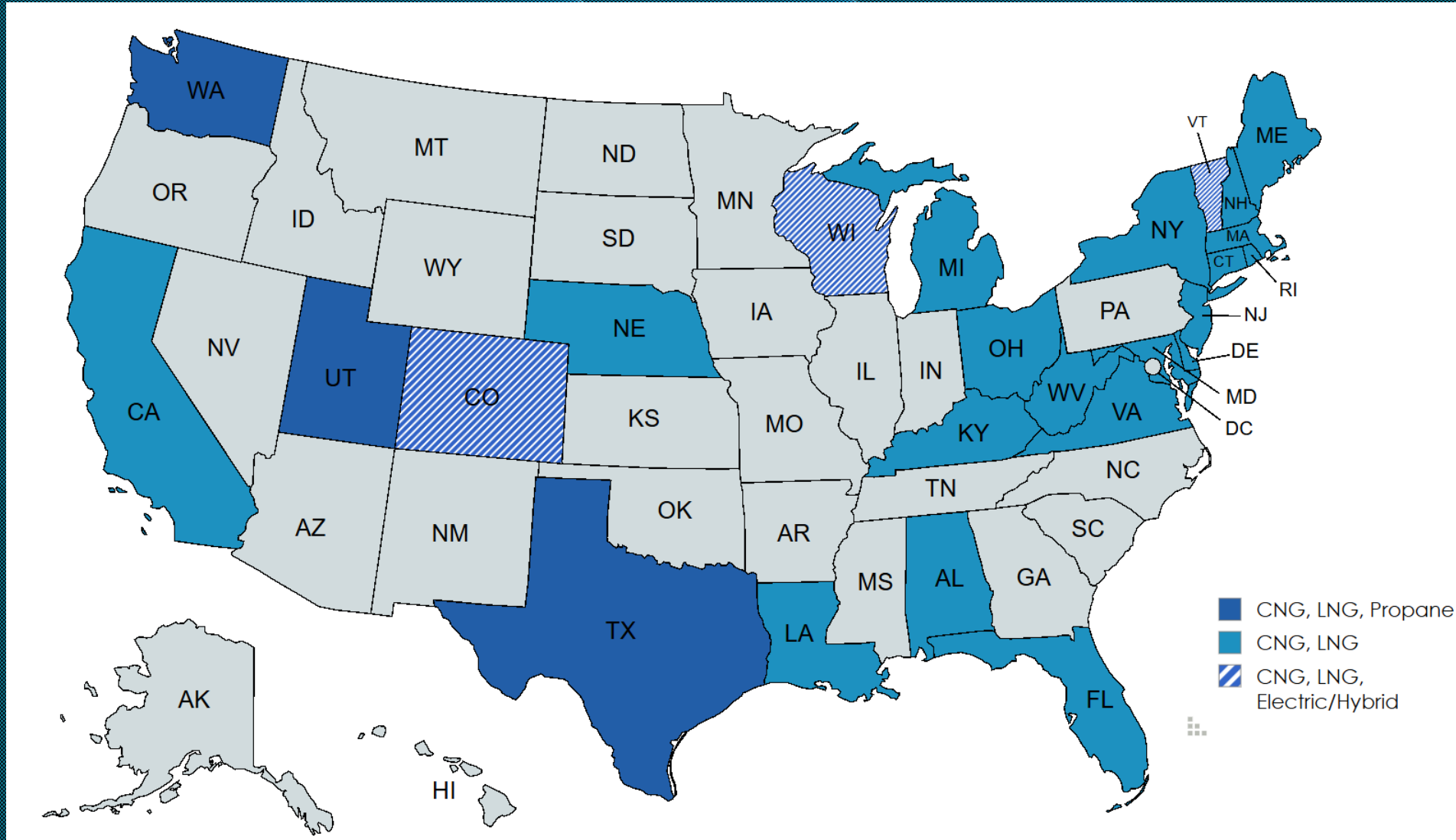
- SAE
 - J2578 (Hydrogen)
 - J3108 (Passenger Vehicles)
 - J2990 (Passenger Vehicles EV Specific)
 - J2406 (CNG)
 - J2342 (LNG)
 - J2936 (EV)
- ISO
 - 17840-4



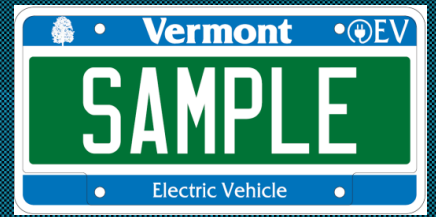
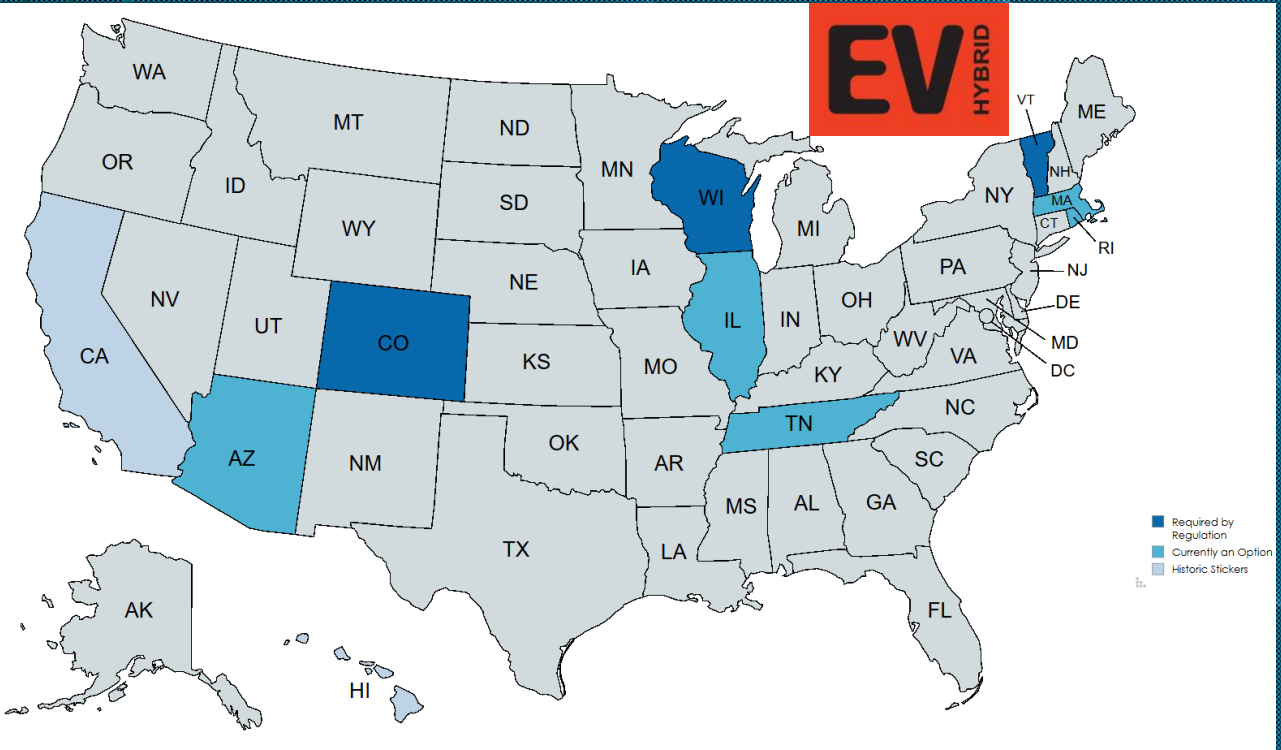
International
Organization for
Standardization



ALTERNATIVE FUEL PLACARDING

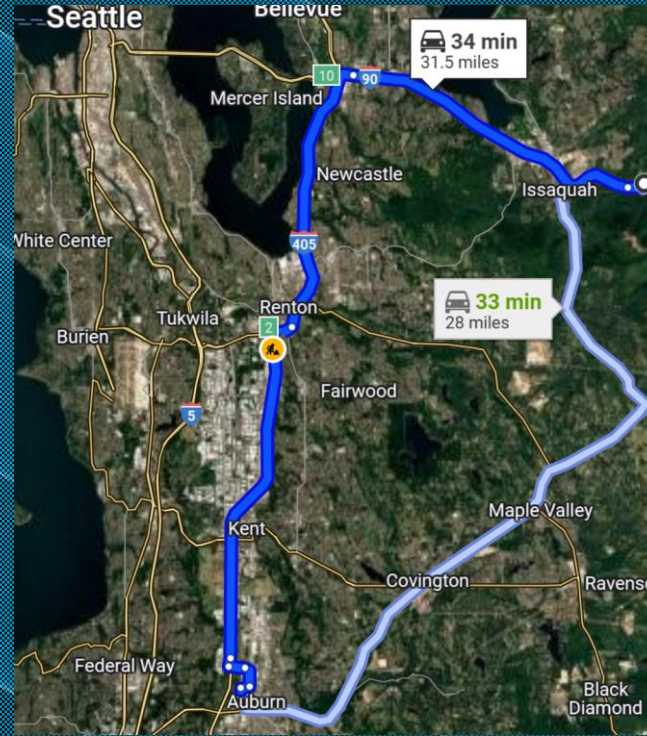


ALTERNATIVE FUEL PLACARDING





DDR (Damaged, Defective, Recalled) Batteries



Fire on the Highway: A Truck Driver's Worst Nightmare

JULY 15, 2025 BY [CHRIS PFAFF](#) • [PATRICK DURHAM](#)

16 MIN READ

Transport/Storage of DDR Batteries



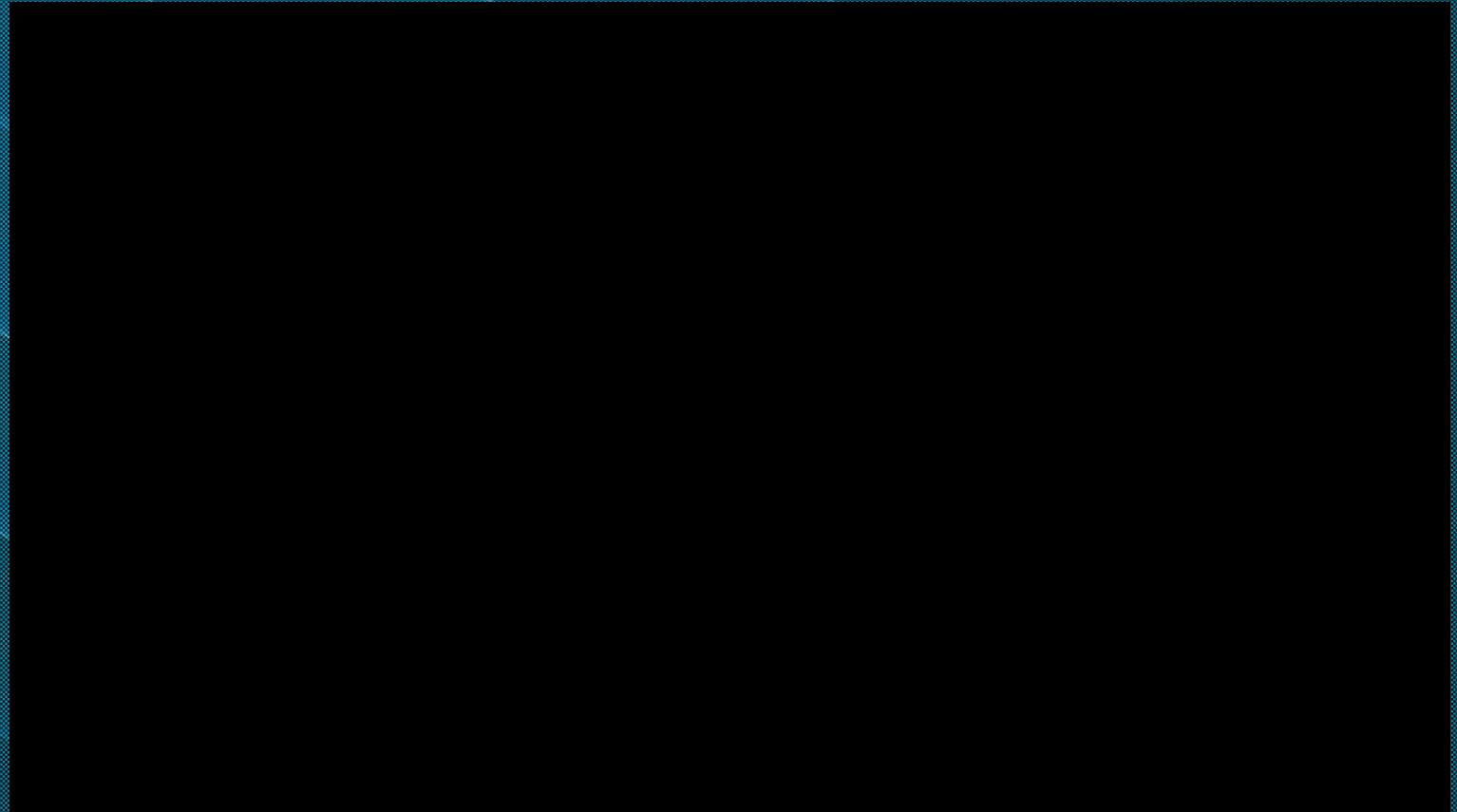
Monahans, TX – Feb 22, 2023



Transport/Storage of DDR Batteries



Livermore, CA – Jan, 2022



Chemical	LEL	UEL
Carbon Monoxide	12.5%	74%
Hydrogen	4%	77%

Transport/Storage of DDR Batteries



Dalton, GA – Aug, 2024



Chemical	LEL	UEL
Carbon Monoxide	12.5%	74%
Hydrogen	4%	77%

Transport/Storage of DDR Batteries



Birmingham, AL – Mar, 2023

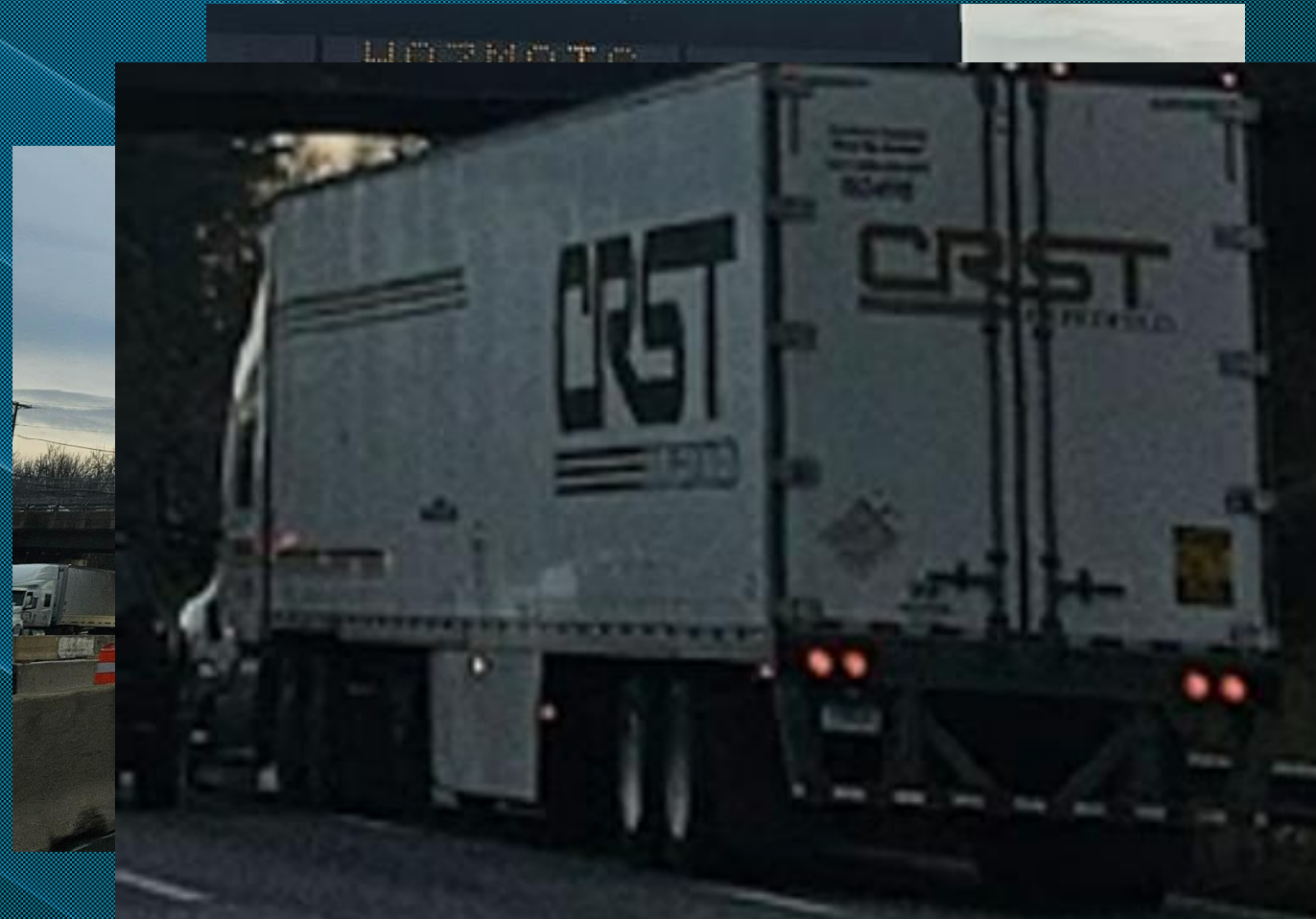


Chemical	LEL	UEL
Carbon Monoxide	12.5%	74%
Hydrogen	4%	77%

Transport/Storage of DDR Batteries



Proposal for DOT class 10 placard





Class 10 – High Energy Batteries



- Class 10.1 – DDR (Damaged, Defective or Recalled)
- Class 10.2 – Mixed-load, end-of-life batteries
- Class 10.3 – Uniform, end-of-life batteries
- Class 10.4 – Battery Energy Storage Systems
- Class 10.5 – Individual new cells for shipment
- Class 10.6 – New batteries in original packaging



SAVE THE DATE

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