



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

1200 New Jersey Avenue, SE
Washington, DC 20590

September 15, 2021

Ms. Christina Reynolds
Chief Science Officer
Remora Carbon
13685 Otterson Ct
Livonia, MI 48150

Reference No. 21-0078

Dear Ms. Reynolds:

This letter is in response to your July 13, 2021, email requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) regarding the applicability of the HMR to a new technology your company has developed. In your email and subsequent phone conversations, you describe a device that will be attached to the cab of a motor vehicle. This device will connect to the exhaust system, filter out CO₂, then compress the gases into attached onboard cylinders for the purpose of reducing carbon emissions. You ask whether your carbon capture device is subject to the HMR when installed on a motor vehicle.

Based on the information you have provided, the answer is no. Section 171.1(b) and (c) state that the requirements of the HMR apply to each person who offers a hazardous material for transportation in commerce or transports a hazardous material in commerce. It is the opinion of this Office that auxiliary equipment attached to a motor vehicle with the intent of reducing carbon emissions is not considered to be “in commerce.” Therefore, the requirements of the HMR are not applicable to your device.

However, please be aware that there may be applicable requirements from other Federal agencies such as the Federal Motor Carrier Safety Administration (FMCSA), who can be reached at 1800-832-5660, the National Highway Traffic Safety Administration (NHTSA), who can be reached at 1-888-327-4236, and the Environmental Protection Agency (EPA), who can be reached at 1-734-214-4333.

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

Sincerely,

A handwritten signature in blue ink that reads "T. Glenn Foster". The signature is fluid and cursive, with a long horizontal flourish extending to the right.

T. Glenn Foster
Chief, Regulatory Review and Reinvention Branch
Standards and Rulemaking Division

From: Quade, William (PHMSA) <william.quade@dot.gov>

Wolcott

Sent: Tuesday, July 13, 2021 3:29 PM

To: Pfund, Duane (PHMSA) <Duane.Pfund@dot.gov>

21-0078

Subject: FW: Remora -- PHMSA Letter of Interpretation Request

Duane,

Can you please treat this as a request for interp. I have let them know we may need to contact them for additional information, but I'd like to get this through as quickly as possible. There is front-office interest in this as the system has potentially large positive environmental impacts.

From my understanding of it, the system would not fall under the HMR as it is not transportation in commerce. It would be a vehicle system (like a fuel system) that falls under NHTSA or FMCSA jurisdiction. If folks have a different view (or if I am wrong), let me know so I can do expectation setting with the front office.

Thanks,

BQ

Bill Quade

Deputy Associate Administrator for Plans and Policy
USDOT, PHMSA

1200 New Jersey Ave, SE, Washington, DC 20590

Office: 202.366.6873 ◊ Mobile: 202.510.8276

From: Christina Reynolds <christina@remoracarbon.com>

Sent: Tuesday, July 13, 2021 12:53 PM

To: Quade, William (PHMSA) <william.quade@dot.gov>

Cc: Clay Dumas <clay@lowercasellc.com>; Paul Gross <paul@remoracarbon.com>

Subject: Remora -- PHMSA Letter of Interpretation Request

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.

Hi Bill-

As Clay Dumas discussed with you, Remora is building carbon capture devices for semi trucks. We filter carbon dioxide from vehicle exhaust and then compress and store CO2 in pressure vessels onboard the vehicle. We would like to **request a letter of interpretation** to facilitate our custom tank design.

We are weight and size constrained inside our device, so available space and minimal weight will determine the final vessel type, size, and location. The material being stored is primarily supercritical CO2, with small amounts of N2, O2, and NOx. Collectively, the vessels in each device hold ~1800lb of CO2. For our four initial pilots, we are using Steelhead Composite DOT-certified COPVs- 270L water volume, 17"D, 8.5'L, 5000psi operating pressure.

I am happy to answer any questions you have and look forward to hearing back from you.

Thanks,
Christina

Christina Reynolds, PhD
CSO @ [Remora](#)
443-454-4956