

March 4, 2026

Mr. William A. Quade
Acting Associate Administrator for Hazardous Materials Safety
Pipeline and Hazardous Materials Safety Administration
1200 New Jersey Avenue SE
Washington, DC 20590

**RE: Hazardous Materials: Modernizing Regulations To Facilitate Transportation of Hazardous Materials Using Highly Automated Transportation Systems
Docket No. PHMSA-2024-0064 (HM-266)**

Mr Quade:

On behalf of the Transportation Trades Department, AFL-CIO (TTD), I am pleased to respond to the Pipeline and Hazardous Materials Safety Administration's (PHMSA) advance notice of proposed rulemaking (ANPRM) regarding the transportation of hazardous materials using highly automated systems. As America's largest transportation labor federation, TTD represents workers across all modes of transportation, including aviation, maritime, rail, transit, and first responders, who will be directly impacted by future changes to the hazardous materials regulations (HMR). As such, we have a vested interest in this ANPRM. We respectfully request that the PHMSA take our feedback and that of our affiliates into due and serious consideration. Additionally, we endorse the comments filed in this docket by our affiliates, the International Association of Fire Fighters (IAFF).

At the outset, we must reiterate concerns we've expressed in several dockets about the safety and viability of transporting hazardous materials via highly automated and autonomous systems. Human operators are the foundation of our transportation system, and removing them from the equation exposes the public, first responders, and other workers to unacceptable risk. We therefore strongly urge the PHMSA to approach any changes to the HMR with extreme caution. The PHMSA and the Department of Transportation's (DOT) modal agencies must consider whether or not autonomous transportation systems and technologies will be as safe or safer than human-operated vehicles when transporting hazardous materials. Many items contained in the HMR or elsewhere in regulation are critical safety pillars, and should be considered non-negotiable regardless of the development of autonomous transportation systems.

It is our view that autonomous vehicles will never fully replicate human-operated vehicles and therefore pose unacceptable risk to the public, especially when transporting hazardous materials.

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Greg Regan, President / Shari Semelsberger, Secretary-Treasurer

We caution against changes to existing guidance and regulations intended to facilitate the integration of these technologies into the transportation system. Should the PHMSA attempt to address the transportation of hazardous materials using highly automated systems, however, we urge the agency to do so only through the formal rulemaking process. The public must have an opportunity to weigh in on any proposed changes, and the PHMSA must take care to thoroughly consider the impacts of changes in regulations. This can only be accomplished through the rulemaking procedure outlined in the Administrative Procedures Act (APA).

Emergency Response

Human operators are the first line of defense in an emergency occurring during the transportation of hazardous materials. Human crews are able to detect leaks, monitor equipment, and respond to hazards in real time, potentially preventing an emergency situation from progressing or worsening. Relying on remote monitoring equipment to perform these functions for automated transportation systems will undoubtedly result in unnecessary delays in emergency response.

Currently, in the event that a situation requires intervention from emergency responders, operators are responsible for ensuring firefighters and others have complete and accurate shipping manifests and the emergency response information necessary to address the situation. Removing the human element from this equation is inadvisable as it not only puts first responders at risk, but the travelling public, as well.

It is critical that the currently required hard copy of hazardous material emergency response information is maintained. Many trains travel along extremely rural routes where cellular coverage is often limited. Electronic communication technology alone is not mature enough to replace the need for printed communication completely, whether it be due to lack of internet access in remote areas or because the access and control of electronic communication is not sufficient to meet the needs of operators and first responders. Electronic forms of emergency response information can be a useful supplement to the required hard copy, but they are not an appropriate sole replacement given known limiting factors. For these reasons, TTD and our affiliates support permitting the use of electronic emergency response information in addition to maintaining a hard copy aboard occupied vehicles.

Air

Many traditional first-person pilot safety roles, such as sensing heat, smelling odors or smoke, or fighting onboard fires, are unavailable on Uncrewed Aircraft (UA). TTD therefore recommends that a robust evaluation of the risk and required mitigations must be conducted before UAS are authorized to carry hazardous materials in the NAS.

Additionally, we encourage the PHMSA to consider standards for hazardous materials transport containers reflecting rigorous crash-testing standards equivalent to or exceeding those currently required for crewed operations. These standards should encompass impact, vibration, and thermal

resistance. We strongly oppose the carriage of high-risk hazardous materials (e.g., Class 1 explosives or highly toxic substances per Department of Transportation classifications) via UAS, except under emergency exemptions. Operators should also be required to report hazardous material-related UAS incidents to the Federal Aviation Administration (FAA) and local fire departments.

Rail

We strongly support the safety standards currently required by the HMR for the carriage of hazardous materials by rail. Many of these requirements cannot be replicated by autonomous systems. For example, 49 CFR § 174.9 ensures that hazmat cars are inspected at each location where the material is accepted for transportation or placed on a train. These inspections, carried out by trained human inspectors, are critical to avoiding dangerous incidents, and must be maintained.

Similarly, 49 CFR § 174.16 requires that the train operator unload hazardous materials goods only if the consignee shown on a shipping document receives the load, or if properly locked and secure storage facilities are provided. Even in the event that an autonomous train can be shown to physically move hazardous materials, in no circumstance should a computer be tasked with determining if it is acceptable or safe to allow a person or entity to remove hazmat cargo. Likewise, § 174.67 requires unloading to be performed by a hazmat employee properly instructed in unloading hazardous materials and responsible for compliance with the HMR. The presence of such a trained employee is critical in ensuring the safe unloading of hazmat, and should continue to be required.

Highway

While firmly supportive of requiring the presence of operators during all levels of hazardous materials transportation, TTD strongly believes materials included in Table 1 and Table 2, as discussed in 49 CFR Section 172.504, should not be permitted to be transported by highly automated systems due to the life and environmental altering characteristics of those materials when improperly handled or unintentionally released into the environment.

If the PHMSA chooses to explore the transportation of hazardous materials over the road via highly automated systems, the agency must consider strengthening testing protocols and minimum standards for containers. As noted above, we continue to support the requirement that physical copies of emergency response information and shipping manifests are present onboard vehicles transporting hazardous materials.

Vessel

As with other modes of transportation, we do not believe that the transportation of hazardous materials via autonomous vessels will provide an equivalent level of safety to current operations.

We do not recommend that the PHMSA pursue changes to the HMR to facilitate the integration of autonomous vessels into the maritime transportation network, but if the PHMSA chooses to consider these types of changes, we encourage the agency to implement robust standards and testing protocols for shipping containers.

Conclusion

We strongly encourage the PHMSA to thoroughly evaluate the safety risks associated with permitting the carriage of hazardous materials via highly automated systems. Given the safety concerns resulting from unproven technologies and the lack of human operators and crews, we must caution the PHMSA against amending the HMR while technological testing and evaluation of these systems remain ongoing. Any future changes to the HMR must be backed by strong safety data, ensuring that our transportation network is as safe, or safer than under current regulations.

We appreciate the opportunity to comment on this docket and look forward to working with the PHMSA in the future.

Sincerely,

A handwritten signature in black ink, appearing to read "Greg Regan", enclosed within a thin black rectangular border.

Greg Regan
President