



*A bold voice for transportation workers*

May 7, 2018

Matthew Nickels  
Senior Regulations Officer  
Pipeline and Hazardous Materials Safety Administration,  
1200 New Jersey Avenue, SE  
Washington, DC 20590-0001

**RE: Regulatory Challenges to Safely Transporting Hazardous Materials by  
Surface Modes in an Automated Vehicle Environment  
Docket No. PHMSA-2018-0001**

Dear Mr. Nickels,

On behalf of the Transportation Trades Department, AFL-CIO (TTD), I am pleased to provide comments on the Pipeline and Hazardous Materials Safety Administration (PHMSA)'s solicitations for information on autonomous surface transportation of hazardous materials. By way of background, TTD consists of 32 affiliate unions representing workers in all modes of transportation, including those who will be impacted by the development and deployment of automated driving systems, workers who transport hazardous materials, and first responders tasked with responding to incidents involving hazmat. We therefore have a vested interest in the notice.<sup>1</sup>

In this docket, PHMSA requests information on how the development of automated technologies may impact the hazardous materials regulations (HMR), and what PHMSA should consider with regards to automated transportation of hazmat.

To date, DOT has collected, or is collecting, information on automation across modes – how current regulations interplay with automation efforts, and strategies by which the federal government can clear the field for the deployment of these technologies. While we have stated

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<sup>1</sup> Attached is a complete list of TTD's 32 affiliate unions



concerns across several dockets with regard to the safety and workforce impacts of these technologies, this docket poses unique issues due to the substantial life and environment altering impacts of 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 vehicle technology.

Tragedies in the rail industry offer stark reminders of the dangers of hazardous materials accidents. In 2013, the explosion of train cars carrying crude oil killed 43 and destroyed the community of Lac-Mégantic. Less than a decade earlier, a collision in Graniteville, SC resulted in the release of 60 tons of toxic chlorine gas, and the deaths of 10 people. Pursuing policy that seeks to avoid accidents like these should remain among PHMSA's top priorities.

While outside the scope of this request, TTD and its rail affiliates believe that now is the time to ensure that trains, particularly those carrying hazmat, are fully crewed with a qualified and trained engineer and conductor. These employees are among the most powerful safety tool available to railroads, and should not be replaced with unproven autonomous technology.

Within the HMRs, several items are incompatible with the automation of rail transport of hazmat. 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.

Additionally, §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. Similarly, §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.

The HMR also require that motor carriers that transport hazardous material on the nation's highways comply with 49 CFR 397. As with the issues discussed above, it is important that PHMSA and FMCSA, through the requirements of §177.804, do not undercut important safety regulations simply because some aspect of the driving operation can be automated. For example, §397.5 requires that hazmat must be attended at all times by its driver or a qualified representative of the motor carrier and §397.15 describes requirements for the delicate fueling process for hazmat vehicles. Both of these requirements speak to the necessity of the uniquely human ability of the operator to assess their surroundings and make judgement calls based on safety. Relatedly, §397.101 describes requirements for hazmat drivers to make routing decisions based on a number of safety factors, a task best suited for human operators, not automated technology. As a whole, these regulations speak to the importance of a human operator, and human capabilities during the highway transit of hazmat. In any effort to promote autonomous vehicle technology, PHMSA should not neglect their value.

Any effort to replace human operators at any junction in the transportation of hazardous materials is also of serious concern to first responders, particularly fire fighters, who must respond to life-threatening incidents involving hazmat. Regardless of who or what is transporting, unloading, or inspecting hazmat cargo, PHMSA must maintain HMRs that concern placarding and cargo manifests. The importance of these identifiers is not limited to shippers and transporters of the cargo – it is also critical for first responders who must swiftly determine the hazardous materials involved in an accident so that they may best mitigate the situation. An incident in which fire fighters respond to an accident and have no way to determine the flammability or flash point of a hazmat substance unnecessarily puts lives at risk, and must be avoided.

Additionally, PHMSA should consider how differences in autonomous technology affect emergency response. As with the roll-out of the batteries that power hybrid vehicles years ago, first responders may be tasked with responding to technology that carries risks or behaves in a way they are not prepared for, or have not previously experienced. PHMSA should determine if the HMR can be amended to prescribe requirements that increase standardization of these technologies, improving safety for emergency response personnel.

Finally, PHMSA should prohibit certain substances from ever being transported without a human operator, due to the risk these materials pose to life and the environment. To this point, and the issues discussed above, we concur with and strongly endorse the comments filed by the International Association of Fire Fighters (IAFF), a TTD affiliated union.

As autonomous technology is developed, PHMSA must ensure that it does not trade safety for flexibility in the HMR, particularly given the potentially catastrophic nature of accidents involving hazardous materials. TTD believes strongly that there are HMR requirements that must never be abrogated regardless of the state of autonomous vehicle technology, for the safety of all, including transportation workers and first responders.

We thank PHMSA for the opportunity to comment on this request, and look forward to working with the agency on this and other issues moving forward.

Sincerely,



Larry I. Willis  
President



**Transportation Trades Department, AFL-CIO**  
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***TTD MEMBER UNIONS***

Air Line Pilots Association (ALPA)  
Amalgamated Transit Union (ATU)  
American Federation of Government Employees (AFGE)  
American Federation of State, County and Municipal Employees (AFSCME)  
American Federation of Teachers (AFT)  
Association of Flight Attendants-CWA (AFA-CWA)  
American Train Dispatchers Association (ATDA)  
Brotherhood of Railroad Signalmen (BRS)  
Communications Workers of America (CWA)  
International Association of Fire Fighters (IAFF)  
International Association of Machinists and Aerospace Workers (IAM)  
International Brotherhood of Boilermakers, Iron Ship Builders,  
Blacksmiths, Forgers and Helpers (IBB)  
International Brotherhood of Electrical Workers (IBEW)  
International Longshoremens' Association (ILA)  
International Organization of Masters, Mates & Pilots, ILA (MM&P)  
International Union of Operating Engineers (IUOE)  
Laborers' International Union of North America (LIUNA)  
Marine Engineers' Beneficial Association (MEBA)  
National Air Traffic Controllers Association (NATCA)  
National Association of Letter Carriers (NALC)  
National Conference of Firemen and Oilers, SEIU (NCFO, SEIU)  
National Federation of Public and Private Employees (NFOPE)  
Office and Professional Employees International Union (OPEIU)  
Professional Aviation Safety Specialists (PASS)  
Sailors' Union of the Pacific (SUP)  
Sheet Metal, Air, Rail and Transportation Workers (SMART)  
SMART-Transportation Division  
Transportation Communications Union/ IAM (TCU)  
Transport Workers Union of America (TWU)  
**UNITE HERE!**  
United Mine Workers of America (UMWA)  
United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service  
Workers International Union (USW)

*These 32 labor organizations are members of and represented by the TTD*

