Billing Code: 4910-60-P

DEPARTMENT OF TRANSPORTATION

Pipeline and Hazardous Materials Safety Administration

49 CFR Parts 107, 171, 172, 173, 174, 177, 178, 179, and 180

[Docket No. PHMSA-2018-0001; Notice No. 2018-01]

Request for Information on Regulatory Challenges to Safely Transporting Hazardous Materials by Surface Modes in an Automated Vehicle Environment; Correction

AGENCY: Pipeline and Hazardous Materials Safety Administration (PHMSA), Department of Transportation (DOT).

ACTION: Request for information; correction.

SUMMARY: This request for information notice replaces the version published in the *Federal Register* on March 22, 2018 (83 FR 12529), to make technical corrections to the prior version. The Pipeline and Hazardous Materials Safety Administration (PHMSA) requests information on matters related to the development and potential use of automated technologies for surface modes (i.e., highway and rail) in hazardous materials transportation. In anticipation of the development, testing, and integration of Automated Driving Systems in surface transportation, PHMSA is issuing this request for information on the factors the Agency should consider to ensure continued safe transportation of hazardous materials without impeding emerging surface transportation technologies.

DATES: Interested persons are invited to submit comments on or before May 7, 2018. Comments received after that date will be considered to the extent practicable.

ADDRESSES: You may submit comments identified by Docket Number PHMSA-2018-0001 via any of the following methods:

- *Federal eRulemaking Portal:* Go to http://www.regulations.gov. Follow the online instructions for submitting comments.
- *Fax:* 1-202-493-2251.
- *Mail:* Docket Operations, U.S. Department of Transportation, West Building, Ground Floor, Room W12-140, Routing Symbol M-30, 1200 New Jersey Avenue SE., Washington, DC 20590.
- *Hand Delivery:* To Docket Operations, Room W12-140 on the ground floor of the West Building, 1200 New Jersey Avenue SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

Instructions: All submissions must include the agency name and docket number for this notice. Internet users may access comments received by DOT at: http://www.regulations.gov. Please note that comments received will be posted without change to: http://www.regulations.gov including any personal information provided.

Privacy Act: In accordance with 5 U.S.C. 553(c), the DOT solicits comments from the public. The DOT posts these comments, without edit, including any personal information the commenter provides, to http://www.regulations.gov, as described in the system of records notice (DOT/ALL–14 FDMS), which can be reviewed at http://www.dot.gov/privacy.

FOR FURTHER INFORMATION CONTACT: Matthew Nickels, Senior Regulations Officer (PHH-10), U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration, 1200 New Jersey Avenue, SE., East Building, 2nd Floor, Washington, DC 20590-0001, Telephone 202-366-0464, Matthew.Nickels@dot.gov.

SUPPLEMENTARY INFORMATION:

I. Overview

The transportation sector is undergoing a potentially revolutionary period, as tasks traditionally performed by humans only are increasingly being done, whether in testing or in actual integration, by automated technologies. Most prominently, "Automated Driving Systems" (ADS) have shown the capacity to drive and operate motor vehicles, including commercial motor vehicles, as safely and efficiently as humans, if not more so. Similar technological developments are also occurring in rail. Additionally, PHMSA acknowledges that ongoing advances in aviation and maritime technology could also affect the transportation of hazardous materials and plans to address these issues in future notices, as necessary.

DOT, including PHMSA, strongly encourages the safe development, testing, and integration of automated technologies, including the potential for these technologies to be used in hazardous materials transportation. Although an exciting and important innovation in transportation history, the emergence of surface automated vehicles and the technologies that support them may create unique and unforeseen challenges for hazardous materials transportation. The safe transportation of hazardous materials

remains PHMSA's top priority, and as the development, testing, and integration of surface automated vehicles into our transportation system continues, PHMSA recognizes the need to work with State and modal partners to ensure the Hazardous Materials Regulations (HMR; 49 CFR parts 171-180) framework sufficiently takes into account these new technological innovations.

The purpose of this request for information is to obtain public comment on how the development of automated technologies may impact the HMR, and on the information PHMSA should consider when determining how to best ensure the HMR adequately account for surface automated vehicles.[1] In anticipation of the role surface automated vehicles and the technologies that support them may play on transportation, the movement of freight, and commerce, PHMSA requests comments from the public and interested stakeholders—including entities engaged in the development, testing, and integration of these technologies—on the potential future incompatibilities between the hazardous materials transportation requirements in the HMR and a surface transportation system that incorporates automated vehicles.

This request for information notice replaces the version published in the *Federal Register* on March 22, 2018 (83 *FR* 12529),[2] to make technical corrections to the prior version.

[1] In this notice, PHMSA is not seeking comment on how advances in aviation or maritime technology could affect the transportation of hazardous materials, though the Agency is considering future notices on those issues.

[2] See https://www.gpo.gov/fdsys/pkg/FR-2018-03-22/pdf/2018-05785.pdf

II. PHMSA's Safety Mission and Regulatory Objectives

PHMSA is an operating administration within DOT established in 2004 by the Norman Y. Mineta Research and Special Programs Improvement Act (Pub. L. 108-426). PHMSA's mission is to protect people and the environment by advancing the safe transportation of energy and other hazardous materials that are essential to our daily lives. To achieve this mission, PHMSA establishes national policy, sets and enforces standards, educates, and conducts research to prevent hazardous materials incidents. PHMSA collaborates closely with other Federal agencies, operating administrations, and transportation modes, in addition to coordinating with State and local governments and authorities to ensure the safe movement of hazardous materials by highway and rail in or around local communities.

Federal hazardous materials law authorizes the Secretary to "prescribe regulations for the safe transportation, including security, of hazardous materials in intrastate, interstate, and foreign commerce." 49 U.S.C. 5103(b)(1). The Secretary has delegated this authority to PHMSA in 49 CFR 1.97(b). The HMR are designed to achieve three primary goals: (1) help ensure that hazardous materials are packaged and handled safely and securely during transportation; (2) provide effective communication to transportation workers and emergency responders of the hazards of the materials being transported; and (3) minimize the consequences of an accident or incident should one occur. The hazardous materials regulatory system is a risk management system that is prevention-oriented and focused on identifying safety or security hazards and reducing the probability and consequences of a hazardous material release.

Under the HMR, hazardous materials are categorized into hazard classes and packing groups based on analysis of and experience with the risks they present during transportation. The HMR: (1) specify appropriate packaging and handling requirements for hazardous materials based on this classification and require a shipper to communicate the material's hazards through the use of shipping papers, package marking and labeling, and vehicle placarding; (2) require shippers to provide emergency response information applicable to the specific hazard or hazards of the material being transported; and (3) mandate training requirements for persons who prepare hazardous materials for shipment or transport hazardous materials in commerce. The HMR also include operational requirements applicable to each mode of transportation, further necessitating that hazardous materials standards and regulations be coordinated in intrastate, interstate, and foreign commerce.

As such, PHMSA—in continued collaboration with the Federal Motor Carrier Safety Administration and the Federal Railroad Administration—seeks information regarding the design, development, and potential use of automated transportation systems to safely transport hazardous materials by surface mode in compliance with the HMR, and to identify requirements within the HMR which may impede the integration of this technology.

III. Special Permit Program Allows Regulatory Flexibility to Foster Innovation

PHMSA safely incorporates technological innovation through its special permit (SP) program. SPs set forth alternative requirements—or a variance—to the requirements in the HMR in a manner that achieves an equivalent level of safety to that required under

the regulations, or if a required safety level does not exist, that is consistent with the public interest. PHMSA's Approvals and Permits Division is responsible for the issuance of DOT SPs. Specifically, SPs are issued by PHMSA under 49 CFR part 107, subpart B.

The HMR often provide performance-based standards and, as such, provide the regulated community with some flexibility in meeting safety requirements. Even so, not every transportation situation can be anticipated and covered under the regulations. The hazardous materials community is at the cutting edge of development of new materials, technologies, and innovative ways of moving hazardous materials. Innovation strengthens our economy, and new technologies and operational techniques may enhance safety. Thus, SPs provide a mechanism for testing and using new technologies, promoting increased transportation efficiency and productivity, and ensuring global competitiveness without compromising safety. SPs enable the hazardous materials industry to safely, quickly, and effectively integrate new products and technologies into production and the transportation stream.

IV. Additional DOT Guidance

PHMSA requests information related to the development and potential use of surface automated vehicles and the technologies that support them in hazardous materials transportation by highway or rail. For additional background on ADS for motor vehicles, PHMSA notes that DOT and the National Highway Traffic Safety Administration (NHTSA) released guidance in the *Automated Driving Systems 2.0: A Vision for Safety*,[3] on September 12, 2017. Further, NHTSA issued a notice [September 15, 2017;

[3] See https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/13069a-ads2.0_090617_v9a_tag.pdf

82 FR 43321] making the public aware of the guidance and seeking comment. This voluntary guidance, among other things, describes the levels of "Automated Driving Systems" for on-road motor vehicles developed by SAE International (see SAE J3016, September 2016) and adopted by DOT.

The SAE definitions divide vehicles into levels based on "who does what, when." Generally:

- At SAE Level 0, the driver does everything.
- At SAE Level 1, an automated system on the vehicle can *sometimes assist* the driver conduct *some parts* of the driving task.
- At SAE Level 2, an automated system on the vehicle can *actually conduct* some parts of the driving task, while the driver continues to monitor the driving environment and performs the rest of the driving task.
- At SAE Level 3, an automated system can both actually conduct some parts of the driving task and monitor the driving environment *in some instances*, but the driver must be ready to take back control when the automated system requests.
- At SAE Level 4, an automated system can conduct the driving task and monitor the driving environment, and the driver need not take back control, but the automated system can operate only in certain environments and under certain conditions.
- At SAE Level 5, the automated system can perform all driving tasks, under all conditions that a driver could perform them.

V. Questions

PHMSA requests comments on the implications of the development, testing, and integration of automated technologies for surface modes (i.e., highway and rail) on both the HMR and the general transport of hazardous materials.

Specifically, PHMSA asks:

1. What are the safety, regulatory, and policy implications of the design, testing, and integration of surface automated vehicles on the requirements in the HMR? Please include any potential solutions PHMSA should consider.
2. What are potential regulatory incompatibilities between the HMR and a future surface transportation system that incorporates automated vehicles? Specific HMR areas could include but are not limited to:
    a) Emergency response information and hazard communication
    b) Packaging and handling requirements, including pre-transportation functions
    c) Incident response and reporting
    d) Safety and security plans (e.g., en route security)
    e) Modal requirements (e.g., highway and rail)
3. Are there specific HMR requirements that would need modifications to become performance-based standards that can accommodate an automated vehicle operating in a surface transportation system?
4. What automated surface transportation technologies are under development that are expected to be relevant to the safe transport of hazardous materials, and how might they be used in a surface transportation system?

5. Under what circumstances do freight operators envision the transportation of hazardous materials in commerce using surface automated vehicles within the next 10 years?
    a) To what extent do the HMR restrict the use of surface automated vehicles in the transportation of hazardous materials in non-bulk packaging in parcel delivery and less-than-truckload freight shipments by commercial motor vehicles?
    b) To what extent do the HMR restrict the use of surface automated vehicles in the transportation of hazardous materials in bulk packaging by rail and commercial motor vehicles?
6. What issues do automated technologies raise in hazardous materials surface transportation that are not present for human drivers or operators that PHMSA should address?
7. How might potential changes to the HMR for integration of surface automated vehicle technologies impact current requirements for human drivers or operators (i.e., training)?
8. Do HMR requirements that relate to the operation of surface automated vehicles carrying hazardous materials present different challenges than those that relate to ancillary tasks, such as inspections and packaging requirements?
9. How will the behavioral responses of road and railway users change with the integration of surface automated vehicle technologies? What will the reaction be to automated vehicles or rail cars with markings denoting the presence of hazardous materials?

10. What solutions could PHMSA consider to address potential future regulatory incompatibilities between the HMR and surface automated vehicle technologies?
11. What should PHMSA consider when reviewing applications for special permits seeking regulatory flexibility to allow for the transport of hazardous materials using automated technologies for surface modes?
12. When considering long-term solutions to challenges the HMR may present to the development, testing, and integration of surface automated vehicles, what information and other factors should PHMSA consider?
13. What should PHMSA consider when developing future policy, guidance, and regulations for the safe transportation of hazardous materials in surface transportation systems?

Signed in Washington, DC, on March 23, 2018.

Drue Pearce,

Deputy Administrator, Pipeline and Hazardous Materials Safety Administration.

[FR Doc. 2018-06290 Filed: 3/28/2018 8:45 am; Publication Date: 3/29/2018]