



DEPARTMENT OF TRANSPORTATION

Pipeline and Hazardous Materials Safety Administration

49 CFR Parts 192 and 195

[Docket No. PHMSA-2025-0118; Amdt. Nos. 192-154, 195-116]

RIN 2137-AF79

Pipeline Safety: Integration of Innovative Remote Sensing Technologies for Right-of-Way Patrols on Gas and Hazardous Liquid Pipelines

ACTION: Direct final rule (DFR); request for comments.

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

SUMMARY: This DFR clarifies that PHMSA's right-of-way patrol requirements are technology neutral, and that remote sensing technologies, such as unmanned aerial systems and satellites, can be used for compliance purposes.

DATES: The DFR is effective October 9, 2025, unless adverse comments are received by

[INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL*

***REGISTER*]**. If adverse comments are received, notification will be published in the *Federal Register* before the effective date either withdrawing the rule (in its entirety or portions thereof) or issuing a new final rule which responds to those comments.

ADDRESSES: You may submit comments identified by the Docket Number PHMSA-2025-0118 using any of the following methods:

E-Gov Web: <https://www.regulations.gov>. This site allows the public to enter comments on any Federal Register notice issued by any agency. Follow the online instructions for submitting comments.

Mail: Docket Management System: U.S. Department of Transportation, 1200 New Jersey Avenue SE, West Building Ground Floor, Room W12-140, Washington, D.C. 20590-0001.

Hand Delivery: U.S. DOT Docket Management System: West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

Fax: 1-202-493-2251.

For commenting instructions and additional information about commenting, see
SUPPLEMENTARY INFORMATION.

FOR FURTHER INFORMATION CONTACT: Sayler Palabrica, Transportation Specialist,
1200 New Jersey Avenue SE, Washington, D.C. 20590, 202-744-0825,
sayler.palabrica@dot.gov.

SUPPLEMENTARY INFORMATION:

I. GENERAL DISCUSSION:

PHMSA requires operators to perform periodic patrols of gas transmission and hazardous liquid pipeline rights-of-way (ROW). Section 192.705 requires operators to patrol gas transmission pipelines between one and four times each calendar year, depending on the class location of the pipeline and whether the pipeline is located at a highway or railroad crossing. Similarly, § 195.412 requires hazardous liquid pipeline operators inspect the surface conditions on or adjacent to each pipeline ROW at least 26 times each year. Both sections specify that patrols or inspections may include walking, driving, flying, or other appropriate means of traversing the ROW. During these inspections, an operator patrols the ROW to identify indications of leaks or threats to pipeline integrity, such as construction, excavation activity, and earth movement. While these are primarily visual inspections, PHMSA is aware of operators who integrate additional sensing technologies, such as thermal imaging or light detection and ranging sensors to identify leaks, earth movement, the condition of water crossings, and other safety risks, in conducting ROW patrols.

PHMSA has clarified in interpretation letters that unmanned aircraft systems (UAS, commonly known as drones) and satellite surveillance may satisfy patrol requirements, so long

as they provide current information and imaging quality comparable to traditional aerial patrols (PI-19-0005 (Aug. 1, 2019), PI-21-0006 (Jul. 13, 2021)). However, PHMSA has never clarified this explicitly in the regulation, resulting in regulatory uncertainty that discourages the adoption of cost-effective, advanced technologies. In response to a DOT request for information on deregulation (90 FR 14593 (Apr. 3, 2025)), the American Petroleum Institute (API) and the Liquid Energy Pipeline Association (LEPA) recommended PHMSA “state clearly in regulation (not just interpretive guidance) that drone and satellite technology is eligible for inspecting ROWs” (Docket No. DOT-OST-2025-0026-0874 (May 5, 2025)).

To provide operators with additional regulatory certainty and encourage the use of cost-effective, advanced technologies, this rule revises §§ 192.705 and 195.412 to authorize explicitly UAS, satellite surveillance, and other technologies suitable for observing current surface conditions in conducting ROW patrols. This amendment will reduce potential barriers to the use of these technologies, resulting in potential cost savings and safety and environmental benefits. UAS and satellite surveys are often less expensive than ground-based surveys or surveys conducted with traditional fixed-wing or rotary-wing aircraft. A UAS or satellite patrol is also less likely to create risks to operator personnel, particularly when compared with patrols conducted using traditional ground-based or aerial technologies. Finally, satellite and UAS patrols are also likely to have lower local air quality and noise impacts when compared with traditional methods as UAS are lower in mass than traditional aircraft and often use battery-electric propulsion.

PHMSA notes that while UAS are authorized for compliance with pipeline ROW patrol requirements under §§ 192.705 and 195.412, nothing in this rule affects other regulatory obligations regarding the commercial operation of UAS in the National Airspace System.

Commenting

Instructions: Please include the docket number PHMSA-2025-0118 at the beginning of your comments. If you submit your comments by mail, submit two copies. If you wish to receive

confirmation that PHMSA received your comments, include a self-addressed stamped postcard.

Internet users may submit comments at <https://www.regulations.gov>.

Note: Comments are posted without changes or edits to <https://www.regulations.gov>, including any personal information provided. There is a privacy statement published on

<https://www.regulations.gov>.

Privacy Act: In accordance with 5 United States Code (U.S.C.) 553(c), DOT solicits comments from the public to inform its rulemaking process. DOT posts these comments, without edit, including any personal information the commenter provides, to <https://www.regulations.gov>, as described in the system of records notice (DOT/ALL-14 FDMS), which can be reviewed at

<https://www.dot.gov/privacy>.

Confidential Business Information: Confidential Business Information (CBI) is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA, 5 U.S.C. 552), CBI is exempt from public disclosure. It is important that you clearly designate the comments submitted as CBI if: your comments responsive to this document contain commercial or financial information that is customarily treated as private; you actually treat such information as private; and your comment is relevant or responsive to this notice. Pursuant to 49 Code of Federal Regulations (CFR) 190.343, you may ask PHMSA to provide confidential treatment to information you give to the agency by taking the following steps: (1) mark each page of the original document submission containing CBI as “Confidential”; (2) send PHMSA, along with the original document, a second copy of the original document with the CBI deleted; and (3) explain why the information that you are submitting is CBI. Submissions containing CBI should be sent to Sayler Palabrica, Office of Pipeline Safety, Pipeline and Hazardous Materials Safety Administration (PHMSA), 2nd Floor, 1200 New Jersey Avenue SE, Washington, D.C. 20590-0001, or by email at sayler.palabrica@dot.gov. Any materials PHMSA receives that is not specifically designated as CBI will be placed in the public docket.

Docket: For access to the docket to read background documents or comments received, go to <http://www.regulations.gov>. Follow the online instructions for accessing the docket.

Alternatively, you may review the documents in person at the street address listed above.

II. REGULATORY ANALYSIS AND NOTICES:

A. Legal Authority

This direct final rule is published under the authority of the Secretary of Transportation set forth in the Federal Pipeline Safety Laws (49 U.S.C. 60101 *et seq.*) and delegated to the PHMSA Administrator pursuant to 49 CFR 1.97. PHMSA has determined that the clarification included in this direct final rule is unlikely to elicit significant adverse comment. *See* 49 U.S.C. 60102(b)(6)(A); 49 CFR 190.339.

B. Executive Order 12866; Regulatory Planning and Review

Executive Order (E.O.) 12866 (“Regulatory Planning and Review”; 58 FR 51735 (Oct. 4, 1993)), as implemented by DOT Order 2100.6B (“Policies and Procedures for Rulemaking”), requires agencies to regulate in the “most cost-effective manner,” to make a “reasoned determination that the benefits of the intended regulation justify its costs,” and to develop regulations that “impose the least burden on society.” DOT Order 2100.6B specifies that regulations should generally “not be issued unless their benefits are expected to exceed their costs.” In arriving at those conclusions, E.O. 12866 requires that agencies should consider “both quantifiable measures . . . and qualitative measures of costs and benefits that are difficult to quantify” and “maximize net benefits . . . unless a statute requires another regulatory approach.” E.O. 12866 also requires that “agencies should assess all costs and benefits of available regulatory alternatives, including the alternative of not regulating.” DOT Order 2100.6B directs that PHMSA and other Operating Administrations must generally choose the “least costly regulatory alternative that achieves the relevant objectives” unless required by law or compelling safety need.

E.O. 12866 and DOT Order 2100.6B also require that PHMSA submit “significant regulatory actions” to the Office of Information and Regulatory Affairs (OIRA) within the Executive Office of the President’s Office of Management and Budget (OMB) for review. This direct final rule is a not significant regulatory action pursuant to E.O. 12866; it also has not designated this rule as a “major rule” as defined by the Congressional Review Act (5 U.S.C. 801 *et seq.*).

PHMSA has complied with the procedural and analytical requirements in E.O. 12866 as implemented by DOT Order 2100.6B and determined that this direct final rule will result in cost savings by reducing regulatory burdens and regulatory uncertainty for pipeline facility operators by explicitly stating that certain cost-effective technologies are permitted. PHMSA expects those cost savings will also result in reduced costs for the public to whom pipeline operators generally transfer a portion of their compliance costs. The cost savings of this rulemaking could not be quantified.

C. Executive Orders 14192 and 14219

This direct final rule will be a deregulatory action pursuant to Executive Order (E.O.) 12866 (“Regulatory Planning and Review”; 58 FR 51735 (Oct. 4, 1993)). PHMSA estimates that the total costs of the rule on the regulated community will be less than zero. Nor does this rulemaking implicate any of the factors identified in section 2(a) of E.O. 14219 (“Ensuring Lawful Governance and Implementing the President’s ‘Department of Government Efficiency’ Deregulatory Initiative”) indicative that a regulation is “unlawful . . . [or] that undermine[s] the national interest.” (90 FR 10583 (Feb. 25, 2025)).

D. Energy-Related Executive Orders 13211, 14154, and 14156

The President has declared in E.O. 14156 (“Declaring a National Energy Emergency”; (90 FR 8353 (Jan. 29, 2025))) a national emergency to address America’s inadequate energy development, production, transportation, refining, and generation capacity. Similarly, E.O. 14154 (“Unleashing American Energy,” (90 FR 8353 (Jan. 29, 2025))) asserts a Federal policy to

unleash American energy by ensuring access to abundant supplies of reliable, affordable energy from (inter alia) the removal of “undue burden[s]” on the identification, development, or use of domestic energy resources such as PHMSA-jurisdictional gasses and hazardous liquids.

PHMSA finds this direct final rule is consistent with each of E.O. 14156 and E.O. 14154. The direct final rule will give affected pipeline operators regulatory certainty that cost-effective advanced technologies such as UAS and satellites are approved compliance methods. PHMSA therefore expects the regulatory amendments in this direct final rule will in turn increase national pipeline transportation capacity and improve pipeline operators’ ability to provide abundant, reliable, affordable natural gas and petroleum products in response to residential, commercial, and industrial demand.

However, this direct final rule is not a “significant energy action” under E.O. 13211 (“Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use”; (66 FR 28355 (May 22, 2001))), which requires Federal agencies to prepare a Statement of Energy Effects for any “significant energy action.” Because this direct final rule is not a significant action under E.O. 12866, it will not have a significant adverse effect on supply, distribution, or energy use; OIRA has therefore not designated this direct final rule as a significant energy action.

E. Executive Order 13132: Federalism

PHMSA analyzed this direct final rule in accordance with the principles and criteria contained in E.O. 13132 (“Federalism”; 64 FR 43255 (Aug. 10, 1999)) and the Presidential Memorandum (“Preemption”) published in the Federal Register on May 22, 2009 (74 FR 24693). E.O. 13132 requires agencies to ensure meaningful and timely input by State and local officials in the development of regulatory policies that may have “substantial direct effects on the States, on the relationship between the National Government and the States, or on the distribution of power and responsibilities among the various levels of government.”

While the direct final rule may operate to preempt some State requirements, it will not impose any regulation that has substantial direct effects on the States, the relationship between the National Government and the States, or the distribution of power and responsibilities among the various levels of government. Section 60104(c) of Federal Pipeline Safety Laws prohibits certain State safety regulation of interstate pipelines. Under Federal Pipeline Safety Laws, States that have submitted a current certification under section 60105(a) can augment Federal pipeline safety requirements for intrastate pipelines regulated by PHMSA but may not approve safety requirements less stringent than those required by Federal law. A State may also regulate an intrastate pipeline facility that PHMSA does not regulate. The preemptive effect of the regulatory amendments in this direct final rule is limited to the minimum level necessary to achieve the objectives of the Federal Pipeline Safety Laws. Therefore, the consultation and funding requirements of E.O. 13132 do not apply.

F. Regulatory Flexibility Act

The Regulatory Flexibility Act (5 U.S.C. 601 et seq.) requires Federal agencies to conduct a Final Regulatory Flexibility Analysis (FRFA) for a direct final rule subject to notice-and-comment rulemaking under the Administrative Procedure Act unless the agency head certifies that the proposed rule in the rulemaking will not have a significant economic impact on a substantial number of small entities. E.O. 13272 (“Proper Consideration of Small Entities in Agency Rulemaking”; 67 FR 53461 (Aug. 16, 2002)) obliges agencies to establish procedures promoting compliance with the Regulatory Flexibility Act. DOT posts its implementing guidance on a dedicated webpage. This direct final rule was developed in accordance with E.O. 13272 and DOT implementing guidance to ensure compliance with the Regulatory Flexibility Act. PHMSA expects that this direct final rule will relieve regulatory burdens and therefore certifies the direct final rule will not have a significant impact on a substantial number of small entities.

G. Unfunded Mandates Reform Act of 1995

The Unfunded Mandates Reform Act (UMRA, 2 U.S.C. 1501 et seq.) requires agencies to assess the effects of Federal regulatory actions on State, local, and Tribal governments, and the private sector. For any proposed or direct final rule that includes a Federal mandate that may result in the expenditure by state, local, and Tribal governments, in the aggregate of \$100 million or more (in 1996 dollars) in any given year, the agency must prepare, amongst other things, a written statement that qualitatively and quantitatively assesses the costs and benefits of the Federal mandate.

This direct final rule does not impose unfunded mandates under UMRA because it does not result in costs of \$100 million or more (in 1996 dollars) per year for either State, local, or Tribal governments, or to the private sector.

H. National Environmental Policy Act

The National Environmental Policy Act (NEPA, 42 U.S.C. 4321 et. seq.) requires that Federal agencies assess and consider the impact of major Federal actions on the human and natural environment.

PHMSA analyzed this direct final rule in accordance with NEPA and issues this Finding of No Significant Impact (FONSI), as it has determined that the rulemaking will not adversely affect safety and therefore will not significantly affect the quality of the human and natural environment.

I. Executive Order 13175

PHMSA analyzed this direct final rule according to the principles and criteria in E.O. 13175 (“Consultation and Coordination with Indian Tribal Governments”; 65 FR 67249 (Nov. 9, 2000)) and DOT Order 5301.1A (“Department of Transportation Tribal Consultation Policies and Procedures”). E.O. 13175 requires agencies to assure meaningful and timely input from Tribal government representatives in the development of rules that significantly or uniquely affect Tribal communities by imposing “substantial direct compliance costs” or “substantial direct

effects” on such communities or the relationship or distribution of power between the Federal Government and Tribes.

PHMSA assessed the impact of the direct final rule and determined that it will not significantly or uniquely affect Tribal communities or Indian Tribal governments. The rulemaking’s regulatory amendments have a broad, national scope; therefore, this direct final rule will not significantly or uniquely affect Tribal communities, much less impose substantial compliance costs on Native American Tribal governments or mandate Tribal action. For these reasons, PHMSA has concluded that the funding and consultation requirements of E.O. 13175 and DOT Order 5301.1A do not apply.

J. Paperwork Reduction Act

The Paperwork Reduction Act (44 U.S.C. 3501 et seq.) and its implementing regulations at 5 CFR 1320.8(d) requires that PHMSA provide interested members of the public and affected agencies with an opportunity to comment on information collection and recordkeeping requests. This rulemaking will not create, amend, or rescind any existing information collections.

K. Executive Order 13609 and International Trade Analysis

E.O. 13609 (“Promoting International Regulatory Cooperation”; 77 FR 26413 (May 4, 2012)) requires agencies consider whether the impacts associated with significant variations between domestic and international regulatory approaches are unnecessary or may impair the ability of American business to export and compete internationally. In meeting shared challenges involving health, safety, labor, security, environmental, and other issues, international regulatory cooperation can identify approaches that are at least as protective as those that are or would be adopted in the absence of such cooperation. International regulatory cooperation can also reduce, eliminate, or prevent unnecessary differences in regulatory requirements.

Similarly, the Trade Agreements Act of 1979 (Pub. L. 96-39), as amended by the Uruguay Round Agreements Act (Pub. L. 103-465), prohibits Federal agencies from establishing any standards or engaging in related activities that create unnecessary obstacles to the foreign

commerce of the United States. For purposes of these requirements, Federal agencies may participate in the establishment of international standards, so long as the standards have a legitimate domestic objective, such as providing for safety, and do not operate to exclude imports that meet this objective. The statute also requires consideration of international standards and, where appropriate, that they be the basis for U.S. standards.

PHMSA engages with international standards setting bodies to protect the safety of the American public. PHMSA has assessed the effects of the direct final rule and has determined that its regulatory amendments will not cause unnecessary obstacles to foreign trade.

L. Cybersecurity and Executive Order 14028

E.O. 14028 (“Improving the Nation's Cybersecurity”; 86 FR 26633 (May 17, 2021)) directed the Federal Government to improve its efforts to identify, deter, and respond to “persistent and increasingly sophisticated malicious cyber campaigns.” PHMSA has considered the effects of the direct final rule and has determined that its regulatory amendments will not materially affect the cybersecurity risk profile for pipeline facilities.

List of Subjects

49 CFR Part 192

Natural gas, Pipeline safety.

49 CFR Part 195

Pipeline safety.

In consideration of the foregoing, PHMSA amends 49 CFR parts 192 and 195 as follows:

**PART 192 – TRANSPORTATION OF NATURAL AND OTHER GAS BY PIPELINE:
MINIMUM FEDERAL SAFETY STANDARDS**

1. The authority citation for 49 CFR part 192 continues to read as follows

Authority: 30 U.S.C. 185(w)(3), 49 U.S.C. 5103, 60101 *et seq.*, and 49 CFR 1.97.

2. Revise § 192.705(c) to read as follows

§ 192.705 Transmission lines: Patrolling.

* * * * *

(c) Methods of patrolling include walking, driving, flying via manned or unmanned aerial systems, imaging via satellite, or other means suitable for observing current surface conditions.

PART 195—TRANSPORTATION OF HAZARDOUS LIQUIDS BY PIPELINE

3. The authority citation for part 195 continues to read as follows:

Authority: 30 U.S.C. 185(w)(3), 49 U.S.C. 5121, 60101 *et seq.*, and 49 CFR 1.97.

4. Revise § 195.412(a) to read as follows

§ 195.412 Inspection of rights-of-way and crossings under navigable waters.

(a) Each operator shall, at intervals not exceeding 3 weeks, but at least 26 times each calendar year, inspect the surface conditions on or adjacent to each pipeline right-of-way. Methods of inspection include walking, driving, flying via manned or unmanned aerial systems, imaging via satellite, or other means suitable for observing current surface conditions.

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Issued in Washington, D.C., on June 26, 2025, under the authority delegated in 49 CFR 1.97.

Benjamin D. Kochman,

Acting Administrator.

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