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DEPARTMENT OF TRANSPORTATION

Pipeline and Hazardous Materials Safety Administration

49 CFR Parts 174 and 179

[Docket No. PHMSA-2017-0102 (HM-251F)]

RIN 2137-AF35

Hazardous Materials: Removal of Electronically Controlled Pneumatic Brake System Requirements for High Hazard Flammable Unit Trains

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

ACTION: Final rule.

SUMMARY: The Pipeline and Hazardous Materials Safety Administration, in coordination with the Federal Railroad Administration, is issuing this final rule to remove requirements pertaining to electronically controlled pneumatic brake systems on high-hazard flammable unit trains. This final action is based on the Department of Transportation's determination that the requirements are not economically justified.

DATES: *Effective Date:* This rule is effective [INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: *Docket:* You may view the public docket online at <http://www.regulations.gov> or in person at Dockets Operations, M-30, Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE, Washington, DC 20590-0001 between 9 a.m. and 5 p.m. Monday through Friday, except Federal holidays.

FOR FURTHER INFORMATION CONTACT: For regulatory impact analysis-related questions, please contact Mark Johnson, Senior Economist, PHMSA, by telephone at 202-366-4495 or by email at mark.johnson@dot.gov, or Marc Fuller, Staff Director, RRS-21, FRA, by telephone at 202-366-9335 or by email at marc.fuller@dot.gov. For rulemaking related questions, please contact Candace Casey, Transportation Specialist, PHMSA, by telephone at 202-366-8579 or by email at candace.casey@dot.gov.

SUPPLEMENTARY INFORMATION:

Abbreviations and Terms

AAR	Association of American Railroads
APA	Administrative Procedure Act
CFR	Code of Federal Regulations
CPC	Casualty Prevention Circular
DOT	Department of Transportation
DP system	Distributive Power
EA	Environmental Assessment
ECP	Electronically Controlled Pneumatic
EOT	End-of-Train
FAST Act	Fixing America’s Surface Transportation Act of 2015
FR	Federal Register
FRA	Federal Railroad Administration
GAO	Government Accountability Office
HHFT	High-Hazard Flammable Train
HHFUT	High-Hazard Flammable Unit Train
HMR	Hazardous Materials Regulations
HMT	Hazardous Materials Table
NEPA	National Environmental Policy Act
NPRM	Notice of Proposed Rulemaking
NPV	Net Present Value
NTSB	National Transportation Safety Board
OMB	Office of Management and Budget
PG	Packing Group
PV	Present Value
PHMSA	Pipeline and Hazardous Materials Safety Administration
RFA	Regulatory Flexibility Act
RIA	Regulatory Impact Analysis
RIN	Regulation Identifier Number

RSAC	Railroad Safety Advisory Council
RSI	Railway Supply Institute
TDG	Transportation of Dangerous Goods
U.S.C.	United States Code

Table of Contents

- I. Background
- II. Good Cause Justification
- III. Section-by-Section Review
- IV. Regulatory Analyses and Notices
 - A. Statutory/Legal Authority for this Rulemaking
 - B. Executive Order 12866, Executive Order 13563, Executive Order 13610, and DOT Regulatory Policies and Procedures
 - C. Executive Order 13771
 - D. Executive Order 13132
 - E. Executive Order 13175
 - F. Regulatory Flexibility Act, Executive Order 13272, and DOT Procedures and Policies
 - G. Unfunded Mandates Reform Act of 1995
 - H. Paperwork Reduction Act
 - I. Regulation Identifier Number (RIN)
 - J. Environmental Assessment
 - K. Privacy Act
 - L. Executive Order 13609 and International Trade Analysis
 - M. National Technology Transfer and Advancement Act

List of Subjects

I. Background

On May 8, 2015, in collaboration with the Federal Railroad Administration (FRA), PHMSA published the final rule “Hazardous Materials: Enhanced Tank Car Standards and Operational Controls for High-Hazard Flammable Trains” (hereafter referred to as “HM-251 final rule”). The HM-251 final rule was an integral part of the Department’s comprehensive approach to ensuring the safe transportation of energy products by rail. Many provisions in HM-251, including those pertaining to advanced brake systems, were the culmination of industry-led efforts to improve tank car safety in anticipation of increased crude oil shipments by rail, which began in 2008.

In September of 2007, FRA published a notice of proposed rulemaking (NPRM) proposing to revise FRA power brake regulations “to provide for and encourage the safe implementation and use of ECP brake system technologies” (72 *FR* 50820). The rulemaking was initiated following a joint petition by BNSF Railway (BNSF) and Norfolk Southern (NS) to FRA for a waiver from existing brake power requirements to allow those railroads to operate ECP brake pilot trains.¹ The NPRM proposed incorporating by reference the Association of American Railroad’s (AAR) existing ECP brake system standards. In December of 2008, FRA published a final rule adopting updated AAR ECP brake standards and granting regulatory relief from certain requirements tied to traditional power brakes (e.g. extended the distance between brake inspections for train operations using ECP brakes), which added regulatory flexibility by allowing the use of ECP brakes without the need to apply for a waiver.

In 2011, FRA and the Railway Supply Institute (RSI) met to discuss improvements to tank cars used for the transportation of crude oil in unit trains. The main intent of the meeting was to spur discussion about innovative ways to improve tank car safety for potential future changes in the hazardous materials transportation supply chain. The meeting resulted in the RSI members offering to develop an industry standard (non-regulatory in nature) in collaboration with the AAR, the Renewable Fuels Association (RFA), Growth Energy, and the American Petroleum Institute (API). This collaborative effort was conducted through AAR’s Tank Car Committee Task Force, T87.6.² The T87.6 Task Force carried out technical analyses and generated information for tank car safety improvements, including findings on alternative brake

¹ The joint waiver petition was handled in a separate proceeding than FRA’s ECP brake rulemaking. See Docket No. FRA-2006-26435 at <https://www.regulations.gov/docket?D=FRA-2006-26435>.

² On July 20, 2011, at the summer AAR Tank Car Committee meeting, Docket T87.6 was created with a dual charge: (1) to develop an industry standard for tank cars used to transport crude oil, denatured alcohol, and ethanol/gasoline mixtures; and (2) to consider operating requirements to reduce the risk of derailment of tank cars carrying crude oil classified as Packing Group I and II, and ethanol.

signal propagation systems (i.e., “brake systems”). The advanced brake systems considered in the T87.6 Task Force meetings included conventional air brake systems, ECP brake systems, distributive power (DP) systems, and two-way end-of-train (EOT) devices.

On September 6, 2013, PHMSA published an Advance Notice of Proposed Rulemaking (ANPRM) titled, “Hazardous Materials: Rail Petitions and Recommendations To Improve the Safety of Railroad Tank Car Transportation” (78 *FR* 54849), specifically requesting comments pertaining to the use of these advanced brake propagation systems to reduce the kinetic energy associated with a derailment based on the understanding that a reduction in kinetic energy would, on average, reduce the number of tank cars involved in the derailment. Similarly, FRA and the Railroad Safety Advisory Committee (RSAC) considered and evaluated the usefulness of advanced brake systems. On August 1, 2014, PHMSA issued an NPRM titled “Hazardous Materials: Enhanced Tank Car Standards and Operational Controls for High-Hazard Flammable Trains” (79 *FR* 45016). In the NPRM, PHMSA and FRA considered comments submitted to the ANPRM and, where relevant, proposed to adopt revisions based on the comments. Additionally, in the NPRM, PHMSA requested additional comments pertaining to advanced brake systems.

On May 8, 2015, PHMSA issued the HM-251 final rule (80 *FR* 26644). In the final rule, PHMSA amended the Hazardous Materials Regulations (HMR; 49 CFR parts 171 through 180) by codifying new definitions for trains carrying large volumes of flammable liquids, “high-hazard flammable trains” (HHFTs) and “high-hazard flammable unit trains” (HHFUTs),³ and by implementing additional operational restrictions (e.g., requirements related to speed, braking systems, and routing) for such trains. Specifically, as it relates to this final rule, HM-251

³ A high-hazard flammable train is a single train comprised of 20 or more loaded tank cars containing a Class 3 flammable liquid in a continuous block, or 35 or more loaded tank cars containing a Class 3 flammable liquid across the entire train. A high-hazard flammable unit train is a train comprised of 70 or more loaded tank cars containing Class 3 flammable liquids.

included amendments requiring all tank cars in HHFUTs operating under certain conditions to be equipped with ECP brake systems.

On December 4, 2015, President Barack Obama signed the Fixing America's Surface Transportation Act of 2015 (FAST Act) into law. Title VII of the FAST Act, called the Hazardous Materials Transportation Safety Improvement Act of 2015, outlines several requirements pertaining to the HMR. Section 7311 specifically mandates the study and testing of ECP brake systems, focusing on requirements that were promulgated under the HM-251 final rule. Furthermore, the FAST Act instructs the Department of Transportation to incorporate the results of the Government Accountability Office's (GAO) evaluations and the testing of ECP brake systems by the National Academy of Sciences into an updated regulatory impact analysis (RIA) of the ECP brake system requirements, and to solicit public comment on the updated RIA. Additionally, the FAST Act required that within two years of the mandate, the DOT must determine, based on the updated RIA, whether the ECP brake system requirements in the HM-251 final rule were justified.

In October 2016, GAO submitted a report⁴ with four major recommendations concerning the ECP brake system requirements. GAO recommended that DOT: (1) when updating the RIA, take into account potential uncertainty in key variables and assumptions (e.g., fuel prices and future rail traffic of crude oil and ethanol), discuss this uncertainty, and present ranges of possible scenarios; (2) create a plan to collect data from railroads' ongoing and future operational experiences using ECP brake systems; (3) require freight railroads to collect and provide data to FRA on their ongoing operational experience with ECP brake systems if a new requirement were

⁴ DOT's Rulemaking on Electronically Controlled Pneumatic Brakes Could Benefit from Additional Data and Transparency, GAO-17-122, Oct 12, 2016.

adopted; and (4) publish information that would allow a third party to fully assess and replicate the analysis used in support of the HM-251 final rule. In May 2017, GAO produced a separate report⁵ in response to a congressional inquiry, which further indicated that DOT's forecasted values for some of the variables associated with the transportation by rail of crude oil and ethanol (such as the forecasted number of tank cars used to ship crude oil and ethanol, derailment rate, average amount of product lost per derailment, and number of injuries and deaths) may be higher than values realized in 2015 and 2016 based on preliminary data.

In October 2017, PHMSA and FRA published a notice of availability and request for comments (82 *FR* 48006) on a revised RIA updating the original RIA associated with the ECP brake provisions. As mandated by the FAST Act, DOT updated the RIA and made a determination regarding whether the applicable ECP brake system requirements are economically justified. Based on that revised analysis, the Department determined that the expected benefits, including safety benefits, of implementing ECP brake system requirements do not exceed the associated costs of equipping tank cars with ECP brake systems, and therefore are not economically justified. For this reason, PHMSA is issuing this final rule to remove the ECP brake system requirements from the HMR.

The estimated costs and benefits for the 20-year analysis used in the final revised RIA are presented in Table 1 (below) in three different scenarios labeled "high," "low," and "sensitivity." The three scenarios are based on various levels of future crude oil shipped by rail, to reflect uncertainty regarding those future volumes and to evaluate the ECP brake system

⁵ 2015 Electronically Controlled Pneumatic Brake Rule: Comparison of DOT Forecasts for Selected Data Points for 2015 and 2016 to Preliminary Data for Those Years, GAO-17-567R, May 31, 2017.

requirements over a reasonably wide range of scenarios to determine whether the cost-benefit ratio would be affected by varying levels of crude oil transportation by rail.

The scenario labeled “high” describes a projection in which the highest crude oil by rail volumes of the three scenarios were produced. The “high” scenario was derived from an analysis by linear regression of crude oil carloads on crude oil production volumes using data from 2010 through 2016. A similar model was run comparing volumes of ethanol shipped by rail to ethanol production volumes. The forecasted streams of rail carloads from both models were then added to obtain the total forecast carload volume as presented in Table 8.2a of the docketed RIA.

The “low” scenario presents a crude oil volume forecast that is essentially flat at the 5-year average at a lower volume than that produced by the linear forecast described above. The “low” scenario used the linear forecast model for ethanol as described above to forecast ethanol carload volumes and used an average of the most recent 5 years for which data is complete (2012 – 2016) to forecast crude oil volumes into the future. These years coincide with the emergence of high crude oil by rail volumes (volumes in excess of 100,000 carloads per year). The carload figures for this forecast are also presented in Table 8.2a of the docketed RIA.

Finally, DOT examined a third scenario which forecast crude oil by rail volumes to continue their recent decline for a few more years and bottom out at 120,000 carloads per year, which were added to the linear ethanol forecast volumes as described above in the “high” scenario description. This scenario was presented in the sensitivity analysis section, and hence was labeled “sensitivity” in the table. It produced the lowest volume crude oil by rail forecast of the three scenarios, and was intended to capture the potential impacts of increased pipeline

capacity or other factors that might lead to further declines in crude oil by rail volumes. These scenarios capture a wide range of future flammable liquids by rail volumes, over which the ECP brake requirements were evaluated. As can be seen below, and as reflected in the final updated RIA, the ECP brake system requirements are not expected to be cost-beneficial under any scenario assessed.

Table 1: Costs and Benefits over 20 Years (Millions of Dollars)						
	7 Percent			3 Percent		
	Low	High	Sensitivity	Low	High	Sensitivity
Tank Cars	\$237.76	\$318.49	\$165.00	\$256.18	\$341.52	\$178.39
Locomotives	\$105.03	\$140.42	\$77.13	\$110.79	\$147.39	\$81.84
Asset Management	\$0.52	\$0.52	\$0.52	\$0.52	\$0.52	\$0.52
Training	\$32.29	\$32.29	\$32.29	\$34.62	\$34.62	\$34.62
Total Costs	\$375.60	\$491.72	\$274.95	\$402.11	\$524.05	\$295.37
Damage Mitigation	\$48.16	\$78.19	\$37.36	\$67.19	\$109.44	\$52.41
Set Out Reliefs	\$5.87	\$7.46	\$3.56	\$8.24	\$10.55	\$4.97
Class IA Brake Test	\$27.54	\$46.04	\$21.68	\$45.07	\$65.12	\$30.24
Wheel Savings	\$26.77	\$37.40	\$17.87	\$36.08	\$52.90	\$24.93
Fuel Savings	\$22.70	\$28.85	\$13.79	\$31.90	\$40.81	\$19.23
Total Benefits	\$131.03	\$197.95	\$94.27	\$188.49	\$278.81	\$131.78
Net Benefits	-\$244.57	-\$293.78	-\$180.68	-\$213.63	-\$245.24	-\$163.59

II. Good Cause Justification

PHMSA is issuing this final rule without providing an opportunity for public notice and comment as is normally provided under the Administrative Procedure Act (APA; 5 U.S.C. 553).

The APA authorizes agencies to dispense with certain notice and comment procedures if the

agency finds good cause that notice and public procedures thereon are impracticable, unnecessary, or contrary to the public interest. *See* 5 U.S.C. 553(b)(3)(B). Good cause exists because PHMSA and FRA are following the procedures established in section 7311 of the FAST Act, which requires DOT to prepare a draft updated RIA, seek public comment on the draft updated RIA, prepare a final updated RIA, and make a determination whether the ECP brake system provisions for HHFUTs were justified, based on the costs and the benefits. On December 4, 2017, the Department determined that the ECP brake system provisions in the HM-251 final rule were not justified. This rulemaking action codifies that determination. The public was afforded an opportunity to comment on the revised RIA that formed the basis for determination of whether the ECP brake system requirements would be removed from the HMR. (*See* Section I of this revised final rule.) In this sense, the public has had an opportunity to provide useful information related to this regulatory action. However, having come to its determination that the ECP brake system requirement is not economically justified, PHMSA's adoption of this rule is non-discretionary.

This final rule addresses a Congressional mandate instructing the Department to make a determination on whether the ECP brake provisions in the HM-251 final rule were justified by December 4, 2017. Section 7311 of the FAST Act established a clearly defined procedure for making that determination. PHMSA's actions in this final rule merely codify the Department's determination in the HMR.⁶ Publishing a notice of proposed rulemaking and seeking comment on the proposal would unnecessarily impede the due and timely execution of PHMSA's regulatory functions by delaying the codification of a non-discretionary regulatory action. In making these ministerial amendments to give effect to the Department's determination, PHMSA

⁶ The Secretary has delegated this authority to PHMSA. *See* 49 CFR 1.97.

is not exercising discretion in a way that could be informed by public comment. As such, notice and comment procedures are “impracticable, unnecessary, or contrary to the public interest” within the meaning of the APA (5 U.S.C. 553(b)(3)(B)).

Furthermore, this final rule is effective on the day of publication in the *Federal Register*. The APA requires agencies to delay the effective date of regulations for 30 days after publication, unless the agency finds good cause to make the regulations effective sooner. *See* 5 U.S.C. 553(d). As previously discussed, PHMSA finds that good cause exists to publish this rulemaking without a notice of proposed rulemaking and opportunity for public comment and to make the regulations effective prior to 30 days after publication. This rule simply implements the determination of the Department, which was made in accordance with the specific process designated in section 7311 of the FAST Act; therefore, PHMSA would be unable to adjust the text of the rule to account for any public comment.

III. Section-by-Section Review

Part 174

Section 174.310

Section 174.310 outlines additional safety requirements, such as routing, speed restrictions, and brake system requirements specific to HHFTs and HHFUTs. A rail carrier must comply with these additional requirements if they operate an HHFT or HHFUT as defined in § 171.8. Section 174.310(a)(3) requires advanced brake systems (e.g., two-way end-of-train devices, distributive power, and ECP brake systems) for HHFTs and HHFUTs transporting hazardous materials under certain conditions. Specifically, § 174.310(a)(3)(ii) requires that HHFUTs comprised of at least one tank car that is loaded with a Packing Group (PG) I material

and operating at speeds exceeding 30 mph be equipped with ECP brakes after January 1, 2021. Similarly, paragraph (a)(3)(iii) requires that all other HHFUTs not described in paragraph (a)(3)(ii) be equipped with ECP brakes after May 1, 2023, if operating at speeds exceeding 30 mph. Paragraph (a)(3)(iv) states that each buffer car in an HHFUT that is not equipped with ECP brakes will be counted in determining the percentage of cars with effective and operative brakes, as required under 49 CFR 232.609, which requires that a train have a minimum percentage of operative brakes. Since the ECP brake system requirements are being removed, we are removing this accounting provision as it no longer applies. Lastly, paragraph (a)(3)(v) allows the use of an alternative brake system with approval from FRA in accordance with the processes and procedures outlined in 49 CFR part 232, subpart F. The approval provision is also being removed, as we have determined that restating this option is superfluous, given that approval provisions for new rail brake system technology are outlined in 49 CFR part 232, subpart F.

Further, § 174.310(a)(5) outlines requirements for retrofit reporting by owners of non-jacketed DOT-111 tank cars in PG I service in an HHFUT. Specifically, paragraph (a)(5)(v) requires owners to report the number of tank cars built or retrofitted to a DOT-117, 117R, or 117P specification that are ECP brake-ready or ECP brake-equipped. Because we are removing the ECP brake system requirements, we are also deleting the requirement to report those tank cars that are ECP brake system ready or equipped.

Therefore, as mandated by section 7311 of the FAST Act and based on our determination that ECP brake system requirements are not justified, PHMSA is removing the requirements in § 174.310 for high-hazard flammable unit trains to be equipped with ECP brake systems, for

approval of the use of alternative brake systems, and for retrofit status reports on ECP brake system readiness and use.

Part 179

Subpart D of title 49, part 179 outlines DOT specification requirements for non-pressure tank cars including DOT-117s added under the HM-251 final rule.

Section 179.102-10

Section 179.102-10 outlines ECP brake system capability requirements consistent with § 174.310 for DOT-117 specification tank cars. Paragraph (a) requires each rail carrier operating an HHFUT that is comprised of at least one tank car loaded with a PG I material must ensure that the train meets the ECP braking capability requirements by January 1, 2021. Paragraph (b) requires each rail carrier operating an HHFUT that is not described in paragraph (a) to ensure that the train meets the ECP braking capability requirements by May 1, 2023. Paragraph (c) allows the use of an alternative brake system with approval from FRA. As mandated by the FAST Act and based on the Department's determination that ECP brake system requirements are not justified, PHMSA is removing the requirements to ensure that HHFUTs meet the ECP braking capability requirements. Additionally, the provision for approval of alternate brake systems is being removed, as reference to 49 CFR part 232, subpart F, is superfluous in the absence of the ECP brake system requirements.

Section 179.202-12

Section 179.202-12 prescribes the performance standard requirements for DOT-117P tank cars. Paragraph (g)(1) requires rail carriers operating an HHFUT that is comprised of at least one tank car loaded with a PG I material to ensure that the train meets the ECP braking capability requirements by January 1, 2021. Paragraph (g)(2) requires rail carriers operating an HHFUT not described in paragraph (g)(1) to ensure that the train meets the ECP braking capability requirements by May 1, 2023. Paragraph (g)(3) allows the use of an alternative brake system with approval from FRA. Therefore, as mandated by the FAST Act and based on the Department's determination that ECP brake system requirements are not justified, PHMSA is removing the requirements to ensure that HHFUTs meet the ECP braking capability requirements. Additionally, the approval provision for alternate brake systems is being removed, as reference to 49 CFR part 232, subpart F, is superfluous in the absence of the ECP brake system requirements.

Section 179.202-13

Section 179.202-13 prescribes retrofit standards for existing non-pressure DOT-117 tank cars. Paragraph (i)(1) requires rail carriers operating an HHFUT that is comprised of at least one tank car loaded with a PG I material to ensure the train meets the ECP braking capability requirements specified in § 174.310 by January 1, 2021. Paragraph (i)(2) requires rail carriers operating HHFUTs not described in paragraph (i)(1) to ensure the train meets the ECP braking capability requirements in § 174.310 by May 1, 2023. Paragraph (i)(3) allows the use of an alternative brake system with approval from FRA.

As mandated by the FAST Act and based on the Department's determination that ECP brake system requirements are not justified, PHMSA is deleting the requirements to ensure that

HHFUTs meet the ECP braking capability requirements. Additionally, the approval provision for alternative brake systems is being removed, as reference to 49 CFR part 232, subpart F, is superfluous in the absence of the ECP brake system requirements.

IV. Regulatory Analyses and Notices

A. Statutory/Legal Authority for this Rulemaking

This final rule is published under the authority of Federal Hazardous Materials Transportation Law (Federal Hazmat Law; 49 U.S.C. 5101 *et seq.*), and the Federal Railroad Safety Laws (49 U.S.C. ch. 201-213). Section 5103(b) of the Federal Hazmat Law authorizes the Secretary to prescribe regulations for the safe transportation, including security, of hazardous material in intrastate, interstate, and foreign commerce. Section 20103 of the Federal Railroad Safety Laws, authorizes the Secretary to prescribe regulations and issue orders for every area of railroad safety.

B. Executive Order 12866, Executive Order 13563, Executive Order 13610, and DOT Regulatory Policies and Procedures

1. Background

As previously discussed, the HM-251 final rule amended the HMR by adopting heightened brake system requirements for HHFUTs. Specifically, it required an HHFUT meeting certain operational and train makeup conditions to be equipped with and operate an ECP brake system. These trains were subject to a two-staged implementation schedule. The first stage required that certain HHFUTs be equipped and operate an ECP brake system by

January 1, 2021. The second stage required remaining trains be equipped and operate an ECP brake system by May 1, 2023.

The FAST Act instructed GAO to conduct an independent evaluation of ECP brake systems and DOT to contract with the National Academy of Sciences (NAS) to conduct testing and analysis on ECP brake systems to help assess the costs and benefits of the ECP brake system requirements adopted in the HM-251 final rule. Based on the updated regulatory impact analysis, which incorporates the findings of GAO and NAS, PHMSA is removing the ECP brake system requirements for HHFUTs in this final rule.

2. Executive Orders

This final rule is not a significant regulatory action within the meaning of Executive Order 12866 (EO 12866) and DOT policies and procedures. *See* 44 FR 11034 (Feb. 26, 1979). DOT made this determination by finding that the economic effects of this regulatory action will not have an effect on the economy that exceeds the \$100 million annual threshold defined by EO 12866 and that the regulatory action is not otherwise significant.

In December 2017, DOT prepared and placed an updated Regulatory Impact Analysis (RIA) in the docket (Docket no. PHMSA-2017-0102-0035) updating the economic impact of the ECP brake system provisions in the May 8, 2015, final rule titled “Enhanced Tank Car Standards and Operational Controls for High-Hazard Flammable Trains.” (*See* 80 FR 26644; HM-251.) The RIA estimated the costs and benefits of the ECP provisions that were likely to be incurred over a twenty-year period. DOT estimated the costs and benefits of the final rule using discount rates of 3 percent and 7 percent.

PHMSA is eliminating the requirement that rail carriers install ECP brake systems on trains transporting Class 3 flammable liquid hazardous materials. The FAST Act required DOT to enter into an agreement with NAS to test ECP brakes and reevaluate the economic analysis supporting the ECP brake system requirements of the HM-251 final rule. Using the 2017 Final RIA, DOT estimated the net cost savings that will be realized by removing the ECP brake system requirements. For the 20-year period analyzed, the estimated net cost savings are between \$280.8 million and \$354.7 million, discounted at 3 percent, and between \$292.7 million and \$372.0 million, discounted at 7 percent..

Cost savings of this final rule will be realized in several categories. First, tank cars would no longer need to be equipped with ECP brakes. The cost savings projections assume that a large portion of the existing tank car fleet would have been retrofitted with ECP brake systems. Second, railroads would not be required to install ECP brake systems on locomotives. The 2017 RIA assumed that any locomotive required to be equipped with ECP brakes would have incurred certain costs to be retrofitted. Third, cost savings will now be realized as rail carriers will no longer be required to train employees on the use of ECP brakes. Current employees would have been trained on ECP brakes within the first three years. Additionally, when new employees started, they would have been trained on ECP brakes.

In the HM-251 final rule and the updated RIA, DOT estimated that rail carriers would realize business benefits in several categories with the implementation of ECP brake systems. First, rail carriers would receive relief from fewer set-outs (i.e., cars taken out of service due to a defect). When a car with defective conventional brakes must be removed from the train, a “set-out” occurs. ECP brake systems would have removed the need for some set-outs as the train could have traveled to the nearest forward repair location with a car with defective brakes.

Second, trains would be allowed to travel farther between required brake tests. Third, due to the reduced wear on wheels, wheelsets would not be replaced as frequently. The final business benefit was reduced fuel usage. DOT estimated a one percent reduction in fuel usage due to ECP brake systems.

Since the 2015 ECP brake system requirements are being removed from the hazmat regulations, rail carriers will no longer receive the business benefits cited in the 2015 final rule. This offsets some of the cost savings. Table 2, below, shows the costs savings and offsetting business benefits by category, and the total net cost savings.

Table 2: Cost Savings and Offsetting Business Benefits (Millions of Dollars)				
	7 Percent		3 Percent	
	Low	High	Low	High
Tank Cars	\$237.76	\$318.49	\$256.18	\$341.52
Locomotives	\$105.03	\$140.42	\$110.79	\$147.39
Asset Management	\$0.52	\$0.52	\$0.52	\$0.52
Training	\$32.29	\$32.29	\$34.62	\$34.62
Total Cost Savings	\$375.60	\$491.72	\$402.11	\$524.05
Set Out Reliefs	\$5.87	\$7.46	\$8.24	\$10.55
Class IA Brake Test	\$27.54	\$46.04	\$45.07	\$65.12
Wheel Savings	\$26.77	\$37.40	\$36.08	\$52.90
Fuel Savings	\$22.70	\$28.85	\$31.90	\$40.81
Total Offsetting Business Benefits	\$82.87	\$119.75	\$121.29	\$169.37
Total Net Cost Savings	\$292.73	\$371.97	\$280.82	\$354.68
Annualized Net Cost Savings	\$27.63	\$35.11	\$18.88	\$23.84

Using low and high ranges, for the 20-year period of analysis, the cost savings are between \$280.8 million and \$354.7 million, discounted at 3 percent, and between \$292.7 million and \$372.0 million, discounted at 7 percent. The annualized net cost savings are between \$27.6 million and \$35.1 million, discounted at 7 percent.

Our analysis in response to the FAST Act mandate also assessed the safety effects of ECP brake systems. Although the tests of ECP brake system effectiveness mandated by the FAST Act resulted in a lower safety improvement factor than was used in promulgating the 2015 final rule, they continued to demonstrate that ECP brake systems are more effective than conventional brake systems. As a result, deletion of the ECP brake system requirements from the HMR is forecast to modestly reduce future safety performance, which may result in larger spill sizes and associated damages for future derailments than would be the case if they were maintained.

With the removal of the ECP brake systems requirements from the 2015 rule, the predicted future safety benefits will be foregone. Estimated discounted values were between \$48.2 million and \$78.2 million over 20 years at 7 percent, and between \$67.2 million and \$109.4 million at 3 percent. Annualized safety benefits were estimated at between \$4.5 million and \$7.4 million at both 3 percent and 7 percent discount rates. Table 3, below, shows the safety benefits estimated for the ECP brake system requirements of the 2015 final rule.

Table 3: 2015 Rule Safety Benefits (Millions of Dollars)				
	7 Percent		3 Percent	
	Low	High	Low	High
Safety Benefits	\$48.16	\$78.19	\$67.19	\$109.44
Annualized	\$4.55	\$7.38	\$4.52	\$7.36

In the intervening years since the HM-251 final rule, the rail industry attained significant safety improvements transporting flammable liquids, with declines in both incident rates and spill size.

C. Executive Order 13771

This final rule is considered an EO 13771 deregulatory analysis. Details on the estimated cost savings of this final rule can be found above.

D. Executive Order 13132

This final rule has been analyzed in accordance with the principles and criteria in Executive Order 13132 (“Federalism”). This final rule does not impose any regulation that has substantial direct effects on States, the relationship between the National Government and the States, or the distribution of power and responsibilities among the various levels of government. While the final rule could act to preempt State, local, and Indian tribe requirements by operation of law, PHMSA is not aware of any such requirements that are substantively different than what is required by the final rule. Therefore, the consultation and funding requirements of Executive Order 13132 do not apply.

The Federal Hazardous Materials Transportation Law, 49 U.S.C. 5101-5128, contains express preemption provisions (49 U.S.C. 5125) that preempt inconsistent State, local, and Indian tribe requirements, including requirements on the following subjects:

- (1) The designation, description, and classification of hazardous materials;
- (2) The packing, repacking, handling, labeling, marking, and placarding of hazardous materials;
- (3) The preparation, execution, and use of shipping documents related to hazardous materials and requirements related to the number, contents, and placement of those documents;
- (4) The written notification, recording, and reporting of the unintentional release in transportation of hazardous material; or

(5) The design, manufacture, fabrication, marking, maintenance, recondition, repair, or testing of a packaging or container represented, marked, certified, or sold as qualified for use in transporting hazardous material.

This rule addresses item (5) described above and, accordingly, State, local, and Indian tribe requirements on this subject that do not meet the “substantively the same” standard will be preempted. Federal preemption also may exist pursuant to Section 20106 of the former Federal Railroad Safety Act of 1970 (FRSA), repealed, revised, reenacted, and recodified at 49 U.S.C. 20106, and the former Safety Appliance Acts (SAA), repealed revised, reenacted, and recodified at 49 U.S.C. 20301-20304, 20306. Section 20106 of the former FRSA provides that States may not adopt or continue in effect any law, regulation, or order related to railroad safety or security that covers the subject matter of a regulation prescribed or order issued by the Secretary of Transportation (with respect to railroad safety matters) or the Secretary of Homeland Security (with respect to railroad security matters), except when the State law, regulation, or order qualifies under the section’s “essentially local safety or security hazard.” The former SAA has been interpreted by the Supreme Court as preempting the field “of equipping cars with appliances intended for the protection of employees.” *Southern Ry. Co. v. R.R. Comm’n of Ind.*, 236 U.S. 439, 446 (1915). The train’s power braking system is considered a safety appliance within the terms of the former SAA. 49 U.S.C. 20302(a)(5).

The Federal Hazardous Materials Transportation Law provides at Section 5125(b)(2) that, if DOT issues a regulation concerning any of the covered subjects, DOT must determine and publish in the *Federal Register* the effective date of Federal preemption. The effective date may not be earlier than the 90th day following the date of issuance of a final rule and not later than two years after the date of issuance. The effective date of Federal preemption is [INSERT

DATE 90 DAYS AFTER PUBLICATION IN THE FEDERAL REGISTER]. This effective date for preemptive effect should not conflict with the overall effective date for this final rule because the regulation of hazardous materials transport in commerce generally preempts State and local requirements. Historically, the States and localities are aware of this preemptive effect and do not regulate in conflict with Federal requirements in these situations.

D. Executive Order 13175

This final rule has been analyzed in accordance with the principles and criteria in Executive Order 13175 (“Consultation and Coordination with Indian Tribal Governments”). Executive Order 13175 requires agencies to assure meaningful and timely input from Indian tribal government representatives in the development of rules that have tribal implications. Because this final rule does not have tribal implications, the funding and consultation requirements of Executive Order 13175 do not apply.

E. Regulatory Flexibility Act, Executive Order 13272, and DOT Procedures and Policies

Section 603 of the Regulatory Flexibility Act (RFA) requires an agency to prepare an initial regulatory flexibility analysis describing effects on small entities whenever an agency is required by 5 U.S.C. 553 to publish a general notice of proposed rulemaking for any proposed rule. Similarly, section 604 of the RFA requires an agency to prepare a final regulatory flexibility analysis when an agency issues a final rule under 5 U.S.C. 553 after being required to publish a general notice of proposed rulemaking.

This action is a non-discretionary final rule addressing congressional mandates under the FAST Act of 2015. As prior notice and opportunity for comment under 5 U.S.C. 553 are not

required in this situation, a regulatory flexibility analysis—as would otherwise be required per 5 U.S.C. 603-604—was not performed. However, as mandated by the FAST Act, PHMSA reviewed and updated the RIA supporting the HM-251 final rule, which initially adopted the ECP brake system requirements. The original RIA found that, while the ECP brake system requirements from that final rule would have a direct effect on some small railroads, this effect would not have a significant impact. Therefore, the repeal of the ECP brake system requirement will create a limited benefit for a small number of small entities. PHMSA’s rationale is as follows.

“Small entity” is defined in 5 U.S.C. 601 as including a small business concern that is independently owned and operated, and is not dominant in its field of operation. The U.S. Small Business Administration (SBA) has authority to regulate issues related to small businesses, and stipulates in its size standards that a “small entity” in the railroad industry is a for-profit “linehaul railroad” that has fewer than 1,500 employees, a “short line railroad” with fewer than 500 employees, or a “commuter rail system” with annual receipts of less than \$15 million. *See* “Size Eligibility Provisions and Standards,” 13 CFR part 121, subpart A. Additionally, 5 U.S.C. 601(5) defines as “small entities” governments of cities, counties, towns, townships, villages, school districts, or special districts with populations less than 50,000. Federal agencies may adopt their own size standards for small entities, in consultation with SBA and in conjunction with public comment. Pursuant to that authority, FRA published a final statement of agency policy that formally defines “small entities” or “small businesses” as being railroads, contractors, and hazardous materials shippers that meet the revenue requirements of a Class III railroad as set forth in 49 CFR 1201.1-1 (i.e., \$20 million or less in inflation-adjusted annual revenues) or commuter railroads or small governmental jurisdictions that serve populations of

50,000 or less. *See* 68 FR 24891 (May 9, 2003), codified at appendix C to 49 CFR part 209. The \$20 million-limit is based on the Surface Transportation Board's revenue threshold for a Class III railroad. Railroad revenue is adjusted for inflation by applying a revenue deflator formula in accordance with 49 CFR 1201.1-1. DOT is using this definition for this rulemaking.

Under the 2015 final rule, any railroad that operates at speeds 30 mph or less, as is the case for most small railroads, would not have been affected by the ECP brake system requirements. Additionally, as most small railroads do not travel long distances, this requirement for reduced speed did not cause any significant impact. Therefore, of the approximately 690 Class III railroads, most were not affected by the 2015 final rule, and consequently, will not be affected by this final rule.

Those affected would be small rail carriers that have relatively short mileage connecting two or more larger rail carriers and that may operate trains at speeds higher than 30 mph. The impact would not be significant, however, as these entities do not originate HHFUTs, but may serve as a connecting line between larger railroads or allow the larger rail carriers to operate HHFUTs over their track. All HHFUTs from larger rail carriers would be assembled such that locomotives and cars with ECP brake systems are kept together, precluding speed restrictions under the 2015 final rule. Furthermore, as this final rule is a deregulatory action, this small impact would also be beneficial for small railroads.

F. Unfunded Mandates Reform Act of 1995

This rule does not impose unfunded mandates under the Unfunded Mandates Reform Act of 1995. It does not result in costs of \$155 million or more, adjusted for inflation, to either State, local, or tribal governments, in the aggregate, or to the private sector in any one year.

G. Paperwork Reduction Act

PHMSA currently has an approved information collection under OMB Control Number 2137-0628 titled, “Flammable Hazardous Materials by Rail Transportation,” with an expiration date of March 31, 2019. This final rule will result in a minor decrease in the time spent to submit reports pertaining to ECP brake-ready or ECP brake-equipped tank cars, but does not necessitate the revision of this information collection package in either the annual burden or cost for changes under part 110.

H. Regulation Identifier Number (RIN)

A regulation identifier number (RIN) is assigned to each regulatory action listed in the Unified Agenda of Federal Regulatory or Deregulatory Actions (“Unified Agenda”). The Regulatory Information Service Center publishes the Unified Agenda in April and October of each year. The RIN number contained in the heading of this document may be used to cross-reference this action with the Unified Agenda.

I. National Environmental Policy Act

The National Environmental Policy Act of 1969 (NEPA), as amended (42 U.S.C. 4321-4347), requires Federal agencies to consider the environmental impacts of proposed actions in their decision-making. However, the FAST Act mandates that the results of the updated regulatory impact analysis determine whether the ECP brake requirements remain in place. If the regulatory impact analysis shows that the benefits exceed the costs of the ECP braking requirements, the FAST Act requires the Secretary to publish a “determination,” in the

Federal Register. If the Secretary is unable to support such a “determination,” the FAST Act requires the repeal of the ECP brake system requirements. Because the final updated regulatory impact analysis showed that the expected costs of ECP brake system requirements are greater than the expected benefits, the Department is required to promulgate this repeal.

The FAST Act removed the Secretary’s discretion to consider anything other than the costs and benefits outlined in the RIA. Although PHMSA performed a NEPA analysis with respect to the broader rulemaking, the FAST Act precludes consideration of alternatives and their environmental effects under NEPA for this repeal.

J. Privacy Act

Anyone may search the electronic form of any written communications and comments received into any of our dockets by the name of the individual submitting the document (or signing the document, if submitted on behalf of an association, business, labor union, etc.). DOT posts these comments, without edit, including any personal information the commenter provides, to www.regulations.gov, as described in the system of records notice (DOT/ALL-14 FDMS), which can be reviewed at www.dot.gov/privacy.

K. Executive Order 13609 and International Trade Analysis

Under Executive Order 13609 (“Promoting International Regulatory Cooperation”), agencies must consider whether the impacts associated with significant variations between domestic and international regulatory approaches are unnecessary or may impair the ability of American businesses to export and compete internationally. In meeting shared challenges involving health, safety, labor, security, environmental, and other issues, regulatory approaches

developed through international cooperation can provide equivalent protection to standards developed independently, while also minimizing unnecessary differences.

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 participates in the establishment of international standards to protect the safety of the American public, and we have assessed the effects of the proposed rule to ensure that it does not cause unnecessary obstacles to foreign trade. Accordingly, this rulemaking is consistent with Executive Order 13609 and PHMSA's obligations under the Trade Agreement Act, as amended.

L. Executive Order 13211

Executive Order 13211 requires Federal agencies to prepare a Statement of Energy Effects for any "significant energy action" [66 FR 28355; May 22, 2001]. Under the Executive Order, a "significant energy action" is defined as any action by an agency (normally published in the *Federal Register*) that promulgates, or is expected to lead to the promulgation of, a final rule or regulation (including a notice of inquiry, advance NPRM, and NPRM) that: (1)(i) is a significant regulatory action under Executive Order 12866 or any successor order and (ii) is

likely to have a significant adverse effect on the supply, distribution, or use of energy; or (2) is designated by the Administrator of the Office of Information and Regulatory Affairs as a significant energy action.

Although this is a non-significant regulatory action under Executive Order 12866, PHMSA has evaluated this action in accordance with Executive Order 13211 and has determined this action will not have a significant adverse effect on the supply, distribution, or use of energy. Consequently, PHMSA has determined this regulatory action is not a “significant energy action” within the meaning of Executive Order 13211.

List of Subjects

49 CFR Part 174

Hazardous materials transportation, Rail carriers, Reporting and recordkeeping requirements, Security measures.

49 CFR Part 179

Hazardous materials transportation, Incorporation by reference, Railroad safety, Reporting and recordkeeping requirements.

In consideration of the foregoing, we are amending title 49, chapter I, subchapter C, as follows:

PART 174--CARRIAGE BY RAIL

1. The authority citation for part 174 continues to read as follows:

Authority: 49 U.S.C. 5101-5128; 49 CFR 1.81 and 1.97.

2. In § 174.310, paragraphs (a)(3) and (5) are revised to read as follows:

§ 174.310 Requirements for the operation of high-hazard flammable trains.

(a) * * *

(3) *Braking.* Each rail carrier operating a high-hazard flammable train (as defined in § 171.8 of this subchapter) operating at a speed in excess of 30 mph must ensure the train is equipped and operated with either a two-way end-of-train (EOT) device, as defined in 49 CFR 232.5, or a distributed power (DP) system, as defined in 49 CFR 229.5.

* * * * *

(5) *Retrofit reporting.* Owners of non-jacketed DOT-111 tank cars in PG I service in an HHFT, who are unable to meet the January 1, 2017, retrofit deadline specified in § 173.243(a)(1) of this subchapter are required to submit a report by March 1, 2017, to Department of Transportation. A group representing owners may submit a consolidated report to the Department of Transportation in lieu of individual reports from each tank car owner. The report must include the following information regarding the retrofitting progress:

- (i) The total number of tank cars retrofitted to meet the DOT-117R specification;
- (ii) The total number of tank cars built or retrofitted to meet the DOT-117P specification;
- (iii) The total number of DOT-111 tank cars (including those built to CPC-1232 industry standard) that have not been modified;

(iv) The total number of tank cars built to meet the DOT-117 specification; and

(v) Entities required to submit a report under this paragraph shall submit subsequent follow-up reports containing the information identified in this paragraph within 60 days of being notified by PHMSA and FRA.

* * * * *

PART 179—SPECIFICATIONS FOR TANK CARS

3. The authority citation for part 179 continues to read as follows:

Authority: 49 U.S.C. 5101–5128; 49 CFR 1.81 and 1.97.

§ 179.102-10 [Removed]

4. In subpart D, § 179.102-10 is removed.

§ 179.202-12 [Amended]

5. In § 179.202-12, paragraph (g) is removed.

§ 179.202-13 [Amended]

6. In § 179.202-13, paragraph (i) is removed.

Issued in Washington, DC on September 18, 2018, under authority delegated in
49 CFR 1.97.

Howard McMillan,

Executive Director,

Pipeline and Hazardous Materials Safety Administration.

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