4910-06-P

DEPARTMENT OF TRANSPORTATION

Federal Railroad Administration

49 CFR Part 225

[Docket No. FRA-2014-0099, Notice No. 1]

RIN 2130-AC49

Revision of Method for Calculating Monetary Threshold for Reporting Rail Equipment Accidents/Incidents

AGENCY: Federal Railroad Administration (FRA), Department of Transportation (DOT).

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: Under FRA's accident/incident reporting regulation, railroads are required to report to FRA all rail equipment accidents/incidents above the monetary reporting threshold (reporting threshold) applicable to that calendar year. FRA proposes to amend this regulation to modify the way it calculates periodic adjustments to the reporting threshold.

DATES: Comments are requested no later than [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE **FEDERAL REGISTER**]. FRA will consider comments received after that date to the extent possible without incurring additional expense or delay.

ADDRESSES: <u>Comments</u>: Comments related to Docket No. FRA-2014-0099 may be submitted by any of the following methods:

- <u>Web site</u>: The Federal eRulemaking Portal, www.regulations.gov. Follow the

Web site's online instructions for submitting comments.

- Fax: 202-493-2251.

- Mail: Docket Management Facility, U.S. Department of Transportation, 1200 New Jersey Avenue SE., Room W12-140, Washington, DC 20590.

- Hand Delivery: Docket Management Facility, U.S. Department of Transportation, 1200 New Jersey Avenue SE., Room W12-140 on the Ground level of the West Building, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

Instructions: All submissions must include the agency name, docket name, and docket number. Note that all comments received will be posted without change to http://www.regulations.gov, including any personal information provided. Please see the Privacy Act heading in the **SUPPLEMENTARY INFORMATION** section of this document for Privacy Act information related to any submitted comments or materials.

Docket: For access to the docket to read background documents or comments received, go to http://www.regulations.gov at any time or visit the Docket Management Facility at the address noted in the **ADDRESSES** section of this notice, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

FOR FURTHER INFORMATION CONTACT: Miriam Kloeppel, Staff Director, Risk Reduction Program Division, U.S. Department of Transportation, Federal Railroad Administration, Office of Safety Analysis, RRS-26, W35-204, 1200 New Jersey Ave., SE., Washington, DC 20590 (telephone 202-493-6224); or Senya Waas, Trial Attorney,

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SUPPLEMENTARY INFORMATION:

Table of Contents for Supplementary Information

I. Regulation Identifier Number (RIN)

I. Executive Summary

FRA regulation (49 CFR part 225) requires railroads to report to FRA all rail equipment accidents/incidents that cause damage above a specified monetary threshold amount. FRA also requires railroads to report each highway-rail grade crossing accident/incident, and accidents/incidents involving death, injury, and occupational illnessthat meet certain criteria. FRA uses data from these reported accidents/incidents to identify hazard and risk trends, and to develop policies which help to mitigate and/or prevent similar train accidents in the future. The reporting threshold accounts for inflation in labor and materials in reported rail equipment accidents/incidents. Without a reporting threshold, railroads would need to report every minor event. Without this reported information, FRA would lack sufficient data to be effective in addressing even the most significant safety issues.

FRA's current formula for computing the reporting threshold has three primary components: equipment costs, labor costs (i.e., wages), and the prior reporting threshold. To keep pace with any increases or decreases in equipment and labor costs, FRA reviews the reporting threshold periodically and, if necessary, adjusts the threshold following the procedures in Appendix B to part 225 (Appendix B). *See* 49 CFR 225.19. This approach ensures that each year rail equipment accidents/incidents involving the same real amount of damages are included in the rail equipment accidents/incidents count and allows for comparing accident/incident statistics across years.

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In this NPRM, FRA proposes two technical revisions to the formula for calculating the threshold, and an administrative change to the way FRA communicates the reporting threshold applicable to the upcoming year. First, FRA proposes a minor technical correction to the formula (i.e., a revision to the percentage term used to determine a change in equipment costs, so it is consistent with the percentage term used to determine a change in labor costs). Second, to better reflect overall data trends, FRA proposes using full-year data (i.e., 12 consecutive months) instead of only second-quarter data (i.e., 3 consecutive months) to calculate the reporting threshold. Third, FRA proposes to issue an annual notice on FRA's website stating the reporting threshold for the upcoming calendar year (CY). Issuing a notice each year, as opposed to a final rule, will simplify and expedite the communication of the reporting threshold, and will be more practical and efficient than FRA's current practice of annually publishing a final rule incorporating the reporting threshold amount in the rule text in 49 CFR 225.19 (c) and (e).

FRA uses the current reporting threshold as the basis for calculating the next year's reporting threshold. Therefore, any error in the reporting threshold is reflected in the reporting thresholds for the following years. FRA also presents an alternative approach to calculate the reporting threshold using a fixed, base year for the reporting threshold (which may also reduce this error). The threshold corresponding to the base year would be updated using a composite wage-equipment price index, similar to how the Consumer Price Index (CPI) is used to adjust prices for inflation. FRA expects that this NPRM's proposed revisions will result in more accurate and consistent train accident

data for analyzing railroad safety trends, which will in turn help focus railroad industry and FRA resources where most needed to reduce the occurrence of rail equipment accidents/incidents. Additionally, users of FRA's data (including states, researchers, and other stakeholders), will benefit from access to more accurate and consistent data. Overall, the proposed revisions would benefit a broad range of analyses.

II. Background

A "rail equipment accident/incident" is a collision, derailment, fire, explosion, act of God, or other event involving the operation of railroad on-track equipment (standing or moving) that results in damages to railroad on-track equipment, signals, tracks, track structures, or roadbed, including labor costs and the costs for acquiring new equipment and materials, greater than the reporting threshold for the year in which the event occurs. *See* 49 CFR 225.19(c). Section 225.5 also defines these rail equipment accidents/incidents as "train accidents." A railroad must report each rail equipment accident/incident to FRA using the Rail Equipment Accident/Incident Report (Form FRA F 6180.54). *See* 49 CFR 225.19(b), (c) and 225.21(a). Paragraphs (c) and (e) of section 225.19 further provide that FRA will review the reporting threshold periodically, and if necessary, adjust the number every year under the procedures outlined in Appendix B to reflect any cost increases or decreases.

In addition to reviewing and adjusting the reporting threshold under Appendix B, as necessary, FRA periodically amends its method for calculating the reporting threshold. The Federal Railroad Safety statutes require FRA to base the reporting threshold on publicly available information obtained from the Bureau of Labor Statistics (BLS), other

objective government sources, or other information subject to notice and comment. *See* 49 U.S.C. 20901(b). In 1996, FRA adopted a new method for calculating the reporting threshold for train accidents to allow for use of publicly available data and statistics. *See* 61 FR 30940 (June 18, 1996); 61 FR 60632 (Nov. 29, 1996). In 2005, FRA again amended its method for calculating the reporting threshold because BLS ceased collecting and publishing the railroad wage data used by FRA in the formula. FRA substituted railroad employee wage data collected by the Surface Transportation Board (STB) for the BLS data that was no longer available. *See* 70 FR 75414 (Dec. 20, 2005).

A. FRA's Current Formula

As noted above, FRA's current formula for computing the reporting threshold has three primary components: equipment, labor (i.e., wages), and the prior year's reporting threshold. To calculate the reporting threshold for the upcoming year, FRA updates the previous year's reporting threshold by the change in labor and equipment costs year-over-year from the second quarter of the year. For example, in late CY 2017 FRA calculated the threshold for CY 2018 by using the threshold for CY 2017, as adjusted for the changes in wage data from STB and the railroad equipment producer price index from BLS for the second-quarter of CY 2016, to the second-quarter of CY 2017. In other words, calculating the reporting threshold is an iterative process using each year's reporting threshold as the "seed" value to estimate next year's threshold. Therefore, any error in the prior or current reporting threshold is reflected in the following years.

Additionally, the figure below illustrates the time frame currently used to calculate the year-over-year changes, using the calculation of the CY 2018 reporting threshold as an example.

Figure 1. Currently Used Time Frame Using Second Quarter Data for Equipment and Wage Inputs (to Calculate the CY 2018 Reporting Threshold Given the Current Year of 2017).

						Eprior and Wprior Time Frame				Enew and Wnew Time Frame		
Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
2014	2015	2015	2015	2015	2016	2016	2016	2016	2017	2017	2017	2017

The current formula for computing the reporting threshold is:[1]

$$Tnew = Tprior \times \left[1 + 0.4 \frac{Wnew - Wprior}{Wprior} + 0.6 \frac{Enew - Eprior}{100} \right]$$

Where:

Tnew = New reporting threshold.

Tprior = Prior reporting threshold (i.e., the previous year's threshold) as adopted in 49 CFR 225.19(e)).

Wnew = New average hourly wage rate, in dollars.[2]

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[1] 49 CFR part 225, app. B. In 2005, when FRA replaced the unavailable BLS wage data with STB wage data, it recalculated the 1997 to 2002 reporting thresholds using STB data to demonstrate that the STB data was a reasonable substitute. FRA's analysis showed weighting the wage component by 40% (0.4) and the equipment component by 60% (0.6) more closely approximated the existing threshold at the time, which is the reason for the 40/60 weights in the current formula. *See* 70 FR 75414 (Dec. 20, 2005).

Wprior = Prior average hourly wage rate, in dollars.

Enew = New equipment average Producer Price Index (PPI) value.[3]

Eprior = Prior equipment average PPI value.

With reference to wages and equipment, "prior" refers to the previous wage and equipment averages used to calculate the prior reporting threshold, *Tprior*. In calculating the new reporting threshold, the goal is to capture the changes between the previous wage and equipment prices, and the current wage and equipment prices. In the current formula, the wage component represents STB wage data as a fractional change relative to the previous-year wage, and follows a standard percentage change formulation $(\frac{Wnew - Wprior}{Wprior})$. The equipment component, on the other hand, is presented as the change in the PPI relative to 100, which was the value of the PPI in the base year of 1982 $(\frac{Enew - Eprior}{100})$. FRA essentially used the difference in index points to represent the percent change. Over time, this methodology has resulted in the gradual overstatement of the change in equipment costs and consequently higher reporting thresholds. Moreover, BLS has cautioned against this approach. On June 5, 2015, BLS issued a report entitled

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[2] Since 2005, FRA has used wage data collected and maintained by the STB, reported on Forms A and B – STB Wage Statistics. Railroads report employee service hours and compensation to the STB on a quarterly basis on these forms. FRA uses second-quarter data reported for the Maintenance of Way and Structures Group (Group No. 300), and the Maintenance of Equipment and Stores Group (Group No. 400).

[3] BLS provides equipment index data, reported under LABSTAT Series Report, PPI for Commodities, Series ID WPU144 for Railroad Equipment, base date 1982. As the index numbers are reported monthly, the index numbers for the months of April, May, and June are averaged to produce a second-quarter equipment index number.

"Escalation Guide for Contracting Parties" warning, in part, against using index points to represent percent changes,

> because changes in index levels do not reflect percent changes in prices when the values move away from their base level of 100. […] Escalating by index point changes has the effect of overestimating the percentage change in prices when the index is above 100 and underestimating the percentage change in prices when the index level is below 100.[4]

Finally, the result of the calculation, the new threshold, is rounded to the nearest $100.

B. Proposed Revisions to the Method for Calculating the Reporting Threshold

The following analysis first discusses each of the proposed changes to the threshold formula individually (i.e., changing the calculation method for equipment cost changes, and using full-year data), and then examines their combined effect.

Changing the Calculation Method for Equipment Costs to a Simple Percentage Method

FRA analysis found the current formula for computing the reporting threshold does not accurately capture the changes in equipment prices due to a technical error. The PPI values have been steadily increasing relative to the 1982 base value of 100 for the Railroad Equipment PPI used in the formula, and continue to rise. In fact, by 2018 the average equipment PPI was twice as large as the base equipment PPI currently used as the denominator in the formula (i.e., 203.3 vs. 100). As a result, the reporting threshold calculated using the current formula is about $1,400 higher than it would have been if

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[4] *See* Bureau of Labor Statistics, "Escalation Guide for Contracting Parties," Item (9)(c), June 5, 2015 (available at http://www.bls.gov/ppi/ppiescalation.htm#example).

calculated using the proposed formula with the equipment component correction (i.e., if the formula used the same methodology to calculate changes in equipment prices as it did to calculate changes in labor prices.) *See* Table 1 below. FRA proposes to remedy this inconsistency between the wage and equipment components by amending the formula for calculating the reporting threshold so that changes in equipment prices are calculated using the same methodology as currently used to calculate changes in labor prices. In short, FRA proposes to revise the formula to read as follows:

$$Tnew = Tprior \times \left[1 + 0.4\frac{Wnew - Wprior}{Wprior} + 0.6\frac{Enew - Eprior}{Eprior}\right]$$

This proposed revised formula differs from the current formula by replacing the number 100 in the denominator of the equipment component of the formula with *Eprior* (the prior equipment average PPI). The use of *Eprior* as the denominator of the equipment component will better reflect the actual changes in equipment prices over time, resulting in a more accurate reporting threshold from year-to-year. Conversely, in the absence of this revision the threshold will continue to overestimate the actual changes in equipment costs, and the degree of inaccuracy will progressively increase in the future as each year's threshold becomes artificially inflated by using the number 100 as the denominator in the equipment component.

Table 1 below illustrates the artificial acceleration in the reporting threshold using the current formula as compared to the threshold calculated using the proposed revised formula.

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Calendar Year	Current Equipment Price Denominator	Proposed Equipment Price Denominator	Reporting Threshold as Published (Current Formula)	Reporting Threshold as Calculated (Current Formula)	Reporting Threshold (Proposed Formula, Equipment Component Correction Only)	Difference Between Proposed and Current Thresholds (Calculated)*
Table 1. Comparing Reporting Thresholds Calculated Using the Current and Proposed Formulae: Using 100 in Denominator for *Eprior* Overestimates Threshold.						
2006	100	135.6	$7,700	$7,700	$7,500	-$200 (-3%)
2007	100	160.2	$8,200	$8,200	$7,800	-$400 (-5%)
2008	100	169.7	$8,500	$8,500	$8,000	-$500 (-6%)
2009	100	175.6	$8,900	$8,900	$8,300	-$600 (-7%)
2010	100	180.2	$9,200	$9,200	$8,500	-$700 (-8%)
2011	100	182.0	$9,400	$9,400	$8,700	-$700 (-7%)
2012	100	184.6	$9,500	$9,500	$8,800	-$700 (-7%)
2013	100	186.4	$9,900	$9,900	$9,000	-$900 (-9%)
2014	100	191.5	$10,500	$10,500	$9,400	-$1,100 (-10%)
2015	100	197.2	$10,500	$10,900	$9,800	-$1,100 (-10%)
2016	100	196.6	$10,500	$11,200	$9,900	-$1,300 (-12%)
2017	100	200.6	$10,700	$11,400	$10,000	-$1,400 (-12%)
2018	100	203.3	$10,700	$11,400	$10,000	-$1,400 (-12%)
Average	100	181.8	$9,554	$9,746	$8,900	-$846 (-8%)
Standard Deviation			$1,016	$1,253	$868	$389

*Calculation: The percent change between the proposed reporting threshold and the current reporting threshold (calculated) is the difference between the two thresholds divided by the current reporting threshold (calculated). For example, for year 2007, percent change = ($7,800 - $8,200)/$8,200 = -0.04878 or about -5%.

In Table 1, the Reporting Threshold as Published (Current Formula) column lists the reporting thresholds as published in the **Federal Register**. The Reporting Threshold as Calculated (Current Formula) column differs by listing the reporting thresholds resulting from strictly following the formula. (In both cases, the reporting thresholds are rounded to the nearest $100 after performing the calculation.) The two columns show the same values until 2015. However, for 2015 FRA exercised its discretion and kept the reporting threshold at the calendar year 2014 amount because wage data for 2014 were

abnormally high, and so FRA did not use the reporting threshold produced by the formula. The 2014 wages were unusually high because of the retroactive payment of wage increases in the second quarter of 2014 resulting from labor contract agreements (i.e., backpay that was paid as a lump sum in the second quarter). For 2016, FRA again kept the reporting threshold (as published in the **Federal Register)** the same as for 2014 because wages and equipment for the second quarter of 2015 changed only slightly (about one percent) from the second quarter of 2014. Subsequent reporting thresholds listed in the Reporting Threshold as Published (Current Formula) column were determined using the published value as the *Tprior* "seed value" in the formula, while subsequent reporting thresholds shown in the Reporting Threshold as Calculated (Current Formula) column use the higher, calculated values of the reporting threshold formula as the value of *Tprior* to calculate the new thresholds. The final column illustrates the widening difference between the reporting threshold calculated using the current formula, and the reporting threshold calculated using the proposed formula with *Eprior* in the denominator of the equipment percentage change term instead of 100.

  <u>Using Full-Year Data Instead of Second-Quarter Data for Wages and Equipment</u> <u>Prices</u>

  Currently, when FRA calculates a new reporting threshold for an upcoming calendar year, it relies solely on second-quarter data from the current year, which is the most recent data available at the time of the calculation, and second-quarter data from the previous year. Second-quarter data captures data from the three months of April, May, and June. In FRA's estimation, relying on second-quarter data does not accurately

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represent the data for the entire year because it may fail to reflect overall data trends, seasonal effects, or other changes occurring throughout the year.

FRA proposes to improve its ability to capture and account for seasonal and other changes throughout the year by using a full-year of wage and equipment data in the formula instead of only second-quarter data. STB provides the wages quarterly, but the BLS provides the equipment PPI monthly. To put both wages and equipment PPI in the same time frame, the equipment PPI are grouped into quarters corresponding to the STB wage data. As noted above, the most recent data available at the time the new reporting threshold is calculated are for the second-quarter of the current year. Therefore, to calculate the percent change between current and prior costs, FRA proposes to use data from the second half (third and fourth quarters) of the previous calendar year and the first half (first and second quarters) of the current calendar year to determine the new costs. To calculate the prior costs, FRA would use data spanning the second half of the calendar year two years prior and the first half of the previous calendar year. For example, to calculate the threshold for year 2018 while in year 2017, FRA would use data from the third and fourth quarters of 2016 and from the first and second quarters of 2017 to calculate *Enew* and *Wnew*. For *Eprior* and *Wprior*, FRA would use data from the third and fourth quarters of 2015 and the first and second quarters of 2016. The timeline below demonstrates using full-year data (as four quarters) in this example.

Figure 2. Proposed Time Frame for Using Full-Year Data for Equipment and Wage Inputs (to Calculate the CY 2018 Reporting Threshold Given the Current Year is 2017).

Eprior and Wprior Time Frame	*Enew and Wnew Time Frame*

Q4	Q1	Q2	Q3	Q4	Q1	Q2	*Q3*	*Q4*	*Q1*	*Q2*	Q3	Q4
2014	2015	2015	2015	2015	2016	2016	*2016*	*2016*	*2017*	*2017*	2017	2017

With this approach, the estimated threshold would have smaller bias by including the seasonal variations of the railroad wages and the rail equipment PPIs in the threshold estimations.[5]

To see the effect of using full-year data (arrayed as four consecutive quarters) on the reporting threshold independently of other changes, FRA re-calculated the reporting threshold for each year since 2006 using the current formula, but using full-year data as proposed. Table 2 below presents the results. The differences between the reporting thresholds calculated using full-year data and those calculated using second-quarter data are small. The use of 100 in the denominator instead of *Eprior* appears as the primary factor in increasing the reporting thresholds over time. Conceptually, however, encompassing a greater data period for use in the formula would help reduce the influence of sudden increases or decreases in wages or equipment prices in the second-quarter, which have occurred in the past.

Table 2. Comparing Reporting Thresholds Calculated Using Full-Year Data Instead of Only Second-Quarter Data. (Current Formula).

Calendar Year	Reporting Threshold as Calculated (Current Formula)	Reporting Threshold (Current Formula with Full-Year Data)	Difference Between Thresholds Using Full-Year and 2nd Quarter Data
2006	$7,700	$7,600	-$100 (-1%)

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[5] Using full-year data is less biased and more accurate than using only second-quarter data, but in some years by chance using second-quarter data might yield wage and equipment data closer to the actual prices for these inputs.

2007	$8,200	$8,100	-$100 (-1%)
2008	$8,500	$8,500	$0 (0%)
2009	$8,900	$8,900	$0 (0%)
2010	$9,200	$9,400	$200 (2%)
2011	$9,400	$9,600	$200 (2%)
2012	$9,500	$9,700	$200 (2%)
2013	$9,900	$10,000	$100 (1%)
2014	$10,500	$10,600	$100 (1%)
2015	$10,900	$10,900	$0 (0%)
2016	$11,200	$11,300	$100 (1%)
2017	$11,400	$11,600	$200 (2%)
2018	$11,400	$11,600	$200 (2%)
Average	$9,746	$9,831	$85 (1%)
Standard Deviation	$1,253	$1,324	$114

<u>Combining Both Proposed Changes: Changing the Calculation Method for</u>

<u>Equipment Costs to a Simple Percentage Method, and Using Full-Year Data</u>

Finally, to demonstrate the results of FRA's proposals in this document to (1)

correct the mathematical error in the equipment component of the existing formula (i.e.,

substitute *Eprior* for 100 in the denominator of the equipment term), and (2) use full-year

data instead of only second-quarter data, FRA recalculated the reporting threshold for

each year since 2006 implementing both these proposals. Table 3 lists the results of these

calculations. Table 3 demonstrates that adopting both of these proposals will generally

result in a slightly lower reporting threshold, which may increase the number of reported

incidents.

Table 3. Comparing Reporting Thresholds Calculated Using the Proposed Formula with Full-Year Data, to the Reporting Thresholds Calculated Using the Current Formula.			
Calendar Year	**Reporting Threshold as Calculated (Current Formula)**	**Reporting Threshold (Proposed Formula with Full-Year Data, NPRM)**	**Difference Between Proposed Full-Year, and Current Thresholds**
2006	$7,700	$7,500	-$200 (-3%)

2007	$8,200	$7,800	-$400 (-5%)
2008	$8,500	$8,100	-$400 (-5%)
2009	$8,900	$8,400	-$500 (-6%)
2010	$9,200	$8,800	-$400 (-4%)
2011	$9,400	$9,000	-$400 (-4%)
2012	$9,500	$9,100	-$400 (-4%)
2013	$9,900	$9,300	-$600 (-6%)
2014	$10,500	$9,700	-$800 (-8%)
2015	$10,900	$9,900	-$1,000 (-9%)
2016	$11,200	$10,100	-$1,100 (-10%)
2017	$11,400	$10,300	-$1,100 (-10%)
2018	$11,400	$10,300	-$1,100 (-10%)
Average	$9,746	$9,100	-$646 (-6%)
Standard Deviation	$1,253	$947	$328

Figure 3 below further illustrates the differences between the current and proposed reporting thresholds incorporating both proposed changes.

Figure 3: Reporting Threshold Calculated Using the Current Formula will Continue to Increase Without Corrections.

Current and Proposed Reporting Thresholds
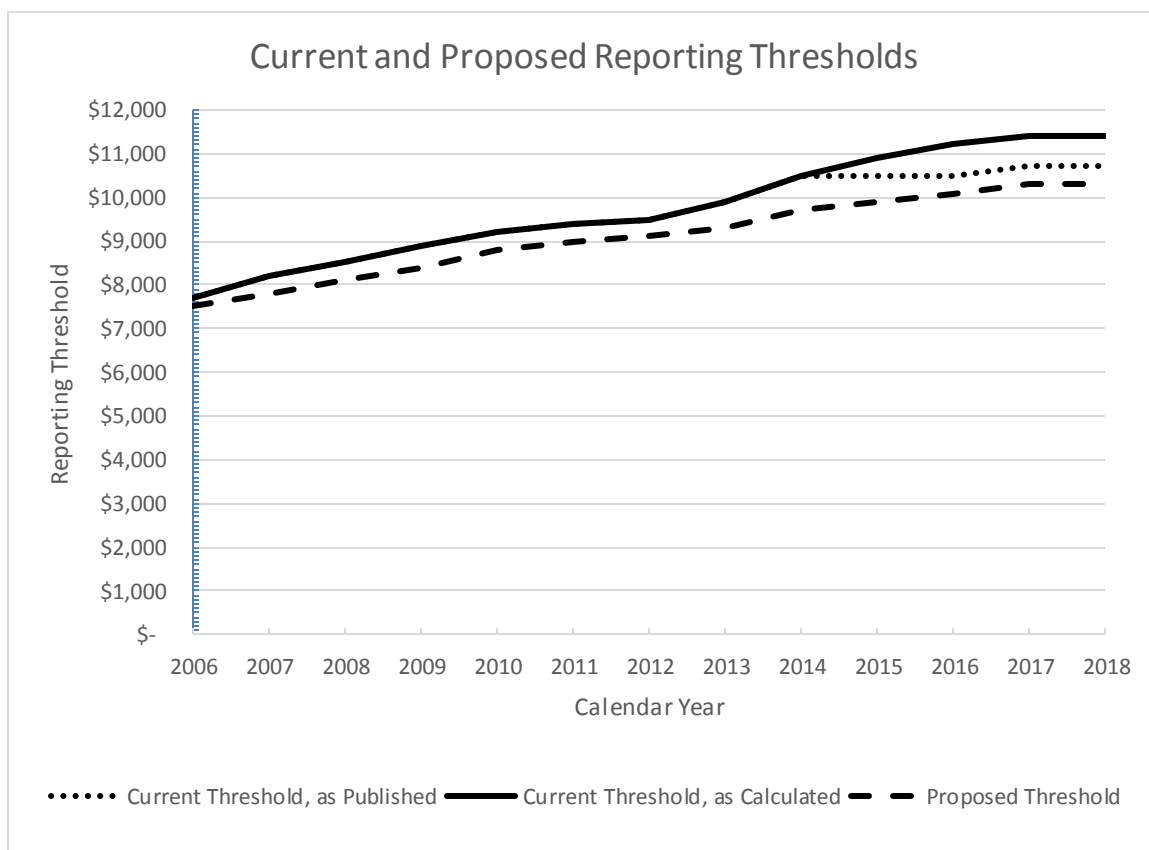
The table and chart demonstrate that, over time, the differences increase between the reporting threshold as currently calculated, and the reporting threshold calculated with the proposed changes. The proposed threshold also increases more gradually, and shows less variability than the thresholds calculated using the current formula. FRA expects the proposed threshold will more accurately reflect the changes in wages and equipment costs railroads incur because the proposed threshold corrects a mathematical flaw, and uses a longer period of data upon which to base the new estimated threshold.

Alternative Approach: Calculate the Reporting Threshold Using a Price Index

An alternative to the current procedure for calculating the reporting threshold is to update the reporting threshold using a price index. A commonly-used price index is the

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CPI, but it is primarily used to adjust prices paid by consumers, not businesses. Instead of the CPI, a more appropriate price index could be constructed using the equipment PPI and STB wages already used in the threshold formula. Using an index may reduce the effect of carrying forward flawed *Tprior* values when calculating the new thresholds, and may also be a simpler approach. However, the lag in prices used to calculate the new reporting thresholds will still exist.

There are several steps to calculate the price index. First, FRA selects a base year for the price index, and sets the value of the index at 100 for the base year. Then the equipment PPI and STB wages can be re-based to the selected base year to form two price indices. Next, the equipment PPI and wage indices can be combined to construct a composite wage-equipment price index. Finally, the base-year reporting threshold can be updated using the composite price index.

For the base year, FRA selects 2006 because the threshold for that year reflects the last substantive change that was made to the threshold calculation by substituting STB wage data for BLS wage data that were no longer available. (Other base years are possible as well.) The equipment PPI can be re-based to 2006 by dividing the PPI for future years by the 2006 PPI, and then multiplying by 100:

$Equipment\ PPI\ with\ 2006\ Base\ Year$

$$= (Calendar\ Year\ Equipment\ PPI \div 2006\ Equipment\ PPI) \times 100$$

For example, the 2007 re-based PPI is calculated by:

2007 equipment PPI with 2006 base year = (176.4/169.4) *100 = 104.1. (See table below.)

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To make the wage index, first the hourly wages for Group No. 300 employees (Maintenance of Way and Structures) and the Group No. 400 employees (Maintenance of Equipment and Stores) are averaged (i.e., the same STB wage data that is currently used in the threshold formula). Next, the average wages are expressed as an index by dividing them by the 2006 average wage, and multiplying by 100:

$Average\ Wage\ with\ 2006\ Base\ Year$

$$= (Calendar\ Year\ Average\ Wage \div 2006\ Average\ Wage) \times 100$$

For example, the 2007 wage index is calculated by:

2007 wage index with 2006 base year = ($23.31/$22.20) * 100 = 105.0.

To calculate the composite wage-equipment price index, FRA calculated the weighted average of the wage and equipment PPI indices using the weights of 0.4 and 0.6 respectively, for each calendar year in the period of analysis. To determine the new threshold, a ratio of the composite price index for the base year to the composite price index for the calendar year of interest, equal to the ratio of the reporting threshold for the base year to the reporting threshold for the calendar year of interest (the unknown threshold) is set-up. Solving for the unknown threshold for the calendar year of interest yields:

$Threshold\ for\ Calendar\ Year$

$$= \frac{Composite\ Price\ Index\ Calendar\ Year \times Threshold\ 2006}{Composite\ Price\ Index\ 2006}$$

Continuing with year 2007 for an example, the threshold for that year is calculated by:

2007 Threshold = (104.5 * $7,700)/100 = $8,045 or $8,000 when rounded to the nearest $100. The data used to construct the composite price index and resulting thresholds for this alternative are summarized in the table below.

Table 4. Alternative Approach to Calculating the Reporting Threshold Using a Composite Wage-Equipment Price Index.

Calendar Year	Equipment PPI	PPI Re-Based Index	Wage, Group No. 300 ($)	Wage, Group No. 400 ($)	Average Wage ($)	Wage Re-Based Index	Composite Price Index	Alternative Threshold ($)
2006	169.4	100.0	22.17	22.22	22.20	100.0	100.0	7,700
2007	176.4	104.1	23.65	22.96	23.31	105.0	104.5	8,000
2008	180.2	106.4	24.44	24.01	24.23	109.1	107.5	8,300
2009	181.9	107.4	24.81	26.25	25.53	115.0	110.4	8,500
2010	184.4	108.9	24.01	25.70	24.86	112.0	110.1	8,500
2011	187.0	110.4	25.43	25.81	25.62	115.4	112.4	8,700
2012	191.8	113.2	27.05	27.20	27.13	122.2	116.8	9,000
2013	195.7	115.5	28.07	28.46	28.27	127.4	120.3	9,300
2014	197.7	116.7	29.34	29.48	29.41	132.5	123.0	9,500
2015	201.9	119.2	30.49	30.80	30.64	138.1	126.7	9,800
2016	203.3	120.0	30.67	30.86	30.76	138.6	127.4	9,800
2017	203.2	120.0	30.98	30.91	30.95	139.4	127.7	9,800
2018	202.9	119.8	32.62	32.60	32.61	146.9	130.6	10,100
Average								9,000
Standard Deviation								777

Sources: Equipment PPI from the Bureau of Labor Statistics (BLS), PPI for commodities, Series ID WPU144 for Railroad Equipment, base data 1982. Wage data from the Surface Transportation Board, Composite of Annual Wage Forms A and B submitted by Class I railroads.

Going forward, if this alternative approach is adopted, FRA anticipates calculating the reporting threshold in December of every year. At that time, 3 quarters of wage data and 11 months of equipment PPI data would be available, which is only slightly less than a full calendar year of data. For the missing one quarter of wage data, and one month of equipment PPI data, FRA could average the available time periods for

that calendar year to substitute for the missing values. Using an average to estimate the missing values may be more simple than extending the time period into the previous calendar year to capture a full-year's worth of data. FRA requests comment on this alternative approach and which year FRA should use as the base year for calculating future reporting thresholds.

The series of thresholds produced by the alternative method are similar to, but slightly lower than, the thresholds calculated using the NPRM proposed formula with full-year data. The average of both the alternative thresholds and NPRM thresholds is $9,000. Both the alternative thresholds and NPRM thresholds are lower than the thresholds calculated by the current formula, which average $9,746.

C. Proposal to Issue an Annual Notice of Reporting Threshold

FRA proposes to discontinue its current practice of issuing a final rule each year incorporating into 49 CFR part 225 the reporting threshold for the upcoming calendar year (CY). Instead, FRA proposes to issue an annual notice on FRA's website stating the reporting threshold amount for the upcoming CY. This notice would be more practical and efficient than FRA's current practice of issuing a final rule each year. Using a notice would allow FRA to quickly make the adjusted reporting threshold available.

While FRA did not seek comment on its annual final rules adjusting the reporting threshold, FRA did receive one comment about the reporting threshold from the Association of American Railroads (AAR) in its comments to the proposed information collection request (ICR) for the Accident/Incident Reporting and Recordkeeping (part 225) regulation, ICR OMB Control Number 2130-0500. In November 2016, AAR

commented that FRA should update the reporting threshold because it had not been updated since December 2013. AAR noted that not updating the threshold reduced the value of the accident statistics, which are used by the railroad industry to evaluate safety and develop safety initiatives. FRA acknowledges the reporting threshold was not changed from 2014 through 2016 as explained earlier under Table 1. FRA is reviewing the method for calculating the reporting threshold in this rulemaking. Given the new reporting threshold is based upon a set formula - the development of which is subject to notice and comment in this rulemaking - notice and comment procedures associated with annual adjustments to the reporting threshold are not necessary.

D. Notice and Comment Procedures

FRA believes a 60-day comment period is appropriate to allow the public to comment on this proposed rule. FRA solicits written comments on all aspects of this proposed rule.

III. Regulatory Review and Notices

A. Executive Orders 12866 and 13771 and DOT Regulatory Policies and Procedures

This NPRM is a non-significant rulemaking and evaluated in accordance with existing policies and procedures under Executive Order 12866 and DOT Order 2100.6. *See* 58 FR 51735, Sep. 30, 1993 and https://www.transportation.gov/regulations/2018-dot-rulemaking-order. This rulemaking is not a regulatory action under Executive Order 13771, "Reducing Regulation and Controlling Regulatory Costs," because this proposed rule is not significant under EO 12866. See 82 FR 9339, Jan. 30, 2017.

FRA proposes to revise its formula for determining the reporting threshold. The changes have been described in detail in the "Background" section above. The changes are intended to improve the accuracy of the reporting threshold, and the resulting rail equipment accident/incident data gathered from the railroads over time. The improved data is expected to help formulate regulations that better address safety risks. Table 5 below summarizes these costs and benefits.

Table 5: Summary of Costs and Benefits (Over a 10-Year Period of Analysis).			
	New Costs	Cost Savings*	Benefits
Undiscounted, Nominal	$202,032	$12,710	Qualitative: More Accurate Data
Present Value (PV) at 3%	$170,744	$10,842	Qualitative: More Accurate Data
Present Value (PV) at 7%	$138,913	$8,927	Qualitative: More Accurate Data
Annualized at 3%	$20,016	$1,271	Qualitative: More Accurate Data
Annualized at 7%	$19,778	$1,271	Qualitative: More Accurate Data

* FRA will save some costs from the proposal to issue a notice, which is easier administratively and reduces printing costs, than the current practice of publishing a final rule.

The regulatory evaluation uses the no-action baseline to describe the expected impacts of the proposed rule. The no-action baseline is simply the threshold calculated using the current formula without any proposed changes. The potential incremental costs and benefits of the proposed rule are compared to the no-action baseline.

The two proposed revisions of standardizing the change in the equipment costs calculation, and using full-year data (in terms of four consecutive quarters) would result in a more accurate reporting threshold in comparison to the current threshold. The proposed reporting threshold with both revisions averages about six percent lower than the current threshold (*see* Table 3). The lower threshold would result in marginally higher numbers of reported rail equipment accidents/incidents in comparison to the

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reporting threshold calculated using the current flawed formula. However, railroads already maintain these accident/incident records (for accidents/incidents which are below the current reporting threshold) even though they are not submitted to FRA. Under 49 CFR 225.25(d)–(g), railroads maintain these "accountable rail equipment accident/incident" events (as defined in section 225.5) on Form FRA F 6180.97 or an alternative form. Thus, the potential burden to submit additional accident/incident data would primarily be an administrative burden.

FRA estimates the cost of submitting these potential additional rail equipment accident/incident reports as the cost of an individual rail equipment accident/incident report multiplied by the number of additional reports. Furthermore, the cost of an individual rail equipment accident/incident report may be decomposed into the amount of labor hours needed to complete an accident report multiplied by the wage rate for the railroad personnel most likely to perform this task. The amount of labor hours to complete a Form F 6180.54 to report a rail equipment accident/incident was previously estimated for the railroad accidents/incidents reporting rule in "Miscellaneous Amendments to the Federal Railroad Administration's Accident/Incident Reporting Requirements; Final Rule." *See* 75 FR 68862 (Nov. 9, 2010). For that rule, the Paperwork Reduction Act analysis estimated two hours per response to complete a rail equipment accident/incident report. (Note the task to transfer information from Form FRA F 6180.97 to Form F 6180.54 to report rail equipment accidents/incidents to FRA may take less time.) The personnel most likely to complete a rail equipment accident/incident report would be administrative personnel, such as a railroad safety

officer, or someone performing those assigned functions. This analysis uses the wage rate for Professional and Administrative employees, STB Group No. 200, as an appropriate wage for estimating the costs of completing a report.[6] The average straight time wage rate of $41.15 is burdened for overhead expenses by 75 percent to produce an hourly rate of $72.01 per hour. The marginal cost of submitting an accident/incident report is therefore:

2 hours per Form F 6180.54 * $72.01 per hour = $144.02 per additional accident/incident report, rounded to $144.

By definition, railroads are not required to submit reports for accidents/incidents resulting in monetary damages below the current threshold, making it difficult to estimate the number of potential extra rail equipment accident/incident reports that may be submitted because of a slightly lower proposed threshold. However, rather than provide little information about the impacts of this proposed rule, FRA makes the following assumptions and inferences in order to at least describe the potential impacts.

1) This analysis reasons the rail equipment accidents/incidents affected by the proposed rule would be those with monetary damages "near" the threshold amount. That is, rail equipment accidents/incidents with far greater monetary damages, or those with much lower monetary damages, than the current reporting threshold will not be affected by a small decrease in the reporting threshold.

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[6] *See* STB, "Annual Compilation of Wage Statistics of Class I Railroads in the United States, 2017," at http://www.stb.dot.gov/stb/industry/econ_reports.html.

2) "Near" the reporting threshold is set at $12,000 for the purposes of this analysis.

3) FRA broadly assumes the pattern of rail equipment accidents/incidents occurring near and above the threshold is the same as the pattern of accidents/incidents occurring near and below the threshold. Essentially, the rail equipment accidents/incidents that are not reported to FRA are assumed to be a mirror image of the rail equipment accidents/incidents near and above the threshold that are reported to FRA. For the narrow band of accidents under consideration for this analysis, the distribution of accidents/incidents above and below the threshold may reasonably be similar.

4) As sample data for discussion purposes, the distribution of rail equipment accidents/incidents near the threshold for the years 2014 to 2018 (5 years) is used. Those years represent a more recent data sample for the threshold. For 2014 to 2016, the $12,000 "near" boundary is about 15 percent above those years' reporting threshold of $10,500 (which forms the lower boundary for those years). Similarly, for 2017 and 2018, the $12,000 "near" boundary is about 12 percent above those years' reporting threshold amount of $10,700 (again, the lower boundary for those year). The train accident data are presented below.

Table 6. Number of Reported Train Accidents "Near" the Reporting Threshold, for Every $100 Increase in the Threshold.					
Reported Train Accident Monetary Damage Interval ($)	No. of Train Accidents 2014	No. of Train Accidents 2015	No. of Train Accidents 2016	No. of Train Accidents 2017	No. of Train Accidents 2018
10,400 - 10,500	3	0	2		

10,500 - 10,600	11	4	6		
10,600 - 10,700	8	8	5	1	0
10,700 - 10,800	9	4	9	14	7
10,800 - 10,900	10	5	9	3	7
10,900 - 11,000	11	19	7	14	18
11,000 - 11,100	8	13	1	9	8
11,100 - 11,200	12	5	3	10	4
11,200 - 11,300	9	4	7	7	5
11,300 - 11,400	4	8	8	7	8
11,400 - 11,500	13	10	6	9	6
11,500 - 11,600	9	9	8	13	3
11,600 - 11,700	10	17	6	3	3
11,700 - 11,800	7	7	9	5	9
11,800 - 11,900	10	9	8	4	8
11,900 - 12,000	14	8	10	13	13
Total	148	130	104	112	99
Average (Overall Avg.=7.8)	9.3	8.1	6.5	8.0	7.1
Standard Deviation	2.9	4.9	2.6	4.4	4.5

* The reporting threshold was $10,500 from 2014 to 2016, and $10,700 from 2017 to 2018.

In the above table, the lower and upper boundaries for the separate monetary intervals in the first column contain reported damages greater than the lower boundary amount for that interval, up to and including the upper boundary amount for that interval. For example, if $X is the reported accident damage falling in the range $11,000 - $11,100, then the interval may be written as: $11,000 < \$X \le \$11,100$.
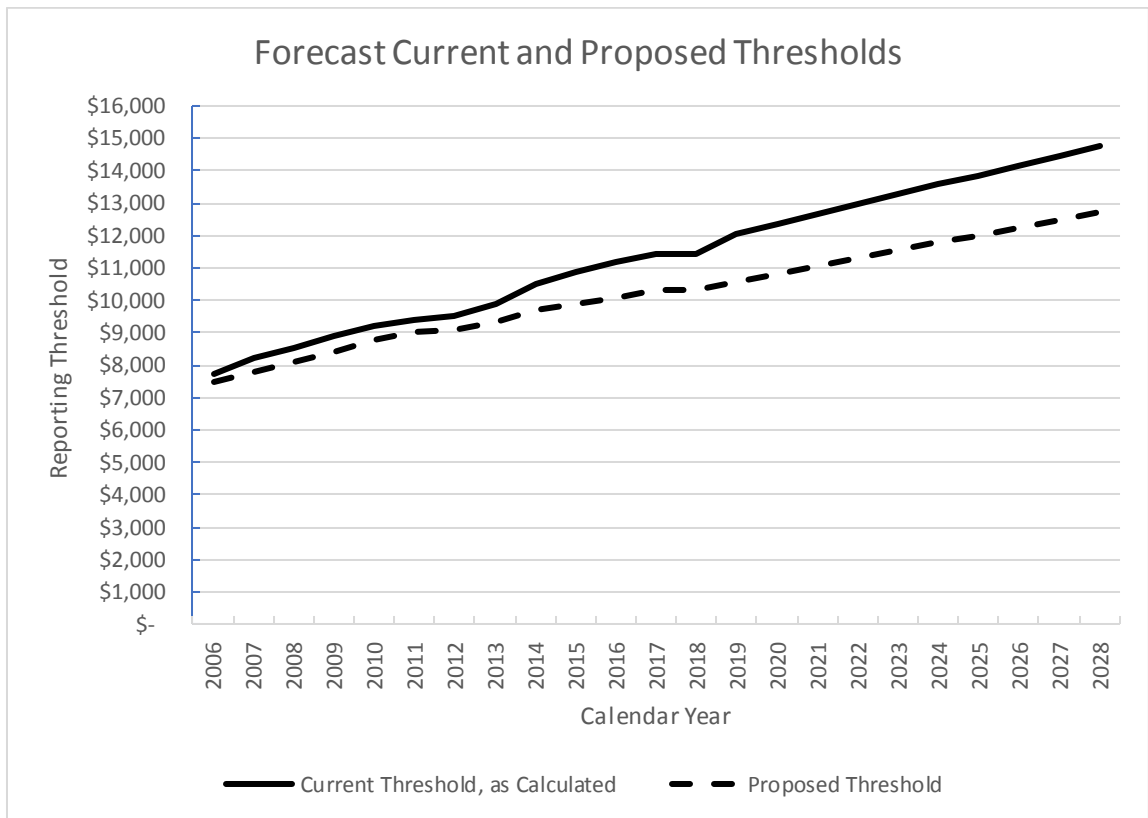
Table 6 shows railroads reported 148 total rail equipment accidents/incidents near the threshold in 2014, representing about 8 percent of all the rail equipment accidents/incidents reported in that calendar year (calculated as 148/1886 total rail equipment accidents/incidents for 2014 = 0.078 ≈ 8 percent). Additionally, in 2014, on

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average there were about 9 rail equipment accidents/incidents for every $100 increase in reported monetary damages. (Calculated as 148/16 intervals $= 9.3 \approx 9$ rail equipment accidents/incidents). The rail equipment accident/incident experience near the threshold for the other years (2015 to 2018) was slightly lower, representing about 5 to 7 percent of the total rail equipment accidents/incidents reported for those years. Overall, for the years 2014 to 2018, the railroads reported an average of 8 rail equipment accidents/incidents for every $100 increase in reported monetary damages.

Next, FRA determined the number of additional rail equipment accident/incident reports that railroads may be required to submit to FRA in the future under the proposed rule. To estimate these future accident/incident reports, FRA forecast both the reporting thresholds calculated using the current formula, and the reporting thresholds calculated using the proposed formula with full-year data, for the years 2019 to 2028. The forecasted thresholds are illustrated below.[7]

Figure 4: Forecast from 2019 to 2028 of Reporting Thresholds Calculated Using the Current and Proposed Formulae.

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[7] FRA used the "Forecast Sheet" function in Microsoft Excel 2016 to forecast both the current reporting threshold, and the proposed reporting threshold for the years 2019 to 2028. The forecast was based on the series of current reporting thresholds and proposed thresholds for the period 2006 to 2018 as shown in Table 3. Given the data is historical in nature, the forecast function was used to perform the time series analysis. The forecast function uses the exponential smoothing (error, trend, seasonal) algorithm. For a description of the forecast sheet function, see: *Create a Forecast In Excel for Windows*, accessed at https://support.office.com/en-us/article/create-a-forecast-in-excel-for-windows-22c500da-6da7-45e5-bfdc-60a7062329fd.

Forecast Current and Proposed Thresholds

The chart above shows the two reporting thresholds moving further apart as the flawed formula produces a higher and higher reporting threshold over time.

From the forecast of current and proposed thresholds, FRA calculated the monetary difference between the two thresholds for each year from 2019 to 2028. To convert these monetary differences to the estimated number of accident/incident reports, FRA applied the previously-determined rate of 8 accidents for every $100 increase in reported monetary damages. For example, for year 2020, the expected difference between the current and proposed thresholds is $1,522. See Table 7. To convert this amount to the number of accident/incidents, the following proportion was used in which

8 accidents/incidents is to the unknown X-number of accidents/incidents per year, as $100 is to the $1,522 difference between the current and proposed thresholds.

$$\frac{8 \; accidents\_incidents}{X} = \frac{\$100}{\$1522}$$

$$X = \frac{(8 \; accidents\_incidents * \$1522)}{100}$$

$X = 121.76 \; accidents\_incidents \approx 122 \; accidents\_incidents \; for \; year \; 2020.$

The number of accidents/incidents for the other years in the forecast period are calculated similarly.

Finally, to monetize these additional estimated accident/incident reports, FRA multiplied the $144 cost to submit an accident/incident report by the estimated number of additional reports. For example, for year 2020 the expected cost is $17,568. (Calculated as 122 accidents/incidents * $144 per accident/incident report = $17,568.) Performing similar calculations for the remaining years in the forecast period results in the cost schedule below. The present value of total costs discounted at a 7 percent discount rate equals $138,913, and when discounted at a 3 percent rate equals $170,744. These costs may be overstated because the set of current reporting thresholds as calculated was subtracted from the proposed reporting thresholds. Instead, if the set of current reporting thresholds as published was used as the baseline and subtracted from the proposed thresholds, the differences would be somewhat smaller, resulting in fewer estimated incremental accident/incident reports. However, FRA did not forecast the reporting

thresholds as published because they reflect FRA discretion and may not be
representative of future thresholds.

Table 7. Estimated Costs Based on Forecasted Number of Rail Equipment Accidents/Incidents.					
Calendar Year	Reporting Threshold (Current Formula) Calculated	Reporting Threshold (Proposed Formula with Full-Year Data, NPRM)	Difference Between Proposed Full-Year and Current Thresholds	No. of Extra Accidents/ Incidents Reported (Rounded)	Estimated Annual Cost @$144 per Accident/ Incident
2019	$12,021	$10,566	-$1,456	116	$16,704
2020	$12,329	$10,807	-$1,522	122	$17,568
2021	$12,637	$11,048	-$1,589	127	$18,288
2022	$12,944	$11,289	-$1,655	132	$19,008
2023	$13,252	$11,530	-$1,721	138	$19,872
2024	$13,559	$11,771	-$1,788	143	$20,592
2025	$13,867	$12,012	-$1,854	148	$21,312
2026	$14,174	$12,254	-$1,921	154	$22,176
2027	$14,482	$12,495	-$1,987	159	$22,896
2028	$14,789	$12,736	-$2,053	164	$23,616
Total Undiscounted Cost 2019-2028 (10 Years), Nominal					$202,032
Present Value (PV) of Total Cost Discounted at 7% 2019-2028					$138,913
Present Value (PV) of Total Cost Discounted at 3% 2019-2028					$170,744
Total Annualized Cost Using 7% Discount Rate 2019-2028					$19,778
Total Annualized Cost Using 3% Discount Rate 2019-2028					$20,016

To account for the costs of a lower reporting threshold resulting from the
proposed changes, FRA would need to estimate the number of extra rail equipment
accidents/incidents that railroads would report. However, those accidents/incidents are
not currently reported. This analysis makes some assumptions about the distribution of
those unreported accidents/incidents in order to offer some useful information about the
proposed rule's potential impacts. FRA seeks comments from the public on the
assumptions used.

Earlier, FRA presented an alternative approach to calculate the reporting thresholds using a wage-price composite index. The resulting thresholds were slightly lower than the thresholds produced using the proposed threshold formula with full-year data (i.e., the NPRM proposal). Therefore, the marginal costs of the alternative approach are higher because railroads would report more accidents/incidents. If the alternative approach is adopted, the present value of total costs discounted at 7 percent would equal $175,492, and when discounted at 3 percent, would equal $216,568. The annualized cost using a 7 percent rate would be $24,986, and using a 3 percent rate would be $25,338.[8]

To put the proposed rule's potential costs into context, the incremental costs are compared to the total costs for reporting rail equipment accidents/incidents with damages greater than the reporting threshold. The industry-total costs for reporting 1,886 rail equipment accidents/incidents in 2014, for example, was equal to $271,584 at a cost of $144 per accident/incident report. From above, the annualized cost using a 7 percent or 3 percent interest rate is about $20,000. Thus, the marginal cost of the proposed threshold revisions is about 7 percent of the total industry accident reporting costs. (Calculated as $20,000 approximate annual cost/$271,584 sample total annual cost = 0.0736 ≈ 7 percent.) Thus, the typical cost of the proposed revisions is expected to be relatively small. Furthermore, the effect of the proposed rule is expected to be even smaller in the

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[8] For brevity, the estimated extra accidents/incidents reported under the alternative approach and the corresponding costs are shown as ordered pairs in the form of *Year(Extra Accidents/Incidents, Cost)*: {2019(138, $19,872), 2020(147, $21,168), 2021(156, $22,464), 2022(165, $23,760), 2023(174, $25,056), 2024(183, $26,325), 2025(192, $27,648), 2026(201, $28,944), 2027(210, $30,240), 2028(219, $31,536).

context of all reported accidents/incidents, which include rail equipment accidents/incidents above the reporting threshold (i.e., train accidents), highway-rail incidents, and other incidents. From 2014 to 2018, railroads reported approximately 12,000 accidents/incidents annually on average, or about six times as many rail equipment accidents/incidents.

Separately from changes to the reporting threshold calculation, FRA proposes to publish an annual notice on FRA's website notifying stakeholders of the new reporting threshold for the following year. Currently, FRA publishes a final rule in the **Federal Register**. The publication of an annual notice instead of an annual final rule would result in less administrative costs for FRA. By not having to publish a final rule in the **Federal Register**, FRA would save on printing costs. The Government Printing Office (GPO) charges agencies $151 per column to publish material in the **Federal Register**, and $85 per page to publish material in the Code of Federal Regulations (CFR).[9] FRA counted the number of columns in the **Federal Register** occupied by the reporting threshold final rule for the years 2007 to 2018.[10] The reporting threshold final rule occupied an average of 8 columns annually, for an average annual cost of $1,271. (Calculated as 8 columns * $151 per column = $1,271 per year for publishing costs.)

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[9] *See* GPO Circular Letter No. 1007 (June 4, 2018), available at https://www.gpo.gov/how-to-work-with-us/agency/circular-letters/open-requisitions-sf1-for-federal-register-and-code-of-federal-regulations.

[10] Year 2006 was excluded because FRA made a substantive change to the formula and the Federal Register notice for that year was atypically longer at 13 columns.

The new reporting thresholds are also printed in the CFR in 49 CFR 225.19(c) and (e). FRA amends the existing list of reporting thresholds by adding the new threshold. Since only the new threshold amount is added (seven characters), only a small amount of additional space on the page is needed, even over the 10 year period of analysis. Therefore, the publishing cost for the additional space in the CFR for adding the new threshold amount will be small. The table below accounts for the cost savings from publishing a notice of the new reporting threshold to FRA's website, instead of publishing it in a final rule in the Federal Register.

Table 8. Cost Savings Resulting from not Publishing the New Years' Reporting Threshold Notice in the Federal Register.

Calendar Year	Avg. No. of Columns Printed in Federal Register for New Reporting Threshold Notice	Printing Cost for Federal Register Reporting Threshold Notice @$151 per Column
2019	8	$1,271
2020	8	$1,271
2021	8	$1,271
2022	8	$1,271
2023	8	$1,271
2024	8	$1,271
2025	8	$1,271
2026	8	$1,271
2027	8	$1,271
2028	8	$1,271
Total Undiscounted Cost 2019-2028 (10 Years), Nominal		$12,710
Present Value (PV) of Total Cost Discounted at 7% 2019-2028		$8,927
Present Value (PV) of Total Cost Discounted at 3% 2019-2028		$10,842
Total Annualized Cost Using 7% Discount Rate 2019-2028		$1,271
Total Annualized Cost Using 3% Discount Rate 2019-2028		$1,271

The rail equipment accident/incident data FRA gathers under 49 CFR part 225 is used in support of many safety regulations and programs. The proposed revisions would

help ensure the reporting threshold accurately reflects the cost changes over time that occur in incident damages. Admittedly, as the small number of rail equipment accidents/incidents near the threshold reduces the costs of these proposed changes, it also reduces the potential benefits of the proposed changes. Nevertheless, through greater accuracy of the reporting threshold, the quality of the collected train accident data is expected to improve. With access to higher quality data, future analyses supporting rulemakings will improve the efficiency of safety risk targeting, and help to better identify accident/incident trends. A more accurate reporting threshold will also permit valid comparisons of rail equipment accident/incident rates across years.

In addition to FRA, other users of railroad safety data, such as students, researchers, industry stakeholders, and the general public will benefit from adopting the revisions in the proposed rule. FRA makes the train accident data, along with other rail accident/incident data, available to the public on the FRA Office of Safety Analysis website.[11] As of March 2019, over 2.7 million people have visited the website. These users will benefit by having access to higher-quality data.

Given the wide range of regulations and projects that use train accident data, it is difficult to monetize the marginal contributions that better data might make to these regulations. Also, higher quality data might benefit other projects for which private parties use the data.

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[11] *See* http://safetydata.fra.dot.gov/OfficeofSafety/Default.aspx.

Based on the cost analysis and benefits discussion above, FRA believes the proposed rule may have a positive impact on analyses by improving the accuracy of FRA's rail equipment accident/incident data. The proposed rule will impact a small number of rail equipment accidents/incidents that occur near the reporting threshold, resulting in minimal costs. The benefits of the proposed rule will affect users conducting analysis in support of safety programs, as well as other data users.

FRA invites comments on the assumptions and analysis employed in this analysis.

B. Regulatory Flexibility Determination

This section examines the impact of the proposed rule on small entities. FRA is proposing changes to the way the reporting threshold is calculated. FRA proposes a minor mathematical correction to the way the percent change in equipment costs is calculated in the reporting threshold formula. Also, FRA proposes to use 12 months of data in the reporting threshold calculation, instead of the current practice of using only 3 months of data. Finally, FRA proposes to notify railroads of the new reporting threshold for the upcoming year by publishing an annual notice on FRA's website, as opposed to its current procedure of publishing an annual final rule in the **Federal Register.** These changes are explained in more detail in the "Background" section above.

FRA expects the proposed, technical changes to the reporting threshold formula to yield lower reporting thresholds in the future in comparison to reporting thresholds calculated using the current formula. The technical changes are expected to improve the accuracy of train accident data, but may result in marginally increasing the number of rail equipment accidents/incidents railroads are required to report. FRA estimates the number

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of extra rail equipment accidents/incidents reported will be small, and therefore the corresponding burden on small entities will be minimal.

The Regulatory Flexibility Act of 1980, 5 U.S.C. 601-612, and Executive Order 13272, Proper Consideration of Small Entities in Agency Rulemaking, 67 FR 53461 (Aug. 16, 2002), require agency review of proposed and final rules to assess their impact on small entities, unless the Secretary certifies that the rule will not have a significant economic impact on a substantial number of small entities. Under section 312 of the Small Business Regulatory Enforcement Fairness Act of 1996, Pub. L. 104-121, FRA has issued a final policy statement that formally establishes "small entities" are railroads that meet the line-haulage revenue requirements of a Class III railroad, which is $20 million or less in inflation-adjusted annual revenues, and commuter railroads or small governmental jurisdictions that serve populations of 50,000 or less. *See* 49 CFR part 209, app. C. For other entities, the same dollar limit in revenues governs whether a railroad, contractor, or other respondent is a small entity. *Id*.

Description of Regulated Entities

All railroads currently governed by 49 CFR part 225 railroad accident/incident reporting requirements will be subject to this proposed rule. Of those, FRA considers about 735 of the approximately 784 railroads in the United States to be small entities. Although most of the railroads are small entities, the frequency of rail equipment accidents/incidents, and the frequency of subsequent required reporting, is generally proportional to the size of the railroad. A railroad that employs thousands of employees and operates trains millions of miles is exposed to greater risks than one whose operation

is substantially smaller. Small railroads may go for months at a time without having a reportable occurrence of any type, and even longer without having a rail equipment accident/incident with monetary damages greater than the reporting threshold, as defined in 49 CFR part 225. For example, over the five-year period from 2014 to 2018, small railroads reported an average of 14 percent of the total number of rail equipment accidents/incidents.[12]

Substantial Number of Small Entities

For the small railroads, FRA conducted a similar analysis for all railroads above and reviewed the rail equipment accidents/incidents "near" the threshold. Following the analysis for all railroads, "near" is defined for the purposes of this analysis as $12,000. These rail equipment accidents/incidents represent those most likely affected by the proposed rule. (As noted earlier, accidents/incidents below the reporting threshold are not reported.) As an example, in 2014, 18 small railroads reported 20 rail equipment accidents/incidents near the threshold (the high). In 2016, 8 small railroads reported 8 rail equipment accidents/incidents near the threshold (the low, *see* Table 8). Based on the period from 2014 to 2018, the small railroads likely affected by this proposed rule range between 1.1 to 2.4 percent of all small railroads, averaging 1.7 percent (about 12 small railroads). (Calculation example for 2014: 18 small railroads with rail equipment accidents/incidents near the threshold/735 small railroads = 0.024.)

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[12] Class III rail equipment accidents/incidents divided by all railroad rail equipment accidents/incidents, by year: year 2014 – 272/1,886=14%; year 2015 – 292/1,934=15%; year 2016 – 251/1,721=15%; year 2017 – 237/1,760=13%; year 2018 – 240/1,836=13%. Source: Agency query of FRA Safety Data website at http://safetydata.fra.dot.gov/OfficeofSafety/Default.aspx

Table 8. Number of Reported Train Accidents "Near" the Reporting Threshold, for Every $100 Increase in the Threshold: Small Entities.

Reported Train Accident Monetary Damage Interval ($)	No. of Train Accidents 2014	No. of Train Accidents 2015	No. of Train Accidents 2016	No. of Train Accidents 2017	No. of Train Accidents 2018
10,400 - 10,500	1	0	2		
10,500 - 10,600	2	0	0		
10,600 - 10,700	2	2	0		
10,700 - 10,800	1	1	0	0	0
10,800 - 10,900	0	0	0	1	0
10,900 - 11,000	3	3	0	2	2
11,000 - 11,100	3	3	0	0	0
11,100 - 11,200	2	2	1	1	1
11,200 - 11,300	0	0	0	1	0
11,300 - 11,400	2	0	0	1	1
11,400 - 11,500	1	1	0	0	1
11,500 - 11,600	0	0	2	1	0
11,600 - 11,700	1	2	0	1	0
11,700 - 11,800	0	1	0	0	2
11,800 - 11,900	1	2	1	1	1
11,900 - 12,000	1	0	2	2	3
Total	20	17	8	11	11
Average (Overall Avg.=0.9)	1.3	1.1	0.5	0.8	0.8
Standard Deviation	1.0	1.1	08	0.7	1.0

* The reporting threshold was $10,500 from 2014 to 2016, and $10,700 from 2017 to 2018.

As noted above, small railroads account for about 14 percent on average of all reported rail equipment accidents/incidents in any given year. Additionally, FRA estimates less than three percent of the small railroads subject to this proposed rule are likely to be impacted by being required to submit more accident/incident reports. These are the small railroads that reported rail equipment accidents/incidents near the reporting thresholds calculated using the current formula (e.g., 18 smalls for 2014 and 8 smalls for

2016 in the example above). Given the low portion of small railroads impacted, this proposed rule is not expected to impact a substantial number of small entities.

No Significant Economic Impact

To determine the potential compliance costs for small entities, FRA conducted an analysis such as that presented in the economic analysis for all railroads. The steps in the analysis are summarized here, and the calculations and results described below. First, FRA calculated the rate of additional rail equipment accidents/incidents that small entities may have to report for every $100 change in the reporting threshold. This rate is based on rail equipment accidents/incidents reported by the small entities in the past for the period 2006 to 2018. Because FRA lacks information on accidents/incidents below the current threshold as railroads do not have to report these, FRA broadly assumes the pattern of accidents/incidents below a proposed, lower threshold will be similar to those above the threshold. To estimate the trend of the thresholds calculated using the current formula, and the thresholds calculated using the proposed formula, FRA forecast both current and proposed thresholds for the years 2019 to 2028. The forecasts allowed FRA to calculate the monetary differences between the current and proposed reporting thresholds in the future, by year. Next, FRA converted the monetary difference between the reporting thresholds to the number of additional rail equipment accident/incident reports that small railroads may have to submit to FRA under the proposed threshold. FRA estimated these additional accident/incident reports by applying the rate of accidents/incidents per $100 change in the reporting threshold. Finally, FRA multiplied the railroad's cost to submit an accident/incident report to FRA by the number of

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additional rail equipment accident/incident reports, to produce the compliance cost per year for the small entities.

Table 8 above is used to determine the rate of additional rail equipment accidents/incidents per a $100 change in the reporting threshold. The data for the years 2014 to 2018 are used as sample data for analysis. Those years represent a more recent part of the period of analysis (i.e., 2006 to 2018) used to describe the effects of the proposed rule on the reporting threshold. For example, in 2014, there was an average of 1.3 more rail equipment accident/incidents reported for every $100 change in the reporting threshold. (Calculated as 20 rail equipment accident/incidents ÷ 16 intervals = 1.250 ≈ 1.3 rail equipment accident/incident per $100 change in the threshold, on average.) The rates for the other years between 2015 to 2018 were calculated similarly and are slightly lower, ranging between 0.5 to 1.1, or an overall average rate of about 1 more rail equipment accident/incident for every $100 change in the reporting threshold.

In the analysis for all railroads, FRA forecast the reporting thresholds and is employing that forecast in this analysis for small entities. Using the forecasts, FRA calculated the difference between the current reporting threshold and the proposed reporting threshold on an annual basis. FRA then combined the resulting differences with the rate of additional rail equipment accidents/incidents per $100 change in the reporting threshold to calculate the number of additional accident/incident reports expected. For example, for year 2020, the monetary difference between the forecast current threshold and the forecast proposed threshold was $1,522. Using the proportion

below, FRA expects the small railroads to report 15 more rail equipment accidents/incidents in that year:

$$\frac{1 \; accidents\_incidents}{X} = \frac{\$100}{\$1522}$$

$$X = \frac{(1 \; accidents\_incidents * \$1522)}{100}$$

$$X = 15.22 \; accidents\_incidents \approx 15 \; accidents\_incidents \; for \; year \; 2020.$$

FRA calculated the expected number of additional accidents/incidents for the small railroads for the other years in the forecast period using the same method.

Finally, to monetize these estimated extra accident/incident reports, FRA used the cost incurred by a railroad to submit an accident/incident report to FRA, which was previously determined in the analysis for all railroads at $144 per report. FRA multiplied this cost by the estimated number of additional reports to arrive at annual costs. Continuing to use year 2020 as an example, the expected cost is $2,160. (Calculated as 15 accidents/incidents * $144 per accident/incident report = $2,160.) FRA calculated the costs for the other years in the forecast period similarly, resulting in the cost schedule below. For the 10-year period, the undiscounted (nominal) costs sum to $25,488. The present value of total costs discounted at a 7 percent discount rate equals $17,526, and when discounted at a 3 percent rate equals $21,541.

Table 9. Estimated Costs Based on Forecasted Number of Rail Equipment Accidents/Incidents: Small Entities.

Calendar Year	Reporting Threshold (Current Formula) Calculated	Reporting Threshold (Proposed Formula with Full-Year Data)	Difference Between Proposed Full-Year and Current Thresholds	No. of Extra Accidents/ Incidents Reported (rounded)	Estimated Annual Cost @$144 per Accident/ Incident
2019	$12,021	$ 10,566	-$1,456	15	$2,160
2020	$12,329	$ 10,807	-$1,522	15	$2,160
2021	$12,637	$ 11,048	-$1,589	16	$2,304
2022	$12,944	$ 11,289	-$1,655	17	$2,448
2023	$13,252	$ 11,530	-$1,721	17	$2,448
2024	$13,559	$ 11,771	-$1,788	18	$2,592
2025	$13,867	$ 12,012	-$1,854	19	$2,736
2026	$14,174	$ 12,254	-$1,921	19	$2,736
2027	$14,482	$ 12,495	-$1,987	20	$2,880
2028	$14,789	$ 12,736	-$2,053	21	$3,024
Total Undiscounted Cost 2019-2028 (10 Years), Nominal					$25,488
Present Value (PV) of Total Cost Discounted at 7% 2019-2028					$17,526
Present Value (PV) of Total Cost Discounted at 3% 2019-2028					$21,541
Total Annualized Cost Using 7% Discount Rate 2019-2028					$2,495
Total Annualized Cost Using 3% Discount Rate 2019-2028					$2,525

In terms of the estimated economic impact of the proposed rule on small entities, FRA expects the impact to be minimal based on the above analysis. From the analysis of rail equipment accident/incident data, FRA found 8 to 18 small railroads reported these accidents/incidents near the reporting threshold in any given year. These are the small railroads that will most likely experience an impact from the proposed rule. Given the annualized cost is approximately $2,500, the cost per railroad for this group of railroads is about $139 to $313 per year—or on average about $210 per year per railroad. (Calculated as $2,500/18 railroads = $139; and $2,500/8 railroads = $312.50; for a range of about $139 to $313.) When compared to annual revenues, the impact is very small.

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The industry trade organization representing small railroads, the American Short Line and Regional Railroad Association (ASLRRA), reports the average freight revenue per Class III railroad is $4.8 million.[13] Relative to the average freight revenue per railroad, FRA estimates the proposed rule will affect less than 0.1 percent of revenues. (Calculated as $210 compliance cost per year per railroad/$4,800,000 average freight revenue per railroad = 0.00004 = 0.004 percent.) FRA therefore expects the average or typical compliance costs for a small entity to be not significant.

<u>Small Entities</u>

This proposed rule affects all small entities subject to FRA's accident reporting rule. However, FRA's analysis shows that the number of small entities reporting rail equipment accidents/incidents near the threshold represent only about two percent of the small entities.

Given that the proposed changes to the reporting threshold formula will result in a potentially lower reporting threshold, FRA also estimates the potential cost to file additional accident reports to FRA. FRA estimates about 15 to 20 additional train accident reports will be filed annually, using information the railroads already are required to maintain, at an annualized cost of about $2,500 for the group of affected small entities. The average cost per small railroad is estimated at about $210 per railroad. These compliance costs represent a very small percentage, less than 0.1 percent, of a

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[13] *See* American Short Line and Regional Railroad Association. (2014). *Short Line and Regional Railroad Facts and Figures*. (Pamphlet). Washington, DC: Author.

small railroad's annual freight revenues. FRA therefore expects that the economic impact of the proposed rule on small entities will be minimal. FRA invites comment from small entities or the public who believe there will be a significant economic impact on a substantial number of small entities affected by this proposed rule.

C. Paperwork Reduction Act

The burden for Accident/Incident Reporting and Recordkeeping is approved in the information collection for 49 CFR part 225 under OMB No. 2130-0500. OMB re-approval for this collection of information was granted on June 6, 2018, and the new expiration date is June 30, 2021.

D. Federalism

Executive Order 13132, "Federalism," 64 FR 43255 (Aug. 10, 1999), requires FRA to develop an accountable process to ensure "meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications." "Policies that have federalism implications" are defined in the Executive Order to include regulations that 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." Under EO 13132, the agency may not issue a regulation with federalism implications that imposes substantial direct compliance costs and that is not required by statute, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by State and local governments, the agency consults with State and local governments, or the agency consults with State and local government officials early in the process of

developing the regulation. Where a regulation has federalism implications and preempts State law, the agency seeks to consult with State and local officials in the process of developing the regulation.

This NPRM has been analyzed in accordance with the principles and criteria contained in EO 13132. FRA has determined that, if adopted, the proposed rule would not 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. In addition, FRA has determined that this proposed rule will not impose substantial direct compliance costs on State and local governments. Therefore, the consultation and funding requirements of EO 13132 do not apply.

However, this proposed rule could have preemptive effect by operation of law under certain provisions of the Federal railroad safety statutes, specifically the former Federal Railroad Safety Act of 1970 (FRSA), repealed and recodified at 49 U.S.C. 20106, and the former Accident Reports Act of 1910, repealed and recodified at 49 U.S.C. 20901. *See* Pub. L. 103-272 (July 5, 1994). 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 "local safety or security hazard" exception to section 20106.

In sum, FRA has analyzed this proposed rule in accordance with the principles

and criteria contained in EO 13132. As explained above, FRA has determined that this

proposed rule has no federalism implications, other than the possible preemption of State

laws under the former FRSA. Accordingly, FRA has determined that preparation of a

federalism summary impact statement for this proposed rule is not required.

E. Environmental Impact

FRA has evaluated this proposed rule in accordance with the National

Environmental Policy Act (NEPA), 42 U.S.C. 4321 et seq., other environmental statutes,

related regulatory requirements, and its "Procedures for Considering Environmental

Impacts" (FRA's Procedures) (64 FR 28545, May 26, 1999). FRA has determined that

this proposed rule is categorically excluded from detailed environmental review pursuant

to section 4(c)(20) of FRA's NEPA Procedures, "Promulgation of railroad safety rules

and policy statements that do not result in significantly increased emissions of air or

water pollutants or noise or increased traffic congestion in any mode of transportation."

See 64 FR 28547 (May 26, 1999). Categorical exclusions (CEs) are actions identified in

an agency's NEPA implementing procedures that do not normally have a significant

impact on the environment and therefore do not require either an environmental

assessment (EA) or environmental impact statement (EIS). *See* 40 CFR 1508.4.

In analyzing the applicability of a CE, the agency must also consider whether

extraordinary circumstances are present that would warrant a more detailed

environmental review through the preparation of an EA or EIS. *Id.* In accordance with

section 4(c) and (e) of FRA's Procedures, the agency has further concluded that no

extraordinary circumstances exist with respect to this regulation that might trigger the need for a more detailed environmental review. As a result, FRA finds this rule is not a major Federal action that significantly affects the quality of the human environment.

F. Unfunded Mandates Reform Act of 1995

Under Section 201 of the Unfunded Mandates Reform Act of 1995, Pub. L. 104-4 (Mar. 22, 1995); 2 U.S.C. 1531, each Federal agency "shall, unless otherwise prohibited by law, assess the effects of Federal regulatory actions on State, local, and tribal governments, and the private sector (other than to the extent that such regulations incorporate requirements specifically set forth in law)." Section 202 of the Act (2 U.S.C. 1532) further requires that "before promulgating any general notice of proposed rulemaking that is likely to result in the promulgation of any rule that includes any Federal mandate that may result in expenditure by State, local, and tribal governments, in the aggregate, or by the private sector, of $100,000,000 or more (adjusted annually for inflation) in any one year, and before promulgating any final rule for which a general notice of proposed rulemaking was published, the agency shall prepare a written statement" detailing the effect on State, local, and tribal governments and the private sector. This proposed rule is not expected to result in the expenditure, in the aggregate, of $100,000,000 or more, adjusted for inflation, in any one year, and thus preparation of such a statement is not required.

G. Energy Impact

Executive Order 13211 requires Federal agencies to prepare a Statement of Energy Effects for any "significant energy action." *See* 66 FR 28355 (May 22, 2001).

Under the Executive Order, a "significant energy action" is defined as "[a]ny 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 notices of inquiry, advance notices of proposed rulemaking, and notices of proposed rulemaking: (1)(i) that 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) that is designated by the Administrator of the Office of Information and Regulatory Affairs as a significant energy action." FRA has evaluated this proposed rule under Executive Order 13211. FRA has does not anticipate that this proposed rule is likely to have a significant adverse effect on the supply, distribution, or use of energy. Consequently, FRA has determined that this regulatory action is not a "significant energy action" within the meaning of Executive Order 13211.

H. Privacy Act

Under 5 U.S.C. 553(c), DOT solicits comments from the public to better inform its rulemaking process. 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. In order to facilitate comment tracking and response, we encourage commenters to provide their name, or the name of their organization; however, submission of names is completely optional. Whether or not commenters identify themselves, all timely comments will be fully considered. If you wish to provide

comments containing proprietary or confidential information, please contact the agency for alternate submission instructions.

I. Regulation Identifier Number (RIN)

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

List of Subjects in 49 CFR Part 225

Investigations, Penalties, Railroad safety, Reporting and recordkeeping requirements.

The Proposed Rule

In consideration of the foregoing, FRA proposes to amend part 225 of chapter II, subtitle B of title 49, Code of Federal Regulations, as follows:

1. The authority citation for part 225 continues to read as follows:

Authority: 49 U.S.C. 103, 322(a), 20103, 20107, 20901-02, 21301, 21302, 21311; 28 U.S.C. 2461, note; and 49 CFR 1.89.

2. Revise 225.19(e) to read as follows:

§ 225.19 Primary groups of accidents/incidents.

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(e) *Notice.* Each year, the Administrator publishes a notice on FRA's website announcing the reporting threshold that will take effect on January 1 of the following calendar year.

3. Appendix B to part 225 is revised to read as follows:

Appendix B to Part 225—Procedure for Determining Reporting Threshold

1. Wage data used in the calculation are collected from railroads by the Surface Transportation Board (STB) on Form A—STB Wage Statistics. Rail equipment data from the U.S. Department of Labor, Bureau of Labor Statistics (BLS), LABSTAT Series reports are used in the calculation. The equation used to adjust the reporting threshold has two components: (a) The average hourly earnings of certain railroad maintenance employees as reported to the STB by the Class I railroads and Amtrak; and (b) an overall rail equipment cost index determined by the BLS. The wage component is weighted by 40% and the equipment component by 60%.

2. For the wage component, the average of the data from Form A—STB Wage Statistics for Group No. 300 (Maintenance of Way and Structures) and Group No. 400 (Maintenance of Equipment and Stores) employees is used.

3. For the equipment component, LABSTAT Series Report, Producer Price Index (PPI) Series WPU 144 for Railroad Equipment is used.

4. In the month of October, second-quarter and first-quarter wage data for the current year, and fourth-quarter and third-quarter wage data for the previous year are obtained from the STB. For equipment costs, the corresponding BLS railroad equipment indices for the same time period as the STB wage data are obtained.

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5. The wage data are reported in terms of dollars earned per hour, while the equipment cost data are indexed to a base year of 1982.

6. The procedure for adjusting the reporting threshold is shown in the formula below. The wage and equipment components appear as fractional changes relative to the prior year. After performing the calculation, the result is rounded to the nearest $100.

7. The weightings result from using STB wage data and BLS equipment cost data to produce a reasonable estimation of the reporting threshold that was calculated using the threshold formula in effect immediately before calendar year 2006, a formula that assumed damage repair costs, at levels at or near the threshold, were split approximately evenly between labor and materials.

8. Formula:

New Threshold = Prior Threshold × [1 + 0.4(Wnew—Wprior)/Wprior + 0.6(Enew − Eprior)/Eprior]

Where:

Wnew = New average hourly wage rate ($).

Wprior = Prior average hourly wage rate ($).

Enew = New equipment average PPI value.

Eprior = Prior equipment average PPI value.

Issued in Washington, DC.