March 16, 2021

(Via online at www.regulations.gov)

Docket Operations Facility
U. S. Department of Transportation
1200 New Jersey Avenue, SE, W12–140
Washington, DC 20590

Re: Docket No. FRA-2019-0072

Comments of the
American Train Dispatchers Association (ATDA)
Brotherhood of Locomotive Engineers and Trainmen (BLET/IBT)
Brotherhood Railway Carmen Division (BRC/TCU/IAM)
Brotherhood of Railroad Signalmen (BRS)
Sheet Metal, Air, Rail and Transportation (SMART)

The five railroad Labor Organizations identified above ("Labor Organizations") are the collective bargaining representatives of the vast majority of railroad industry workers engaged in train operations, train dispatching, signal and mechanical maintenance, inspection, testing, and repair on passenger and freight railroads throughout the United States. The undersigned Labor Organizations, and their individual and collective memberships, have a direct safety interest in the outcome of this Notice of Proposed Rulemaking ("NPRM"). The classes or crafts represented by the Labor Organizations are those who would be directly affected.

The NPRM proposes to extend the distance certain individual rail cars may travel (from 1,500 to 2,500 miles) without stopping for brake and mechanical inspections and tests, if the cars have a valid eABS record. The NPRM also proposes to allow railroads to add or remove multiple cars from a train without conducting additional brake tests, if the train is solely made up of cars with eABS records.

The prime mover of the NPRM is FRA's response to the wish of the Association of American Railroads ("AAR") that FRA "establish an alternative regulatory framework for railroads to utilize when choosing to use an electronic air brake slip ('eABS') but would not require railroads to use such a system." 86 Fed. Reg. 3957 (Jan. 15, 2021).

The Labor Organizations request that FRA withdraw this NPRM because an alternative regulatory framework for air brake testing not only is unnecessary, but it also would lead to fewer brake inspections, fewer timely discoveries of defects and other problems, and allow the risks associated with brake system degradation to actually increase across the national rail network. Any safety advancements being cited in

AAR's submission have been produced by the existing system of regulations, and not from the alternative reality AAR and FRA wish to create.

Currently, an air brake slip provides information to a train's locomotive engineer as to when and where the most recent Class I air brake test was performed. It is literally a paper slip with adhesive, which is attached to the control stand of a locomotive, and reflects the requirements of 49 C.F.R. § 232.205(e):

> *(e) A railroad must notify the locomotive engineer that the Class I brake test was satisfactorily performed, whether the equipment to be hauled in his train has been off-air for a period of more than 24 hours, and provide the information required in this paragraph to the locomotive engineer or place the information in the cab of the controlling locomotive following the test. The information required by this paragraph may be provided to the locomotive engineer by any means determined appropriate by the railroad; however, a written or electronic record of the information must be retained in the cab of the controlling locomotive until the train reaches its destination. The written or electronic record must contain the date, time, number of freight cars inspected, and identify the qualified person(s) performing the test and the location where the Class I brake test was performed.*

This section already contemplates that an electronic record may be used as an alternative to a paper slip for this purpose. However, the regulation correctly did not conflate the capability to generate and use electronic means to convey information regarding a brake test, to the brake test itself. This part of the regulation has been amended as recently as December 2020, and belies the implication in AAR's that the regulation, since it was promulgated in 2001, has never taken account of subsequent advancements in technology. eABS is nothing more than the AAR's term for the "electronic record" that is already accounted for in the regulation.

Moreover, part 232 does not include, and FRA does not propose any standards governing the design, manufacture or use of eABS. The device can be whatever a railroad and a software company want it to be, and it is not tied to the brake apparatus of a train. It is for informational purposes only. This is not a bad thing. Information is powerful, but it cannot take the place of work in the field without diminishing railroad safety.

Utilization involves deploying creative means to gain some technical advantage. However, if a railroad "utilizes" an "alternative regulatory framework" when it "choose[s] to use eABS," the result is a system in which railroads adopt some form of managerial cunning to manipulate a regulation to its own purposes. This form could be ever changing due to the "alternative regulatory framework." Ignored in the process is the very purpose for which the regulations in part 232 were adopted — the safe operation of trains via their braking system. And the divination of a new "regulatory framework" is beside the point, as ideology can never and will never ensure that a train stops when and where desired.

AAR's submission states:

> "40 Years Ago … In 1982, when FRA increased the mileage interval for air brake inspections from 500 to 1,000 miles, air brakes were commonly used to control train speed. Power-braking, the practice of keeping a train stretched by applying power and simultaneously setting the air brakes, had been a common practice since the invention of the automatic air brake. Dynamic brakes were sometimes unreliable. Dynamic brake effectiveness was greatly reduced at low speeds."

FRA-2019-0072-0002.

The fact of the matter is that, for nearly a half century, not much has changed in the brake systems that are in use on railroads in America. Computer sensors have been added and software may be able to control when a valve opens or closes, but the air brake apparatus itself is essentially the same system, albeit with economic improvements (cost savings) in certain components. The lone significant technological advance during that period—the electro-pneumatic controlled braking system—has essentially been abandoned by the industry, because the major railroads would rather spend their profits on stock buybacks than on safety.

Durability of brake shoes has improved, but this has as much to do with improvements in brake shoe composition as it does with the increased use of dynamic braking in lieu of using the train brakes. Of course, there continues to be a significant need for the use of train brakes on a grade in combination with the dynamic brake in order to regulate and maintain the speed of the train at the required speed. Similarly, in extremely cold weather the displacement of air braking by dynamic braking introduces a new risk, because extending the periods of time during which air is not moving through brake pipes, control valves and brake cylinders actually increases the likelihood that moisture in the air will freeze.[1]

AAR cleverly couches its discourse in terms of "regulatory modernization." However, this is window dressing and misdirection. It also urges FRA to focus on the forest of "too many regulations", leading to failure to the specific safety enhancement provided by the trees, individually and in tandem.

For example, it is true that dynamic braking has improved in reliability and power due to many advances in locomotive power and efficiency. However, its utility is highly dependent on the type of power configuration on any one train. It is not guaranteed that a train will even be using modern locomotives for motive power or dynamic braking. Dynamic braking is not even a requirement, and some locomotive units are not equipped with it. Thus, to gut a safety regulation governing all trains because of a technological improvement that actually exists on only a fraction of the fleet diminishes safety.

It also is true that power braking (sometimes called "stretch braking") has been discouraged for many years by railroads. This has directly led to significantly longer trains, much less uniform in their make-up, which would not abide the in-train forces generated in power braking. But the real reason this braking method was displaced was pure economics. As AAR concedes in its submission:

> "Engineers are instructed to not use air brakes if the speed of the train can safely be controlled with the use of dynamic brakes. ***Power braking is no longer acceptable because it wastes fuel.***"

Id. at Slide 8 (emphasis added).

[1] The industry is still grappling with how to best identify and correct known deficiencies of the DB-10 brake valve in cold ambient air temperatures that could result in a train's inability to activate its emergency brake feature or a *runaway* train, despite more than seven years of awareness. The AAR issued circular C-12027 on October 25, 2013, advising that New York Air Brake had presented evidence that the faulty valve improperly permits an increased brake pipe air flow from the controlling locomotive once a brake application has been initiated. The increased air flow is caused by leakage from the bottom cover exhaust port of the DB-10 service portion of the brake control valve. The only recommended procedure for identification of the defect, per the circular, is brake and mechanical inspections. This NPRM, if granted, would serve to mask the unsafe condition and extend the delay of its elimination from this nation's railroad industry, as it would severely reduce the frequency of inspections. (For additional information, see SMART TD's petition of FRA for emergency order dated December 20, 2019.)

This move away from power braking also complicates the decisions an engineer has to make in determining when it is safe to control not just speed (but also in-train forces) with dynamic brake alone or when to use air brakes alone or a combination of dynamic braking and air brakes. They are all tools in a locomotive engineer's tool kit. The difficult part for a locomotive engineer is the variability of this decision occurs by the minute during a train's trip traversing the track from departure to arrival. It is also highly dependent on other factors such as train make-up, train weight, length, cargo (including hazardous materials), weather, topography, track conditions, and unannounced speed changes or unplanned occurrences. Unplanned occurrences can run the gamut from mechanical breakdowns, to locomotives that run out of fuel or overheat, to hot journals or roller bearings on cars. The list of permutations is longer than needs to be calculated to demonstrate that every type of brake system a train is equipped with will need to be used at different times for near constant changing scenarios, and often without very much notice or opportunity to pre-plan.

Indeed, for over a decade the highly-touted fuel savings software systems still cannot account for the difficulties of matching in-train forces with stretch braking, because optimally safe and efficient braking techniques involve extremely sensitive judgments that locomotive engineers often refer to as something you have to "feel in the seat of your pants." This technology operates on fairly simple fixed algorithms, without a kinesthetic learning capability, much less any ability to make proprioceptive adjustments on the fly.

Locomotive engineers have seen and adapted to many changes in locomotive technology over many years. One needs to be careful not to label every technological change as an "advancement." Some changes definitely are advancements. Locomotive reliability has greatly improved on the railroads that have purchased and deployed modern locomotives. Some technological changes are neutral, and some represent retreats from progress. A current challenge for locomotive engineers in the cab of the locomotive is that many technologies—such as fuel savings software and PTC—have been designed after the cab interior, and their placement inside the locomotive reflects this fact. Engineers in the field frequently complain that the cab is overcrowded, with either their vision being obstructed, or their attention diverted to screens placed anywhere they will fit in the cab, which often is outside their range of vision of the tracks ahead.

The numbers cited in AAR's report from Norfolk Southern Railroad and Union Pacific are little more than an exercise in mathematics. However, this statistical analysis does not inexorably lead to the conclusion for which it is proffered. This is because train operations do not occur in this sort of closed mathematical system, and the eABS system is nothing more than a tracking and notification system that tracks the most recent air brake tests; it provides no evidence whatsoever of the actual efficacy of the air brakes on the train.

In this way, eABS is similar to the "check engine" light in a car. Although the sensor that causes the light to come on tells the driver to check the engine, the illumination of the light itself tells you nothing about the actual performance of your car's systems; that determination requires additional inspections and tests. Nor should it lead a driver conclude that he or she should keep driving another five hundred miles without getting the engine checked. A "check engine" light program that tells you that a periodic inspection or test needs to be performed once again provides neither any indication of the prior test results, nor the extent to which performance has degraded since the last test. AAR's eABS is no different. AAR also cites to several different data points that purports to show low incidence results of accidents or discovered defects, such as "bad order" cars. The data are insufficient for this purpose, because most of the worst types of derailments and railroad accidents are very low incident events and relying on small sample sizes can result is significant "unanticipated" negative consequences. This is particularly troubling, because the worst types of accidents—especially accidents due to brake malfunctions—all too frequently are high

consequence events. Put a different way, these accidents do not happen very often, but when they do, they can be catastrophic and cost lives.

The AAR also argues that fewer brake inspections and the attendant need for securement of cars via handbrakes will reduce employee exposure to "slips, trips and falls." Reducing railroad worker casualties is a worthy goal, but there is a trade-off between potential risk of slips, trips and falls, and increased exposure to risk for runaway trains, derailments and collisions. The logical extension of AAR's argument is that eliminating all brake inspections and tests will concurrently eliminate all employee casualties that occur during the performance of these inspections and tests; this is an absurdity.

The current human cost already is too high. The Labor Organizations want as many inspections and tests as needed to make the industry as safe as reasonably possible. The current inspection and testing regimen is not burdensome; to the contrary, AAR's membership is now enjoying its second decade of multi-billion-dollar annual profits. Moreover, when a person doing an inspection does not discover a defect, this is not evidence that less testing is needed. Rather, and to borrow the words of the late Justice Ruth Bader Ginsburg, it "is like throwing away your umbrella in a rainstorm because you are not getting wet." *Shelby County v. Holder*, 570 U.S. ____ (2013), (Ginsburg, J., dissenting at 33).

The same is true for when electronic sensor that malfunctions. Complex systems will always have component failure whether it be human, mechanical, or electronic, or some combination thereof. The goal is to have the system as a whole fail-safe when one or more these components fail. While there cannot be a backup for every failure, rail safety advocates would be mistaken to remove reinforcements and redundancies that have preserved safe operations during a period of safety advances.

It is permissible under the current regulation for carriers to use a notification system like eABS. Rail carriers are already using them. The Labor Organizations approve of technological improvements in notification to crews, particularly those notifications that provide better and more timely information about brake and locomotive system health. To return to an automotive analogy, it is helpful to a car's maintenance that a mechanic who works on the car has access to the car's maintenance records, and that the mechanic can access those records electronically. However, someone still will have to change the brake pads, and access to electronic inspection and maintenance records do nothing the change the frequency. And, again, the electronic record says nothing of the car's current condition out on the road somewhere.

Thus, the NPRM's acknowledgement of the obvious—that allowing trains to move longer distances between Class I brake tests will reduce the number of tests required to be conducted (86 Fed. Reg. at 3961)—fails to advance the safety inquiry. There is no showing that frequency of tests correlates with safe performance of a train's air brake system. However, frequency of inspection and testing does establish the frequency of detection of breakdowns in that system, as well as wear and tear to the braking apparatus. It also allows for those problems, when detected in the field, to be addressed via repair or replacement immediately upon discovery. AAR's "reduce the tests" mantra necessarily also means "reduce the discovery opportunities", and also "reduce the timeliness of repairs." The latter two reductions will diminish the safety performance of a train's air brakes.

Train crews and the public rely on high functioning brake systems for their personal safety. For this reason, they hold inspection, testing and maintenance as critical to their safety on the job and in their communities. Having an eABS system that provides accurate and timely information is fine. However, a new or different notification system that uses information technology cannot justify reducing the frequency of inspection of and repairs to train brakes in the field. Railroad safety is only enhanced when

the current frequency of inspections and tests are conducted, along with the improved information provided by the eABS system.

Lastly, the "solid block of cars" request does not withstand any scrutiny in the field because, as all train crews know, it is virtually impossible to know how a certain configuration of a solid block of cars came to be in the state it is in at the time a train arrives at a particular location. For this reason, the system fails safely by requiring an air test of a block of cars when more than one is picked up. There is no other way to make the determination that the block(s) of cars picked up will have brakes that properly perform on the particular train to which it is added until it is tested. Too many variables exist on each train to conclude that no testing is necessary.

Following through with a Final Rule would only serve a single purpose: delivering yet another financial windfall to rail carriers by eliminating more inspections, testing and repairs, and deferring routine maintenance. It would also allow brake systems that have broken or degraded past their expected life to continue on and add risk to the rail network. Accordingly, the Labor Organizations respectfully request that FRA withdraw this NPRM because it is unnecessary and contrary to railroad safety. Rail carriers would still be free to use eABS track air brake testing under the current regulation.

Thank you for the opportunity to comment.

Respectfully submitted,

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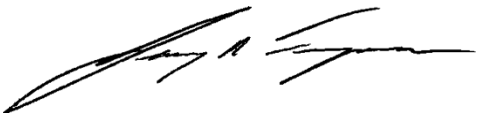

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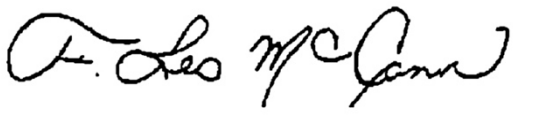

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