

**DEPARTMENT OF TRANSPORTATION  
Federal Railroad Administration**

**FRA Emergency Order No. 28, Notice No. 1**

**Emergency Order Establishing Additional Requirements for Attendance and  
Securement of Certain Freight Trains and Vehicles on Mainline Track or Mainline  
Siding Outside of a Yard or Terminal**

The Federal Railroad Administration (FRA) of the United States Department of Transportation (DOT) has determined that public safety compels issuance of this Emergency Order (EO), which requires railroads operating on the general system to implement additional processes and procedures to ensure that certain unattended trains and vehicles<sup>1</sup> on mainline track or mainline siding outside of a yard or terminal are properly secured against unintended movement. FRA re-examined its regulations governing the securement of such equipment in light of the July 6, 2013, derailment in Lac-Mégantic, Quebec, Canada, which demonstrated the terrible consequences that can arise when a railroad accident results in a sudden release of flammable liquids. FRA's inspection data since January 2010 shows significant non-compliance with FRA's securement regulations, 49 CFR 232.103(n), with nearly 4,950 recorded defects in that time. Moreover, FRA has seen a number of serious accidents during rail transportation of flammable liquids since 2009, and there has been significant growth in these types of rail shipments since 2011. These factors lead FRA to the conclusion that additional action is necessary to eliminate an immediate hazard of death, personal injury, or significant harm to the environment, particularly in instances where certain hazardous materials are involved. As a result, FRA is ordering that each railroad take the following actions on

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<sup>1</sup> A vehicle, as defined in 49 U.S.C. 20301, "means a car, locomotive, tender, or similar vehicle."

mainline track or mainline siding outside of a yard or terminal to ensure the safe transportation by rail of hazardous material:

1. No train or vehicle transporting hazardous materials as described in Appendix A shall be left unattended on a mainline track or mainline siding outside of a yard or terminal until the railroad develops, adopts, complies with and makes available to FRA upon request, a plan that identifies specific locations and circumstances when such trains or vehicles may be left unattended. The plan shall contain a sufficient safety justification for any determination allowing such trains or vehicles to be unattended. FRA will monitor such plans and if FRA determines that adequate justification is not provided, the railroad shall ensure that trains and equipment are attended until appropriate modifications to the plan are completed. FRA does not intend to grant approval to any plan. Each railroad shall notify FRA when it has developed a plan under this provision prior to the railroad operating pursuant to the plan.

2. Develop processes for the securement of unattended trains or vehicles transporting hazardous materials as described in Appendix A on mainline track or mainline siding outside of a yard or terminal if permitted by the railroad's plan required by this order that contains the following requirements:

a. The controlling locomotive cab must be locked or the reverser on the controlling locomotive must be removed and secured, and

b. Employees who are responsible for securing trains and vehicles transporting hazardous materials as described in Appendix A must communicate to the train dispatcher the number of hand brakes applied, the tonnage and length of the train or vehicle, the grade and terrain features of the track, any relevant weather conditions, and

the type of equipment being secured; train dispatchers must record the information provided; and train dispatchers or other qualified railroad employees must verify and confirm with the train crew that the securement meets the railroad's requirements.

3. Review and verify, and adjust, as necessary, existing procedures and processes related to the number of hand brakes to be set on all unattended trains and vehicles and ensure the means of verifying that number is appropriate.

4. Implement operating rules and practices requiring the discussion of securement for any job that will impact or require the securement of any train or vehicle in the course of the work being performed.

5. Develop procedures to ensure that a qualified railroad employee inspects all equipment that any emergency responder has been on, under, or between for proper securement before the train or vehicle is left unattended.

Additionally, each railroad must provide notice of this EO to all employees affected by this EO to ensure that they have knowledge of the EO's requirements.

#### **Authority**

Authority to enforce Federal railroad safety laws has been delegated by the Secretary of Transportation to the Administrator of FRA. 49 CFR 1.89. Railroads are subject to FRA's safety jurisdiction under the Federal railroad safety laws. 49 U.S.C. 20101, 20103. FRA is authorized to issue emergency orders where an unsafe condition or practice "causes an emergency situation involving a hazard of death, personal injury, or significant harm to the environment." 49 U.S.C. 20104. These orders may immediately impose "restrictions and prohibitions . . . that may be necessary to abate the situation." Id.

## **Lac-Mégantic Derailment**

FRA has re-examined its requirements for securing trains and vehicles on mainline track and mainline sidings outside of a yard or terminal in the aftermath of the catastrophic July 6, 2013, accident involving loaded tank cars containing petroleum crude oil that occurred in the town of Lac-Mégantic, Quebec, Canada, on track owned by Montreal, Maine & Atlantic Railway Corporation (MMA), a company incorporated in the United States. While Canadian authorities are still investigating the accident and no final conclusions have been made, the following is known based on preliminary information released by the Transportation Safety Board of Canada.

According to Rail Safety Advisory Letters issued by the Transportation Safety Board of Canada on July 19, 2013, the incident is summarized as follows. At approximately 10:45 pm Eastern Daylight Time (EDT) on July 5, 2013, MMA train 2 was proceeding eastward from Montreal, Quebec, to St. John, New Brunswick. The train was approximately 4,700 feet long and weighed over 10,000 tons. It consisted of five locomotives, a loaded box car, and 72 loaded tank cars containing petroleum crude oil (U.S. DOT Hazard Class 3, UN 1267). At approximately 11:00 pm the train stopped near milepost 7.40 near Nantes, Quebec. At that location the operator of the train secured it and departed, leaving the train unattended on mainline track with a descending grade of approximately 1.2 percent.

At around 11:50 pm a local resident reported a fire on the controlling locomotive (MMA 5017) of the train. The local fire department was called and responded with another MMA employee. At approximately midnight, the controlling locomotive was

shut down and the fire extinguished. After the fire was extinguished, the fire department and the MMA employee left the site.

At approximately 1:00 am the next day (the early morning of July 6th) it appears that the train began rolling and picking up speed down the descending grade toward the town of Lac-Mégantic, Quebec, which sits approximately 30 miles from the United States-Canada border. Near the center of town, the box car and 63 of the loaded tank cars derailed. The locomotives, which separated from the train, traveled an additional ½ mile before coming to a stop. A number of derailed tank cars released product resulting in multiple explosions and subsequent fires. At this time, it is estimated that there were 42 fatalities and that 5 persons are still missing. There was also extensive damage to the town, and approximately 2,000 people were evacuated from the surrounding area. While the investigation is ongoing and the Transportation Safety Board of Canada has not reached any final conclusions, it has made a determination that the braking force applied to the train was insufficient to hold it on the 1.2-percent descending slope between Nantes and Lac-Mégantic.

In response to this accident, Transport Canada (the Canadian government department responsible for regulating transportation safety in Canada) issued an emergency railroad directive pursuant to Section 33 of the Canadian Railway Safety Act.<sup>2</sup> While Transport Canada explained in the emergency directive that the cause of the accident in Lac-Mégantic remains unknown, the emergency directive stated that:

[I]n light of the catastrophic results of the Lac-Mégantic accident and in the interest of ensuring the continued safety and security of railway

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<sup>2</sup> Available online at: <http://www.tc.gc.ca/eng/mediaroom/backgrounders-safety-locomotives-7292.html>. Additionally, in response to this accident, the Transportation Safety Board of Canada issued Rail Safety Advisory Letter - 09/13 regarding the securement of equipment and trains left unattended; available online at: <http://www.tsb.gc.ca/eng/medias-media/sur-safe/letter/rail/2013/r13d0054/r13d0054-617-09-13.asp>.

transportation, there is an immediate need to clarify the regime respecting unattended locomotives on main track and sidings and the transportation of dangerous goods in tank cars using a one person crew to address any threat to the safety and security of railway operations.

As such, Transport Canada exercised its statutory emergency directive authority to order railroad companies operating in Canada to comply with certain requirements related to unauthorized entry into locomotive cabs, directional controls on locomotives, the application of hand brakes to cars left unattended for more than one hour, setting of the automatic brake and independent brake on any locomotive attached to cars that is left unattended for one hour or less, attendance related to locomotives attached to loaded tank cars transporting dangerous goods on main track, and the number of crew members assigned to a locomotive attached to loaded tank cars transporting dangerous goods on a main track or siding.

In addition, Transport Canada issued an accompanying order pursuant to paragraph 19(a)(1) of the Canadian Railway Safety Act directing railroad companies in Canada to formulate or revise certain railroad operating rules, respecting the safety and security of unattended locomotives, uncontrolled movements, and crew size requirements. The order provides that rules should be based on an assessment of safety and security risks, and shall at a minimum ensure that the cab(s) of unattended controlling locomotives are secure against unauthorized entry; ensure that the reversers of unattended locomotives are removed and secured; prevent uncontrolled movements of railway equipment by addressing the application of hand brakes; ensure the security of stationary railway equipment transporting dangerous goods; and provide for minimum operating crew requirements considering technology, length of train, speeds, classification of dangerous goods being transported, and other risk factors.

DOT is taking actions consistent with Transport Canada to ensure the safe transportation of products by rail in the United States, with a particular focus on certain hazardous materials that present an immediate danger for communities and the environment in the event of a train accident. Through this EO, FRA is addressing the immediate dangers that arise from unattended equipment that is left unsecured. Additionally, FRA and the Pipeline and Hazardous Materials Safety Administration (PHMSA) are issuing a joint Safety Advisory to railroads and commodity shippers detailing eight recommended actions the industry should take to better ensure the safe transport of hazardous materials. These recommendations include the following: reviewing the details and lessons learned from the Lac-Mégantic accident; reviewing crew staffing levels; removing and securing the train's "reverser" when unattended; a thorough review of all railroad operating procedures, testing and operating rules around securing a train; reviewing Transport Canada's directives to secure and safely operate a train; and conducting a system-wide assessment of security risks when a train is unattended and identifying mitigation efforts for those risks. Additionally, the Safety Advisory recommends testing and sampling of crude oil for proper classification for shipment, as well as a review of all shippers' and carriers safety and security plans. Finally, FRA is convening an emergency meeting of FRA's Railroad Safety Advisory Committee to begin the deliberative process with FRA's stakeholders, including railroad management, railroad labor, shippers, car owners, and others, as the agency considers recommendations in the Safety Advisory that should be made a part of its regulations.

## **Safety Concerns Arising Out of the Lac-Mégantic Derailment**

Generally, the transportation of hazardous materials by rail is extremely safe. The vast majority of hazardous materials shipped by rail each year arrive at their destinations safely and without incident. Indeed, in calendar year 2011, there were only 20 accidents in which a hazardous material was released out of approximately 2.2 million shipments of hazardous material transported by rail in the United States. However, the Lac-Mégantic incident demonstrates the substantial potential for danger that exists when an unattended train rolls away and derailed resulting in the sudden release of hazardous materials into the environment. Although the Lac-Mégantic incident occurred in Canada, the freight railroad operating environment in Canada is similar to that in the United States, and a number of railroads operate in both countries.<sup>3</sup> Freight railroads in the United States also transport a substantial amount and variety of hazardous materials, including materials poisonous by inhalation (PIH), materials or toxic by inhalation (TIH), and explosive materials. Moreover, an increasing proportion of the hazardous materials being transported by rail is classified as flammable.<sup>4</sup>

The MMA train in the Lac-Mégantic incident was transporting 72 carloads of petroleum crude oil with five locomotives and a loaded box car. A similar type of train consist is commonly found on rail lines in the United States because crude oil is often

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<sup>3</sup> As an example, MMA operates both in the United States and Canada, with approximately 510 miles of track in Maine, Vermont, and Quebec, and the tank cars transporting the crude oil that derailed in Lac-Mégantic originated in the Williston Basin of North Dakota.

<sup>4</sup> PHMSA prescribes a comprehensive regulatory safety system that categorizes hazardous materials into nine hazard classes based on the type of hazards presented by the materials. See 49 CFR Parts 172 and 173. Under PHMSA's regulations, crude oil, in most forms, meets the definition of a "Class 3" hazardous material, which signifies that it is a flammable liquid. Ethanol, discussed below, also is a Class 3 hazardous material. PIH materials, referenced above, include "Class 2 and Division 2.3" gases and "Class 6, and Division 6.1" poisons other than gases. Chlorine gas and anhydrous ammonia are two examples of PIH materials (Division 2.3) that are commonly transported by rail.



transported in units of cars or by a unit train consisting virtually entirely of tank cars containing crude oil. Crude oil is often classified by an offeror as a flammable liquid; per PHMSA's Hazmat Regulations (HMR), however, its packing group can be I, II, or III depending on the blend of constituent crude oils. According to the Association of American Railroads (AAR), crude oil traffic increased 443 percent in the United States between 2005 and 2012. Much of this growth has occurred because of developments in North Dakota, as the Bakken formation in the Williston Basin has become a major source for oil production in the United States. Texas also has contributed to the growth of crude oil shipments by rail. As a result, carloads of crude oil increased from approximately 65,600 in 2011 to approximately 257,450 in 2012. The Bakken crude oil from North Dakota is primarily shipped via rail to refineries located near the U.S. Gulf Coast—particularly in Texas and Louisiana—or also to pipeline connections, most notably to connections located in Oklahoma. Crude oil is also shipped via rail to refineries on the East Coast and, to a lesser extent, refineries in other regions of the U.S.<sup>5</sup>

All indications from the U.S. Energy Information Administration (EIA) within the U.S. Department of Energy are that rail export capacity for Bakken crude oil from the Williston Basin will continue to expand to meet production.<sup>6</sup> Rail exports from the North Dakota region are forecast to increase over the next two years (as are pipeline exports). Much of the near-term growth in rail originations right now is a function of how quickly tank car manufacturers can produce new cars to meet the demand for tank

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<sup>5</sup> See AAR's May 2013 paper "Moving Crude Oil by Rail" available online at: <https://www.aar.org/keyissues/Documents/Background-Papers/Crude-oil-by-rail.pdf>.

<sup>6</sup> See EIA reports "Bakken crude oil price differential to WTI narrows over last 14 months", available online at: <http://www.eia.gov/todayinenergy/detail.cfm?id=10431>; and "Rail delivery of U.S. oil and petroleum products continues to increase, but pace slows", available online at: <http://www.eia.gov/todayinenergy/detail.cfm?id=12031>.

cars, primarily for transporting Bakken crude oil. The rise in rail originations in crude oil is subject to changes in the number of tank cars available, price of crude oil, and overall production of crude oil in that region, and is also dependent on whether, or how quickly, additional pipeline export capacity from that region comes online. However, for the foreseeable future, all indications are for continued growth of rail originations of crude in that region as new tank car fleets come online to meet demand.

As demonstrated by the Lac-Mégantic derailment, in a catastrophic incident, crude oil is problematic when released because it is flammable. This risk is compounded because it is commonly shipped in large units. Similar dangers exist with other hazardous materials such as ethanol, which is another flammable liquid that is commonly transported by rail. More carloads of ethanol were transported via rail than any other hazardous material in 2012. Ethanol experienced an increase in traffic of 442 percent between 2005 and 2010. Although in 2012 the number of carloads dropped by 11 percent from 2010 levels, there were still approximately 366,000 carloads transported by rail. Since 2009, there have been at least four serious mainline derailments resulting in the breach of tank cars containing ethanol. While FRA recognizes that none of these four derailments resulted from a roll-away situation, they are instructive on the destructive potential of a derailment involving tank cars containing flammable products:

- On June 19, 2009, in Cherry Valley, IL, a Canadian National Railway train derailed 19 tank cars loaded with ethanol. Thirteen of the 19 derailed cars caught fire, and there were reports of explosions. One person died, and there were 9 reported injuries related to the fire. Additionally,

approximately 600 residences were evacuated within a ½-mile radius of the derailment.

- On February 6, 2011, in Arcadia, OH, a Norfolk Southern Railway Co. (Norfolk Southern) train operating on single main track derailed 33 tank cars loaded with ethanol. The derailment caused a major fire and forced the evacuation of a one-mile radius around the derailment.
- On July 11, 2012, in Columbus, OH, a Norfolk Southern train derailed while operating on main track. Thirteen tank cars containing ethanol derailed resulting in a fire and the evacuation of 100 people within a one-mile radius of the derailment.
- On August 5, 2012, in Plevna, MT, a BNSF Railway Co. train derailed 18 cars while en route from Baker, MT. Seventeen of the 18 cars were tank cars loaded with denatured alcohol, a form of ethanol. Five of the cars caught on fire resulting in explosions, the burning of surrounding property not within the railroad's right-of-way, and the evacuation of the immediate area.

Although these accidents were serious, their results had potential for more catastrophic outcomes. The catastrophic releases created the potential for additional deaths, injuries, property damage, and environmental damage.

There are other hazardous materials that have similar potential for catastrophic danger. For example, accidents involving trains transporting other hazardous materials, including PIH materials, such as chlorine and anhydrous ammonia, can also result in serious consequences as evidenced by the following accidents:

- On July 18, 2001, 11 of 60 cars in a CSX Transportation, Inc. freight train derailed while passing through the Howard Street Tunnel in downtown Baltimore, MD. The train included 8 tank cars loaded with hazardous material; 4 of these were among the cars that derailed. A leak in a tank car containing tripropylene resulted in a chemical fire. A break in a water main above the tunnel flooded both the tunnel and the streets above it, resulting in the tunnel collapsing.
- On January 18, 2002, a Canadian Pacific Railway train containing 15 tank cars of anhydrous ammonia derailed half a mile from the city limits of Minot, ND due to a breaking of the rail at a joint. Five of these tank cars ruptured catastrophically, resulting in an ammonia vapor that spread 5 miles downwind over an area where 11,600 people lived. The accident caused one death, 11 serious injuries, and 322 minor injuries. Environmental cleanup costs reported to the National Transportation Safety Board (NTSB) were \$8 million.
- On June 28, 2004, near Macdona, TX, a Union Pacific Railroad Company train passed a stop signal and collided with a BNSF train. A chlorine car was punctured and the chlorine gas that was released killed three and injured 32.
- On January 6, 2005, in Graniteville, SC, a Norfolk Southern train collided with another Norfolk Southern train that was parked on a customer side track, derailing both locomotives and 16 cars of the moving train. The accident was caused by a misaligned switch. Three tank cars containing

chlorine derailed, one of which was punctured. The resulting chlorine exposure caused 9 deaths, approximately 554 people were taken to local hospitals, and an additional 5,400 people within a one-mile radius of the site were evacuated by law enforcement personnel. FRA's analysis of the total cost of the accident was \$126 million, including fatalities, injuries, evacuation costs, property damage, environmental cleanup, and track out of service.

While train accidents involving hazardous materials are caused by variety of factors, nearly one-half of all accidents are related to railroad human factors or equipment defects. FRA's data shows that since 2009, human factors have been the most common cause of reportable train accidents. Based on FRA's accident reporting data for the period from 2009 through 2012, 35.7 percent of train accidents were human factor-caused. With regard to the securement of unattended equipment, specifically, FRA accident data indicates that approximately 8.5 percent of human factor-caused train accidents from calendar year 2011 until April 2013 were the result of improper securement. This EO is intended to address some of the human factors failures that may cause unattended equipment to be improperly secured to protect against a derailment situation similar to that which occurred in Lac-Mégantic.

### **Securement Requirements**

As previously noted, FRA has issued regulations designed to ensure that trains and vehicles are properly secured before being left unattended. See § 232.103(n). "Unattended equipment" is defined as "equipment left standing and unmanned in such a manner that the brake system of the equipment cannot be readily controlled by a qualified

person.” Id. Section 232.103(n) addresses the securement of unattended equipment by stating that a train’s air brakes must not be depended on to hold equipment standing unattended on a grade and further requires the application of a sufficient number of hand brakes to hold the equipment with the air brakes released and the ventilation of the brake pipe pressure to zero with the angle cock opened on one end of a cut of cars when not connected to a locomotive or other compressed air source. The regulations also require railroads to develop a process or procedure for verifying that the hand brakes that are applied are sufficient to hold the equipment with the air brakes released. When dealing with locomotives and locomotive consists, § 232.103(n)(3) establishes specific additional requirements:

- All hand brakes must be fully applied on all locomotives in the lead consist of an unattended train.
- All hand brakes must be fully applied on all locomotives in an unattended locomotive consist outside of yard limits.
- The minimum requirement for an unattended locomotive consist within yard limits is that the hand brake must be fully applied on the controlling locomotive.
- Railroads must develop, adopt, and comply with procedures for securing any unattended locomotive that is not equipped with an operative hand brake.

Additionally, FRA requires each railroad to adopt and comply with instructions addressing the throttle position, status of the reverse lever (commonly referred to as a “reverser”), position of the generator field switch, status of the independent brakes, position of the isolation switch, and position of the automatic brake valve of an unattended locomotive. See § 232.103(n)(4).

In FRA's view, these regulations—when followed—substantially reduce the risk of movement of unattended equipment. However, FRA has found there is significant non-compliance among the railroads with respect to FRA's securement regulations. With limited resources, FRA can inspect only a small percentage of trains and vehicles for regulatory compliance. However, even with its limited resources, FRA has recorded nearly 4,950 securement defects in the course of its inspections since January 2010, an average of approximately 1,483 defects per year. With increased shipments of hazardous materials such as crude oil and ethanol, securement non-compliance, particularly on mainline track and mainline sidings outside of a yard or terminal, has become a serious, immediate safety concern. Therefore, additional measures are necessary to protect the health and safety of railroad employees, the general public, and the environment.

First, in this EO, FRA is prohibiting railroads from leaving trains or vehicles that are transporting hazardous materials as described in Appendix A unattended on mainline track or mainline siding outside of a yard or terminal unless the railroad adopts and complies with a plan that identifies the specific locations and circumstances for which it is safe and suitable for leaving such trains or vehicles unattended. The plan must contain sufficient analysis of the safety risks and any mitigating circumstances the railroad has considered in making its determination. FRA does not intend to grant approval to any plan, per se. However, FRA will monitor such plans and if FRA determines that adequate justification is not provided, the railroad shall ensure that trains and equipment are attended until appropriate modifications are made to the railroad's plan.

Second, FRA is requiring railroads to develop specific processes for employees responsible for securing any unattended train or vehicles transporting hazardous materials

as described in Appendix A that must be left on mainline track or a mainline siding outside of a yard or terminal. The employees responsible for securing the train or vehicles must lock the controlling locomotive cab door before leaving it unattended or remove and secure the reverser. The reverser is the directional control for the locomotive. Removing it would put the locomotive in neutral, preventing it from moving forward or backward under the power of the engine. Additionally, employees must communicate to the train dispatcher the number of hand brakes applied, the tonnage of the train or vehicle, the grade and terrain features of the track, any other relevant weather conditions, and the type of equipment being secured. The dispatcher is then required to record the information provided by the employee. Finally, the dispatcher or other qualified railroad employee must verify and confirm with the train crew that the securement meets the railroad's requirements. This requirement provides a check on those individuals setting hand brakes to ensure appropriate securement procedures are followed. The requirement is similar to FRA's existing regulations that require employees to report to the train dispatcher when a main track switch in non-signaled territory has been restored to normal position and locked. FRA believes this type of notification and verification requirement will help ensure that employees responsible for securing equipment containing hazardous materials will follow appropriate procedures because the employee will need to fully consider the securement procedures in order to relay what was done to the dispatcher. Further, the dispatcher or other qualified railroad employee (e.g. a trainmaster, road foreman of engines, or another train crew employee) will be in a position to ensure that a sufficient number of hand brakes have been applied.



Third, this EO requires that railroads review, verify, and adjust, as necessary, existing requirements and instructions related to the number of hand brakes to be set on unattended trains and vehicles and that railroads review and adjust, as necessary, the procedures for verifying that the number of hand brakes is sufficient to hold the train or vehicle with the air brakes released. FRA's concern is that existing railroad processes and procedures related to setting and verifying hand brakes on unattended trains and equipment may not be sufficient to hold all trains and vehicles in all circumstances. FRA expects that the procedures and number of hand brakes required to be set will vary significantly, depending on a variety of factors, including, but not limited to: the length and weight of the train or vehicle(s), the location, the grade and other terrain features of the track, the weather conditions, the type of equipment being secured, and whether the hand brakes apply on one or more trucks of a piece of equipment. The procedures should also ensure that an additional margin of safety is provided when determining the number of hand brakes to be set in order to compensate for the differing ability of individuals to set a hand brake at a specified level. FRA also expects railroads to develop appropriate procedures to be followed by their employees to test or verify that the number of hand brakes set will hold the equipment with the air brakes released.

Fourth, this EO requires railroads to implement operating rules and practices requiring the job briefing of securement among crewmembers and other involved railroad employees before engaging in any job that will impact or require the securement of any train or vehicle in the course of the work being performed. This requirement is analogous to other Federal regulations that require crewmembers to have a job briefing before performing various tasks, such as confirming the position of a main track switch before

leaving an area. The purpose of this job briefing requirement is to make certain that all crewmembers and other involved railroad employees are aware of what is necessary to properly secure the equipment in compliance with § 232.103(n).

Finally, FRA is requiring railroads to develop procedures to ensure that a qualified railroad employee inspects all equipment that any emergency responder has been on, under, or between for proper securement before the rail equipment or train is left unattended. One of the facts that has come to light in the aftermath of the Lac-Mégantic derailment is that first responders were at milepost 7.4 near Nantes (along with an MMA employee) to check a report of a fire on the train. This was well after the operator had secured the train and left it unattended. Because it may be necessary for emergency responders to modify the state of the equipment if it is necessary for them to go on, under, or between equipment in order to perform their jobs, it is critical for the railroad to have a qualified employee inspect the equipment after the emergency responders have completed their jobs to ensure that the equipment is properly secured before it is again left unattended.

### **Finding and Order**

While FRA recognizes that the transportation of hazardous materials by rail is extremely safe and that the vast majority of hazardous materials shipped by rail each year arrive at their destinations safely and without incident, FRA finds that there are gaps in the regulatory scheme that create an emergency situation involving a hazard of death, personal injury, or significant harm to the environment, with respect to securement of unattended vehicles and trains transporting a hazardous material of the type described in Appendix A to this EO on mainline track and mainline sidings outside of a yard or

terminal. Accordingly, pursuant to the authority of 49 U.S.C. 20104, delegated to the FRA Administrator by the Secretary of Transportation, 49 CFR 1.89, it is hereby ordered that each railroad must institute and carry out the following measures, effective within 30 days after the date of this order:

1. No train or vehicles transporting the type and quantity of hazardous materials described in Appendix A (Appendix A Materials) shall be left unattended on a mainline track or mainline siding outside of a yard or terminal until the railroad develops, adopts, complies with and makes available to FRA upon request a plan that identifies specific locations and circumstances when such trains or vehicles may be left unattended. The plan shall contain a sufficient safety justification for any determination allowing such trains or vehicles to be unattended. FRA will monitor such plans and if FRA determines that adequate justification is not provided, the railroad shall ensure that trains and equipment are attended until appropriate modifications to the plan are completed. FRA does not intend to grant approval to any plan. Railroads shall notify FRA when the railroad has developed a plan under this provision prior to the railroad operating pursuant to the plan.

2. Railroads shall develop processes for securing unattended trains or vehicles transporting Appendix A Materials on a mainline track or mainline siding outside of a yard or terminal if permitted by the railroad's plan required under paragraph (1) of this order that contains the following requirements:

a. The controlling locomotive cab must be locked or the reverser on the controlling locomotive must be removed and secured.

b. Employees who are responsible for securing trains and vehicles transporting Appendix A Materials must communicate to the train dispatcher the number of hand brakes applied, the tonnage and length of the train or vehicle, the grade and terrain features of the track, any relevant weather conditions, and the type of equipment being secured; train dispatchers must record the information provided; and train dispatchers or other qualified railroad employees must verify and confirm with the train crew that the securement meets the railroad's requirements.

3. Railroads shall review and verify, and adjust, as necessary, existing procedures and processes related to the number of hand brakes to be set on all unattended trains and equipment and shall ensure the means of verifying that number is appropriate.

4. Railroads shall implement operating rules and practices requiring the job briefing of securement for any job that will impact or require the securement of any train or vehicle in the course of the work being performed.

5. Railroads shall develop procedures to ensure that a qualified railroad employee inspects all equipment that any emergency responder has been on, under, or between for proper securement before the train or vehicle is left unattended.

6. Notice of this EO shall be provided to all employees affected by this EO.

### **Relief**

Petitions for special approval to take actions not in accordance with this EO may be submitted to the Associate Administrator for Railroad Safety/Chief Safety Officer (Associate Administrator), who shall be authorized to dispose of those requests without the necessity of amending this EO. In reviewing any petition for special review, the

Associate Administrator shall grant petitions only in which a petitioner has clearly articulated an alternative action that will provide, in the Associate Administrator's judgment, at least a level of safety equivalent to that provided by this EO.

### **Penalties**

Any violation of this order or the terms of any written plan adopted pursuant to this order to provide alternate protection shall subject the person committing the violation to a civil penalty of up to \$105,000. 49 U.S.C. 21301. Any individual who willfully violates a prohibition stated in this order is subject to civil penalties under 49 U.S.C. 21301. In addition, such an individual whose violation of this order demonstrates the individual's unfitness for safety-sensitive service may be removed from safety-sensitive service on the railroad under 49 U.S.C. 20111. If appropriate, FRA may pursue criminal penalties under 49 U.S.C. 522(a) and 49 U.S.C. 21311(a), as well as 18 U.S.C. 1001, for the knowing and willful falsification of a report required by this order. FRA may, through the Attorney General, also seek injunctive relief to enforce this order. 49 U.S.C. 20112.

### **Effective Date and Notice to Affected Persons**

Upon issuance of this EO, railroads shall immediately initiate steps to implement this EO. Railroads shall complete implementation no later than September 1, 2013. Notice of this EO will be provided by publishing it in the Federal Register.

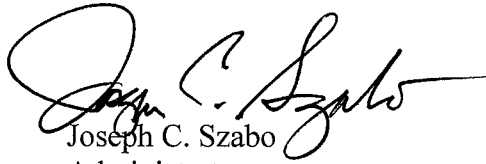
### **Review**

Opportunity for formal review of this EO will be provided in accordance with 49

U.S.C. 20104(b) and section 554 of title 5 of the United States Code. Administrative procedures governing such review are found at 49 CFR part 211. See 49 CFR 211.47, 211.71, 211.73, 211.75, and 211.77.

AUG - 2 2013

Issued in Washington, D.C. on \_\_\_\_\_.



Joseph C. Szabo  
Administrator

**Appendix A**  
**to Emergency Order 28**

- (1) Five or more tank car loads of any one or any combination of materials poisonous by inhalation as defined in 49 CFR 171.8, and including anhydrous ammonia (UN 1005) and ammonia solutions (UN 3318); or
- (2) 20 rail car loads or intermodal portable tank loads of any one or any combination of materials listed in (1) above, or, any Division 2.1 flammable gas, Class 3 flammable liquid or combustible liquid, Class 1.1 or 1.2 explosive, or hazardous substance listed in 49 CFR 173.31(f)(2).<sup>7</sup>

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<sup>7</sup> See 49 CFR 173.115 for the definition of Division 2.1 flammable gas, 173.120 for definition of Class 3 flammable liquid; and 173.50 for the definition of the various classes of explosives.