




Memorandum

U.S. Department
of Transportation

**Federal Railroad
Administration**

Date: **AUG 21 2013**

Subject: Guidance on Emergency Order 28

From: Thomas J. Herrmann 
Acting Director, Office of Safety Assurance and Compliance

To: Regional Administrators, Deputy Regional Administrators, Specialists, Chief Inspectors, Railroad System Oversight Managers, State Program Managers, and Federal and State Inspectors

FRA issued Emergency Order 28 (EO 28 or the Order) on August 2, 2013, following a re-examination of its securement regulations in light of the July 6, 2013, derailment in Lac-Mégantic, Quebec, Canada. See 78 FR 48218-24 (Aug. 7, 2013). The Order establishes six requirements to eliminate the immediate hazard of death, personal injury, or significant harm to the environment, related to the securement of certain unattended equipment. Each requirement (Requirement) is identified as follows:

1. No train or vehicle transporting the type and quantity of hazardous materials described in Appendix A to the Order (Appendix A Materials) may be left unattended on a mainline track or mainline siding outside of a yard or terminal until the railroad develops, adopts, complies and makes available to FRA upon request a plan that identifies specific locations and circumstances when such trains or vehicles may be left unattended. FRA requires the plan to 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 must ensure that trains and equipment are attended until appropriate modifications to the plan are completed. Railroads must notify FRA when the railroad has developed a plan under this provision prior to the railroad operating pursuant to the plan.
2. Railroads are required develop processes for securing unattended trains or vehicles transporting Appendix A Materials on mainline track or mainline siding outside of a yard or terminal if permitted by the railroad's plan adopted pursuant to paragraph (1) of EO

28. The Order requires that the securement processes contain 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 are required to 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 to ensure the means of verifying that number is appropriate.
 4. Railroads are required to 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. Railroads are required 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 train or vehicle is left unattended.
 6. Railroads are required to provide notice of EO 28 to all employees affected.

Requirement Nos. 1 and 2 in EO 28 apply to trains or vehicles containing the following minimum quantities of "Appendix A Materials":

- (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).

See Appendix A to EO 28, 78 FR 48223-24.

Requirement Nos. 3, 4, and 5 in EO 28 apply generally to all trains and vehicles. Requirement No. 6 applies to all employees who are responsible for the securement of equipment. FRA has developed the attached chart to serve as a quick guide to assess whether the Order is applicable to a particular railroad operation. See Attachment 1.

FRA also is providing the following guidance to clarify certain matters addressed in the Order:

A. Does EO 28 apply to plant railroads?

FRA does not intend to apply EO 28 to a railroad that operates only on track inside an installation which is not part of the general railroad system of transportation (i.e. plant railroads) when operating on track that is considered within the installation that is not part of the general system. FRA has outlined its policy towards plant railroads in its “Statement of Agency Policy Concerning Enforcement of the Federal Railroad Safety Laws.” See 49 CFR pt. 209, app. A. Pursuant to that policy, under certain circumstances, if a plant railroad leases track immediately adjacent to its plant from a general system railroad assuming certain conditions are met (i.e., the lease provides for, and actual practice entails, the exclusive use of that trackage by the plant railroad and the general system railroad for purposes of moving only cars shipped to or from the plant), the lease will remove the plant railroad’s operations on that trackage from the general system for purposes of FRA’s regulations. FRA intends to utilize this statement of agency policy in applying the requirements of EO 28. Thus, the provisions of EO 28 do not apply to a plant railroad’s operation within its own facility or on track immediately adjacent to its facility when the policy noted above is applicable to the adjacent track, unless that track is part of a general system railroad’s mainline track or mainline siding. In other words, EO 28 would apply to a plant railroad if it operated on the general system by positioning cars or conducting other operations on mainline track or mainline siding outside of a yard or terminal. Trains or other equipment on these tracks containing the minimum quantities of Appendix A Materials must be attended unless, in accordance with the Order, 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 equipment unattended. Further, if any such train or equipment is left unattended, the equipment must be secured as required by EO 28.

FRA also notes that EO 28 contains a provision for seeking relief from the requirements of the Order. Petitions for special approval to take actions not in accordance with EO 28 may be submitted to FRA’s Associate Administrator for Railroad Safety/Chief Safety Officer. See 78 FR 78223.

B. Does EO 28 apply to passenger rail operations?

Generally, EO 28 does not apply to passenger rail vehicles or passenger rail operations. FRA understands, however, that there are situations where a railroad engaged in passenger service “hosts” a freight railroad that is transporting freight over the mainline of a railroad engaged in passenger service. The requirements in EO 28 do apply to these freight operations while traveling over a rail line owned or operated by a railroad engaged in passenger service. In these situations, the host passenger railroad would need a plan in place to address the requirements of EO 28. The host passenger railroad may adopt the plan of the freight railroad operating over its line if the host passenger railroad makes a determination that the freight railroad’s plan is acceptable and suitable for the rail line being used. In addition, Requirement Nos. 3, 4, and 5 would apply to work trains and other maintenance-of-way trains operated by passenger railroads. Thus, passenger railroads should be reviewing their existing securement plans and procedures related to these types of operations to ensure these requirements are addressed.

C. Does EO 28 apply to all types of “trains or vehicles”?

As discussed above, Requirement Nos. 1 and 2 in EO 28 apply to trains or vehicles that are transporting the specified minimum quantities of Appendix A Materials on mainline track or mainline siding outside of a yard or terminal. Requirement Nos. 3, 4, and 5 apply to all freight trains and vehicles, whether transporting Appendix A Materials or not. Similarly, Requirement Nos. 3, 4, and 5 apply to all freight trains and vehicles operating on the general system, not just mainline tracks and mainline sidings outside of yards or terminals.

FRA defines a “train” as “one or more locomotives coupled with one or more freight cars, except during switching service.” See 49 CFR 232.5. The term “vehicle” is a statutorily defined term meaning “a car, locomotive, tender, or similar vehicle.” See 49 U.S.C. 20301. FRA’s primary focus in drafting EO 28 was trains and railcars transporting Appendix A hazardous materials. FRA recognizes that there are certain other types of vehicles, such as maintenance-of-way equipment, that in some instances, carry small amounts of hazardous materials related to the work being performed. Unless such vehicles are being used to haul Appendix A Materials in quantities that would trigger Requirement Nos. 1 and 2, FRA would not expect Requirement Nos. 1 and 2 to apply to these types of vehicles. Notwithstanding, FRA does expect that railroads will factor in all types of vehicles that are operated on their lines in addressing Requirement Nos. 3, 4, and 5.

D. What does EO 28 mean by “mainline track or mainline siding outside of a yard or a terminal”?

This phrase, as used in EO 28, is intended to encompass any mainline track or mainline siding unless that mainline track or mainline siding runs through, or is otherwise surrounded by, a railroad’s yard limits, as defined in 49 CFR 232.5. While the definition of “yard limits” at § 232.5 excludes “main tracks and sidings” within such limits, mainline track or mainline siding within such yard limits are considered to within “a yard or a terminal” solely for purposes of EO 28 applicability. Thus, a mainline track that runs through the yard limits of a railroad is not subject to Requirement Nos. 1 and 2 of the Order.

E. Does EO 28 apply to residue tank cars as well as loaded tank cars containing hazardous materials?

The term “tank car loads”, see Appendix A, 78 FR 48223-24, is meant to include loaded tank cars and residue tank cars. Railroads transporting Appendix A Materials should understand that FRA will apply EO 28 to all placarded tank cars containing hazardous materials identified in Appendix A.

F. What should railroads include in their plans for leaving trains or vehicles unattended on mainline track or mainline siding outside of a yard or terminal when transporting Appendix A Materials?

The Order requires railroads to “identif[y] the specific locations and circumstances for which it is safe and suitable for leaving such trains or vehicles unattended.” So, at a minimum, FRA expects that each railroad’s plan for leaving equipment unattended will provide details relating to the specific locations and/or the specific types of circumstances where equipment may be left unattended while transporting the minimum specified quantities of Appendix A Materials on mainline track or mainline siding outside of a yard or terminal. FRA recognizes that in some instances railroads may have to identify specific circumstances that might require such trains or equipment to be left unattended rather than a specific location, for example; “doubling a hill”.^{*} When doing so, FRA would expect that the circumstance be clearly identified and as narrowly defined as possible. In developing its plan, a railroad must address the factors listed in Requirement No. 2 of EO 28. These include: whether the locomotive cab is locked or the reverser is removed and secured; the number of hand brakes applied; the tonnage and

^{*} “Doubling a hill” is an industry term that is used to describe a process whereby a train is separated into two or more sections and each section is taken up an ascending grade separately. This process is typically used where the train has insufficient power to take the entire train up the ascending grade as a single unit.

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.

A railroad's plan also must contain a sufficient safety justification for any determination allowing trains or vehicles subject to Requirement Nos. 1 and 2 to be unattended. This requires railroads to provide a detailed rationale from an operational and safety perspective for leaving a train or vehicle unattended on mainline track or mainline siding outside of a yard or terminal when transporting Appendix A Materials. FRA expects that the plan will consider and address the varying abilities of persons in applying hand brakes and any applicable method for testing securement that the railroad uses (e.g. the "set-and-bump" or the "push-pull" test). If a railroad's plan relies on a matrix for determining the number of hand brakes to set, the plan should include a discussion of the margin of safety used to determine the appropriate number of hand brakes set. Also, if there are particular operations where the railroad expects that equipment is going to be left unattended—such as while "doubling a hill"—the plan should explain the basis for the railroad's decision and describe the procedures in place for securing the unattended equipment.

G. What are EO 28's requirements related to recording securement information and verifying the securement of trains or vehicles?

The Order requires train crews to 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 whenever a train or vehicle transporting Appendix A Materials is left unattended on a mainline track or a mainline siding outside of a yard or terminal. Train dispatchers then must record the information provided. In most instances, FRA expects that the train crew will have precise information about the tonnage and length of the train and the type of equipment being secured. However, FRA understands that in many instances train crews may not have precise information available to them concerning grade and terrain features and relevant weather conditions. In such situations, a train crew should provide the best information available. As an example, the train crew may not have a precise measurement for the grade of the track while tying down a train in a hilly location. It would be sufficient for the train crew in this example to describe that the equipment is being left unattended on low descending grade or in a bowl. In this example, the important factor to FRA is not that that precise grade be relayed, but that there is some consideration about how the grade impacts the securement actions that are taken and that the consideration is relayed to the dispatcher for recording.

With respect to recording the securement information provided by train crews, FRA has provided railroads with flexibility to determine the method for recording such data as long as the records are readily available to FRA personnel upon request. Some railroads may choose to make paper records while some may only create electronic records. FRA also recognizes that some smaller railroads may not have employee-manned train dispatching services. In the last circumstance, FRA acknowledges that a voice recording system would suffice.

Whether using voice, written, or electronic recordings, railroads should consider and address in their plans the minimum number of days for which records will be kept. FRA recommends that such records be kept for a minimum of 7 days. In FRA's view this would allow for appropriate follow-up testing by the railroad. Moreover, in the unlikely event of a securement related incident, the time period of 7 days should be sufficient to allow the records to be pulled and preserved as part of a post-incident investigation.

The verification process required by EO 28 does not have to be performed by the dispatcher. The Order merely requires that the person verifying the securement is a qualified railroad employee. The qualified railroad employee must have adequate knowledge of the railroad's securement requirements for the specific location or for the specific circumstance for which the equipment will be left unattended. Without limiting the type of employee who may be qualified, FRA envisions that a dispatcher, roadmaster, yardmaster, road foreman of engines, or another crew member would be able to serve in the verification capacity.

Finally, EO 28 does not require railroads to record the verification by the qualified railroad employee.

H. Is it acceptable to secure the reverser in the locomotive cab once it has been removed from the control stand?

The Order allows a railroad to leave a train transporting Appendix A Materials on mainline track or a mainline siding outside of a yard or terminal unattended where the railroad has a plan in place that, among other factors, requires the controlling locomotive cab to be locked or the reverser to be removed from the control stand and secured. FRA understands that some railroads would like to secure reversers in the cabs of unlocked controlling locomotives. FRA has no objection to securing a reverser in an unlocked locomotive as long as the reverser is kept in a box or other compartment that can be locked within the locomotive cab. However, FRA would not consider a reverser "secured" within the meaning of EO 28 if the railroad allows the reverser to be stored merely out of plain sight.

I. What must be covered in the job briefing for any job that impacts or requires the securement of a train or vehicle in the course of the work being performed?

The Order contains a requirement that train crews conduct a job briefing whenever their work will impact or require the securement of a train or vehicle. FRA expects that the crew will discuss the equipment that is impacted, the responsibilities of each employee involved in the securement of a train or vehicle, the number of hand brakes that will be required to secure the affected equipment, the process for ensuring that securement is sufficient, which train crewmember will be responsible for contacting the dispatcher, how the verification will be determined, and any other relevant factors affecting securement.

J. Is Requirement No. 5 in EO 28 concerning a railroad's responsibilities after an emergency responder has been on, under, or between equipment an absolute requirement?

Requirement No. 5 in the Order states that railroads must establish a process to ensure that a qualified railroad employee inspects all equipment that any emergency responder (e.g. fireman, paramedic, etc.) has been on, under, or between for proper securement before the train or vehicle is left unattended. FRA understands that on rare occasions there may be situations where an emergency responder accesses railroad equipment without the knowledge of the railroad. The railroad's process can take that type of situation into account; however, FRA will expect that a qualified railroad employee will inspect equipment after it has been accessed by an emergency responder in any circumstance where the railroad acting in a reasonable manner knew or should have known of an emergency responder's presence on, under, or between the subject equipment.

K. How should the railroad notify FRA once it has developed the required plan for leaving equipment unattended under EO 28?

Once a railroad has developed a plan in accordance with EO 28, notification must be submitted in writing to the Associate Administrator for Railroad Safety/Chief Safety Officer, Federal Railroad Administration, 1200 New Jersey Avenue S.E., Washington, DC 20590.

Contact Information: Thomas J. Herrmann, Acting Director, Office of Safety Assurance and Compliance, Office of Railroad Safety, FRA, 1200 New Jersey Avenue, S.E., Washington, DC 20590, telephone (202) 493-6404; or Stephen N. Gordon, Trial Attorney, Office of Chief Counsel, FRA, 1200 New Jersey Avenue, S.E., Washington, DC 20590, telephone (202) 493-6001.

Attachment 1

		Plant Railroads (railroads that operate only on track inside an installation that is not part of the general railroad system of transportation)	Passenger operations on the general system (including for example, intercity, commuter, tourist and excursion railroads)	All freight railroads operating on the general system	Freight railroads operating trains carrying Appendix A materials in the quantities listed on the general system [‡]
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 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...		◆		✓
2	The railroad's plan must contain the following requirements:				
	<p>a. The controlling locomotive cab must be locked or the reverser on the controlling locomotive must be removed and secured, and</p> <p>b. Employees who are responsible for securing trains and vehicles transporting a 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.</p>		◆		✓
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.		◆	✓	✓
6	Provide notice of this EO to all employees affected by this EO to ensure that they have knowledge of the EO's requirements.		◆	✓	✓
◆ Requirements of this E.O. do not apply to passenger vehicles or passenger operations; however, the requirements do apply to freight vehicles and freight operations as described above including when transporting freight over a rail line owned or operated by a railroad engaged in passenger service.					
‡ Appendix A Materials are: (1) Five or more tank car loads 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 combination of materials listed in (1) above, or, Division 2.1 flammable gases, Class 3 flammable liquids and combustible liquids, Class 1.1 or 1.2 explosives, or hazardous substances listed in 49 CFR 173.31(f)(2).					