[4910-06-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Railroad Administration**

**Emergency Order Under 49 U.S.C. 20104 Establishing Requirements for Controlling Passenger Train Speeds and Staffing Locomotive Cabs at Certain Locations on the Metro-North Commuter Railroad Company**

**[Emergency Order No. 29, Notice No. 1]**

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

**SUMMARY:** FRA is issuing this emergency order (EO or Order) to require that the New York State Metropolitan Transportation Authority's Metro-North Commuter Railroad Company (Metro-North) take certain actions to control passenger train speed at any location on main track where there is a reduction of more than 20 miles per hour (mph) in the maximum authorized passenger train speed. Under the EO, Metro-North must create and comply with an FRA-approved action plan that institutes modifications to its existing Automatic Train Control System or other signal systems. Until Metro-North completes the necessary modifications, the EO requires that two qualified railroad employees be present in the control compartment of Metro-North's passenger trains when those trains operate over locations on main track where there is a required reduction of more than 20-mph in the maximum authorized passenger train speed.

**FOR FURTHER INFORMATION CONTACT:** Thomas Herrmann, Acting Director, Office of Safety Assurance and Compliance, Office of Railroad Safety, FRA, 1200 New Jersey Avenue SE., Washington, DC 20590, telephone (202) 493-6036; Joseph St. Peter, Trial Attorney, Office of Chief Counsel, FRA, 1200 New Jersey Avenue SE., Washington, DC 20590, telephone (202) 493-6047, joseph.st.peter@dot.gov; or Stephen

Gordon, Trial Attorney, Office of Chief Counsel, FRA, 1200 New Jersey Avenue SE., Washington, DC 20590, telephone (202) 493-6001, stephen.n.gordon@dot.gov.

**SUPPLEMENTARY INFORMATION:**

**INTRODUCTION**

FRA has determined that public safety compels issuance of this EO. This determination is made in light of the Metro-North train derailment that occurred in New York on December 1, 2013, which killed four people and injured over 60 others. The preliminary investigation into this derailment indicates that the subject train was traveling approximately 82 mph as it entered a sharp curve where the maximum authorized passenger train speed was 30 mph. This is a serious overspeed event, and when considered in the context of three other accidents that occurred on Metro-North earlier this year, FRA has significant concerns with regard to the railroad's compliance with Federal railroad safety regulations and the railroad's own operating rules. These factors lead FRA to the conclusion that additional action is necessary in the form of this EO to eliminate an emergency situation involving a hazard of death, personal injury, or significant harm to the environment.

**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.

**METRO-NORTH SPUYTEN DUYVIL DERAILMENT**

On Sunday, December 1, 2013, Metro-North passenger train 8808 (Train 8808) was traveling south from Poughkeepsie, New York, to Grand Central Terminal in New York City. The train's crew included a locomotive engineer, a conductor, and two assistant conductors. The exact number of passengers aboard the train is not presently known. At approximately 7:20 a.m., the train derailed as it approached the Spuyten Duyvil Station in Spuyten Duyvil, Bronx, New York.[1] The train consisted of seven passenger coach cars, including a control cab locomotive in the lead position, and a conventional locomotive at the rear of the train, operating in a push-pull configuration (a control cab locomotive is both a passenger car, in that it has seats for passengers, and a locomotive, in that it has a control cab from which the engineer can operate the train). All seven cars and the trailing locomotive derailed. As of December 6, the derailment has resulted in four fatalities and over 60 reported injuries.

As is customary, the National Transportation Safety Board (NTSB) has taken the lead role in conducting the investigation of this accident pursuant to its legal authority. 49 U.S.C. 1101 et seq.; 49 CFR 800.3(a), 831.2(b). FRA is also investigating the accident. As Train 8808 approached the Spuyten Duyvil Station from the north, it traveled over a straightaway with a maximum authorized passenger train speed of 70 mph before reaching a sharp curve in the track where, by the railroad's own rules, the maximum authorized speed was reduced to 30 mph. A preliminary review of the information on the locomotive event recorders by NTSB indicates that the train was

[1] The train was not scheduled to stop at the Spuyten Duyvil Station.

traveling approximately 82 mph as it entered the curve's 30-mph speed restriction, exceeding the maximum authorized speed on the straightaway by 12 mph, while also traveling nearly three times the railroad's maximum authorized speed for the curve.[2] Additionally, NTSB indicates that information obtained from the train's event recorders reveals that approximately six seconds before the locomotive came to a stop, the locomotive throttle was placed in idle and an application of the train's brake system was made. Prior to the derailment, Train 8808 received a pre-trip brake inspection and made nine stops. The NTSB reviewed the brake inspection records for December 1 and, to date, has found no anomalies with the train's brake system. Further, to date, no evidence has been discovered that any track-related or signal-related deficiencies contributed to the derailment.

**SAFETY CONCERNS ARISING OUT OF 2013 METRO-NORTH INCIDENTS**

In addition to the December 1, 2013, accident discussed above, three other notable accidents occurred on Metro-North earlier this year. Two of the accidents occurred in May, and NTSB and FRA continue to investigate these accidents, and NTSB recently held a public hearing on both accidents in November 2013.[3] A third accident that occurred in July 2013 is also under investigation by NTSB and FRA.

May 17-- Bridgeport, Connecticut Derailment

[2] FRA regulations provide, in part, that it is unlawful to "[o]perate a train or locomotive at a speed which exceeds the maximum authorized limit by at least 10 miles per hour." 49 CFR 240.305(a)(2).
[3] See NTSB Dockets DCA-13-MR-003 and DCA-13-MR-003; available online at http://www.ntsb.gov/investigations/dms.html.

The first accident occurred on May 17, 2013, in Bridgeport, Connecticut, on Metro-North's New Haven line.[4] An eastbound Metro-North passenger train was traveling 74 mph on track number 4 when it derailed near milepost 53.3 and came to rest in the foul of an adjacent track. According to information obtained from locomotive event recorders, about 20 seconds later a westbound Metro-North passenger train on that adjacent track then struck the derailed train. As a result of the accident, over 50 people were transported to hospitals, and several million dollars in property damage occurred.

At the accident scene, broken compromise joint bars were found. The location where the accident had occurred was last inspected on May 15, 2013, two days prior to the accident. Metro-North's record of that inspection noted that near milepost 53.3 on track number 4 an insulated rail joint had inadequate supporting ballast and displayed indications of vertical movement of the track system under load. In April 2013, the joint bars at this location were found to have been broken and were replaced by Metro-North.[5] This accident was one of two that was the subject of FRA's Safety Advisory 2013-05, regarding joint failures on continuous welded rail track. 78 FR 47486 (Aug. 5, 2013). Safety Advisory 2013-05 made several recommendations to railroads regarding the special attention and maintenance that rail joints in continuous welded rail require, including reminding railroads of applicable Federal Track Safety Standards for such joints at 49 CFR 213.119, and the importance of proper maintenance practices to ensure that joints are adequately supported to support train loads.

[4] See NTSB Preliminary Report, Accident Number DCA-13-MR-003 (June 4, 2013); available online at: http://www.ntsb.gov/investigations/2013/bridgeport_ct/Bridgeport_CT_10_day_Preliminary_Report06042013.pdf.

[5] See NTSB Accident Reconstruction Animation, Derailment and Collision of Metro-North Railroad Passenger Trains 1548 and 1581; available online at: http://www.ntsb.gov/news/events/2013/bridgeport_ct_hearing/animation.html.

May 28-- West Haven, Connecticut Employee Fatality

A second accident occurred on May 28, 2013, when a Metro-North passenger train in West Haven, Connecticut was traveling 70 mph when it struck and killed a Metro-North maintenance-of-way employee who was part of a roadway work group conducting a railroad maintenance and construction project. According to NTSB's preliminary investigation, the roadway work group had established exclusive track occupancy working limits, in accordance with 49 CFR 214.321, on a controlled main track in order to conduct their work.[6] A Metro-North rail traffic controller (RTC) trainee who was training under the mentorship of a qualified RTC placed blocking devices on the computer console for the signal system to prevent trains from entering the roadway work group's exclusive track occupancy working limits. Later, the Metro-North RTC trainee apparently removed the blocking devices without notifying the roadway work group.[7] After the blocking devices were removed, a train then entered the exclusive track occupancy working limits at 70 mph and struck and killed the maintenance-of-way employee. Under FRA's applicable regulations, train movements through exclusive track occupancy working limits may only be made under the direction of the roadway worker in charge of the working limits, and such movements are required to be made at restricted speed, unless a higher speed has been specifically authorized by the roadway worker in charge. 49 CFR 214.321(d). Further, FRA's regulations prohibit the release of working limits until all affected roadway workers have been notified of such release, and until all

[6] See NTSB Recommendation R-13-17 (June 17, 2013); available online at http://www.ntsb.gov/doclib/recletters/2013/R-13-17.pdf.
[7] Id.

affected roadway workers have either left the track or have been afforded on-track safety through train approach warning.[8] 49 CFR 214.329(c).

The NTSB has also stated that in an unrelated incident, approximately three weeks prior to the May 28 accident in West Haven, blocking devices that were protecting an occupied track were similarly removed in error by a Metro-North RTC.[9] In response, Metro-North adopted additional procedures to prevent blocking devices from being removed in error. Despite the adoption of these additional procedures, the accident occurred in West Haven on May 28.

July 18-- CSX Transportation, Inc., Freight Train Derailment

A third accident occurred on July 18, 2013, when a CSX Transportation, Inc. freight train derailed while traveling over Metro-North's system. Ten of the train's cars derailed near the Spuyten Duyvil station, and blocked tracks on Metro-North's Hudson line. No persons were injured as a result of this accident, and the NTSB is investigating to determine the accident's probable cause.

The May 17 and May 28 accidents are still under investigation, and the NTSB has not established their probable causes, and the July 18 CSX accident also remains under investigation by FRA. However, together with the December 1, 2013, accident discussed above, these accidents lead FRA to believe that a potential lack of compliance with Federal railroad safety regulations and applicable Metro-North operating rules and procedures in recent months may have caused or contributed to these serious accidents, which have resulted in five deaths and well over 100 injuries to Metro-North's

[8] The applicable FRA regulation governing train approach warning requires that warning must be given to enable an affected roadway worker to occupy a place of safety not less than 15 seconds before a train moving at maximum authorized speed can pass the roadway worker's location. 49 CFR 214.329(a).
[9] NTSB Recommendation R-13-17 (June 17, 2013); available online at http://www.ntsb.gov/doclib/recletters/2013/R-13-17.pdf.

passengers and employees since May. While the specific causes of these recent accidents may vary, these events are extremely concerning, and require immediate corrective actions.

**OVERSPEED PROTECTIONS**

Metro-North passenger trains are normally operated with only one crewmember, a locomotive engineer, located in the cab of the passenger train's locomotive. In the case of push-pull operations, this crewmember occupies the control compartment of the passenger car (cab car) at the leading end of a train. Metro-North's conventional controlling locomotives are typically equipped with an alerter in order to help ensure the attentiveness of the locomotive engineer operating the train, while the control cab of passenger cars are typically equipped with either an alerter or a "dead man pedal" for the same purpose. Metro-North's locomotive controls and its signal systems also incorporate an Automatic Train Control System (ATC system), which is a train speed control system where trains may be automatically slowed or stopped if a locomotive engineer fails to comply with a signal indication.

However, at locations where there are large reductions in the maximum authorized speed that a passenger train may travel (e.g., at locations such as the sharp curve in the track where the December 1 derailment occurred) and the signal system is not implicated, Metro-North's ATC system is not currently coded to slow trains to comply with applicable speed limits. If a locomotive engineer fails to take action in accordance with applicable railroad rules to slow a train when approaching such a speed limit, Metro-North's ATC system will not slow the train to comply with the speed reduction. As a result, extreme overspeed events like the December 1 derailment can

occur if the lone crewmember controlling the train fails to comply with railroad rules, and, as demonstrated, these overspeed events can have catastrophic results.

In light of the December 1 derailment that is the subject of this Order, and the other serious accidents that have occurred on Metro-North in 2013, and in an effort to immediately prevent similar incidents from occurring that could result in an emergency situation involving a hazard of death, personal injury, or significant harm to the environment, in this Order FRA is requiring that at main track locations where reductions in maximum authorized passenger train speed of greater than 20 mph occur, that Metro-North must immediately have an additional qualified employee in each train's control compartment when a train traverses each such location. A qualified employee is an individual who is qualified on the physical characteristics of the territory over which the train is operating, who is qualified on the signal systems on the territory, and who has been trained to apply the emergency brake if necessary to stop a train (e.g., a conductor, an additional locomotive engineer, or a Metro-North transportation supervisor). A qualified crewmember assigned to the train may serve as the additional qualified employee in a train's control compartment when a train traverses such locations. On trains where the control cab locomotive configuration does not permit a second qualified person to occupy the control compartment, the additional qualified person shall occupy the space immediately adjacent to the control compartment and maintain constant communication with the train's locomotive engineer. The additional qualified employee must be in (or adjacent to, where necessary) the control compartment well in advance of reaching the location where the speed reduction occurs in order to provide sufficient time to take action to control train speeds if necessary.

FRA is requiring this action as the December 1 accident demonstrates that Metro-North's existing ATC system and other existing overspeed protections are not sufficient to prevent dangerous overspeed events. The additional qualified employee located in the control compartment of Metro-North's passenger trains can take immediate actions to slow or stop passenger trains where necessary when the train's locomotive engineer or the existing ATC system fails to do so.

Metro-North must comply with this provision of the EO until it has developed and complied with an action plan to make appropriate modifications to its existing ATC system or other signal systems to enable warning and enforcement of relevant passenger train speed restrictions. FRA notes that other railroads have coded their ATC systems to prevent overspeed events from occurring at locations where civil or other speed restrictions occur. FRA is ordering Metro-North to take similar steps to prevent accidents similar to the December 1 accident from occurring in the future if a locomotive engineer fails to take actions to appropriately slow or stop a passenger train.

**FINDING AND ORDER**

FRA recognizes that passenger rail transportation is generally extremely safe. However, FRA finds that the recent December 1, 2013, accident on Metro-North and the lack of overspeed protections in place on Metro-North's system create an emergency situation involving a hazard of death, personal injury, or significant harm to the environment. 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:

1. Metro-North shall survey its entire system and identify each main track location where there is a reduction of more than 20 mph from the maximum authorized

operating speed for passenger trains (identified locations), and provide a list of each location to the FRA Associate Administrator for Railroad Safety/Chief Safety Officer (Associate Administrator) by December 10, 2013.

2. Metro-North shall develop an action plan that accomplishes each of the following:
   a. Identifies appropriate modifications to Metro-North's existing ATC system or other signal systems to enable warning and enforcement of passenger train speeds at the identified locations.
   b. Contains milestones and target dates for implementing each identified modification to Metro-North's existing ATC system or other signal systems to enable warning and enforcement of passenger train speeds at the identified locations.
3. The action plan must be submitted to the Associate Administrator not later than December 31, 2013. FRA will review and approve, approve with conditions, or disapprove Metro-North's action plan within 30 days of the plan's submission to FRA.
4. Once FRA approves its action plan, Metro-North must make all identified modifications to the existing ATC system or other signal systems in the timeframes and manner that comply with all conditions that FRA places on its approval of Metro-North's action plan.
5. As soon as possible, but not later than December 10, 2013, all passenger train movements at the identified locations shall be made with at least two qualified persons in the cab of the train's controlling locomotive[10] until all modifications to

[10] Whether the cab of a conventional locomotive or control compartment of a control cab locomotive when the train is being operated in a push-pull configuration.

Metro-North's existing ATC system or other signal systems have been completed to enable warning and enforcement of passenger train speed. On trains where the control cab locomotive configuration does not permit a second qualified person to occupy the control compartment, the additional qualified person shall occupy the space immediately adjacent to the control compartment and maintain constant communication with the train's locomotive engineer. The additional qualified employee must be present well in advance of reaching each identified location in order to take action to control train speed if necessary. For purposes of this requirement, "qualified" means that that an employee is qualified on the physical characteristics of the territory, is qualified on the signal systems of the territory, and has been trained to apply the train's emergency brake to stop or slow the train as necessary to comply with relevant railroad operating rules or applicable Federal railroad safety regulations.

Nothing in this Order precludes FRA from using any of the other enforcement tools available to the agency under its regulatory authority to address non-compliance with the Federal railroad safety laws and regulations by Metro-North. FRA is planning to conduct an extensive investigation of Metro-North's safety compliance. If necessary, FRA may issue additional emergency orders or compliance orders, impose civil penalties against Metro-North (individuals may be liable for civil penalties for willful violations of the Federal railroad safety laws and regulations), or disqualify individuals from performing safety-sensitive functions. In addition, FRA reemphasizes the discussion in the agency's December 3, 2013, letter to the New York Metropolitan Transportation Authority, directing Metro-North to update FRA on the progress of the pending safety

stand-down that will be conducted by the railroad, and also to immediately implement a confidential close call reporting system.

**RELIEF**

Metro-North may petition for special approval to take actions not in accordance with this EO. Such petitions shall be submitted to the 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 Metro-North 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 compliance with this EO.

**PENALTIES**

Any violation of this EO 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**

This EO is effective upon receipt of an electronic copy of it by Metro-North, and Metro-North shall immediately initiate steps to implement this Order in order to comply

with the Order's deadlines. Metro-North must complete and submit its action plan to FRA no later than December 31, 2013. Notice of this EO will be given by providing Metro-North with a copy of the Order, and 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 5 U.S.C. 554. 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.

Issued in Washington, D.C. on December 6, 2013.

Joseph C. Szabo
Administrator

[FR Doc. 2013-29574 Filed 12/10/2013 at 8:45 am; Publication Date: 12/11/2013]