



National Transportation Safety Board

Office of Railroad, Pipeline, and Hazardous Materials Investigations
Washington, D.C. 20594

Railroad Operations Factual Report of Investigation

DCA17FR009
Long Island Rail Road
Employee Fatality
Queens Village, New York
June 10, 2017

June 21, 2018

Railroad Operations Factual

A. Accident

Location: Queens Village, New York
Train #1: 7623
Railroad: Long Island Rail Road
Date: June 10, 2017
Time: 10:12 a.m.¹
Fatalities: 1
NTSB #: DCA17FR010

B. Accident Summary

For a summary of the accident, refer to the *Accident Summary* report, within this docket.

C. Railroad Operation Group

Ted T. Turpin NTSB – Operations Group Chairman ██████████	Robert Maraldo NYS-DOT PTSB Supervisor, Rail Safety
Valerie Trichilo Investigations Manager -Transportation LIRR	Sean Fitzpatrick FRA
Chris DeRonde LIRR-Superintendent Train Movement	Don Hill Safety Task Force, BLET
Willie Bates SMART	

¹ All times in this report will be eastern daylight time.

Parties to the Operations Group include: Long Island Rail Road, Federal Railroad Administration, Department of Transportation State of New York, Brotherhood of Locomotive Engineers and Trainmen, and Sheet Metal, Air, Rail, Transportation Union.

Narrative

According to the Locomotive Engineer, his last station stop was Merillon Avenue (MP 17.6). Just after passing Floral Park station, he noticed workman near the track at the Queens interlocking. He said he blew the horn to warn the workman. One of the workman raised a handheld paddle to acknowledge his approach. As he arrived at the site of the workman, one of the workman leaned in towards his track. He blew the horn and placed the train in emergency. Simultaneously, he heard the train strike the individual.

Operating Documents

The crews were governed by the following operating documents:

- Operations Manual Long Island Rail Road which included:
 - Rules of the Operating Department, Third Edition (Effective May 22, 2017)
 - Transportation Department Safety Rules, (Effective September 4, 2012)
 - Regulations for Transportation of Hazardous Materials (Effective July, 2005)
 - Train Handling and Equipment Manuals (2012 Edition)
 - M3
 - M7
 - Diesel Passenger
 - E10/E15
 - Rescue & Assist Appendix
- General Order 301 - Long Island Rail Road Timetable and Special Instructions No. 3 (Effective May 22, 2017)
- Daily General Notice
- Daily Speed Restrictions Notices
- Daily Updated Chief Transportation Officer Notice
- Red Alert (if applicable)

Method of Operations

At Queens Village, LIRR trains were authorized by signal indications. The multiple main territory had numerous locations with interlocking controlled crossovers and branch line junctions. The railroad referred to this type of operation as 261 territory. Rule 261 was the operating rule that described how trains were authorized by signal indications in both directions on multiple tracks.

The accident happened within the Queens interlocking controlled by a block operator. The block operator was in a tower on the north side of the four main tracks east of the Queens Village passenger platform. Before establishing train movements and their routes, the intended train movement had to be coordinated and authorized by the train dispatcher located at the Movement Bureau at the Jamaica LIRR offices.

On the accident day there were additional passenger trains added to the schedule to service the nearby Belmont Stakes horserace.² On a regular Saturday from 9:00 a.m. to 10:12 a.m., there would have been 5 scheduled eastbound trains and 7 westbound trains. On the day of the accident there was 2 additional eastbound trains and 1 additional westbound train during the same timeframe.

Crew Information

Engineer

The engineer had hired on the railroad in November 2014. After one year of training, he was promoted to locomotive engineer in November 2015.

On the day of the accident he was scheduled to make two roundtrips starting at 2:19 a.m. His second roundtrip of the day was from West Side Storage Yard to Huntington Station. The accident happened when he was on the return trip, from Huntington, on his last train of the day at 10:12 a.m.

During the engineer's interview, he explained the other crew members were positioned throughout the train consist when the accident occurred. No other crew member was near him or observed the accident.

LIRR supervisors had recorded the locomotive engineer's rules compliance 53 times in the previous year. Only one of the records noted a non-compliance when the engineer self-reported missing a station stop on May 26, 2016. There was one entry for proper use of the horn and seven entries where he had been observed being vigilant with his forward observations.

The phone records showed that the engineer had not been using his phone at the time of the accident. Further, the results from the post-accident drug and alcohol tests were negative.

Train Dispatchers and Block Operators

Two block operators and a train dispatcher were in the Queen's interlocking tower at the time of the accident. Normally there was only one block operator. However, with the increased train movements servicing the Belmont Stakes racing event, the LIRR decided to have additional personnel at the interlocking tower.

These employees were interviewed. All three said that they had not seen train 7623 before the accident. None of them said they discerned the train horn for 7623 from any other horn they had heard that morning. They did say they had seen the track workers working within Queens Interlocking. They did not take exception to the track workers not getting protection on the tracks. It was not unusual for track workers to provide their own protection while doing minor repairs and inspections.

Event Recorder

Initial readout of the event recorder was done on scene; however, the data SD card was sent to RE for the final download and report.

During the on-scene review, the event recorder showed the train had reached 78 mph (maximum authorized speed was 80 mph) for a sustained time before striking the employee. According to the preliminary event recorder data, the horn had been sounded 2.46 miles before the impact for a grade crossing just west of New Hyde Park Station. The next indication on the event

² At the compass North end of the Queens Village interlocking, a short branch line routed trains eastward to the Belmont racetrack.

recorder of the horn being sounded was near the point of impact with the employee. (See Mechanical Section)

Mechanical

Train 7623– 12 car train MU-7 Equipment

Train 7623 consisted of twelve electrically propelled MU locomotives; model M7, built by Bombardier 2002-2005. EMU M-7 locomotives are semi-permanently coupled and operate in married pairs of A & B cars with 2 trucks per car, power for the equipment is provided by a 650-volt system transmitted through a third rail to current collectors located on both sides of each truck.

Train Consist:

Lead 7695 / 7696
7403 / 7404
7417 / 7418
7625 / 7626
7049 / 7050
7743 / 7744

Equipment specifications:

Weight & Capacity for A-Cars:

Weight (empty) 129,500 lbs.
Full Seated 145,650 lbs.
Crush load 166,935 lbs.
Number seated passengers 110/112
Number standees 129

Weight & Capacity for B-Cars:

Weight (empty) 129,240 lbs.
Full Seated 145,650 lbs.
Crush load 166,935 lbs.
Number seated passengers 101
Number standees 132

The FRA performed inspections and air brake testing following the accident. FRA reported that the train had no defects and passed all required brake tests. Further, the locomotive engineer had stated in his interview that the train had been operating properly.

Event Recorder - Train Horn

The locomotive engineer had stated in his interview that he had used the horn to warn the track workers, yet the event recorder had not shown significant use of the horn approaching the location of the track workers. The track workers had also stated that they heard the horn as the

train approached. The event recorder data indicated that the horn was only activated just prior to the accident.

The FRA and LIRR mechanical department performed testing on the pressure switch that activates the event recorder horn indication. When the horn was tested on a stationary train the event recorder registered every use. However, when additional testing was performed while the train was in motion, the event recorder failed to record every time the horn was used. The FRA and LIRR discovered that when the train was in motion the pressure switch that registers activity by the event recorder, responded intermittently.

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