

INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE PENNSYLVANIA RAILROAD NEAR HIGHSPIRE, PA., ON OCTOBER 14, 1923.

November 28, 1923.

To the Commission

On October 14, 1923, there was a rear-end collision between a passenger train and an express train on the Pennsylvania Railroad near Highspire, Pa., resulting in the injury of 14 passengers and 5 employees

Location and method of operation.

This accident occurred on that part of the Philadelphia Division extending between EV Block Station and NO Block Station, a distance of 58.1 miles, in the vicinity of the point of accident this is a four-track line, the freight tracks being a short distance north of the passenger tracks, over which trains are operated by time-table, train orders, and an automatic block-signal system. The accident occurred about 1 mile west of Highspire; approaching this point from the east there are 3,800 feet of tangent, followed by a curve of $0^{\circ} 3'$ to the right 2,600 feet in length, the accident occurring on this curve at a point about 1,220 feet from its eastern end. The grade for westbound trains is slightly descending to Highspire, then is slightly ascending to and beyond the point of accident.

The automatic block signals are of the three-position, upper-quadrant type, the night indications are red, yellow, and green, for stop, caution, and proceed, respectively. Westbound signal 985 is located about 4,230 feet east of the point of accident, while 4,435 feet farther east is located signal 975, signal 982 is located 483 feet west of the point of accident. Under the rules, when an automatic block-signal displays a caution indication, trains must approach the next home signal prepared to stop, the rules also provide that block signals control the use of the blocks, but, unless otherwise provided, do not supersede the superiority of trains, nor dispense with the use or observance of other signals whenever and wherever they may be required. The view of both signals is unobstructed in clear weather, but there was a dense fog at the time of the accident, which occurred at about 3.10 a. m.

Description

Westbound passenger train No. 3 consisted of 1 express car, 2 baggage cars, 3 chair cars, and 3 Pullman sleeping cars, all of steel construction, hauled by engine 3760, and was in charge of Conductor Thompson and Engineman Shunk. The train passed Royalton, the last open office, 3.7 miles east of Highspire, at 2.52 a. m., five minutes late, and on reaching a point 4,250 feet west of signal 985, while traveling at a speed estimated to have been between 5 and 10 miles an hour, its rear end was struck by extra 3379.

Westbound express train extra 3379 consisted of 12 express cars and a caboose, hauled by engine 3379, and was in charge of Conductor Yendig and Engineman ^{man} Smith. The express cars were of wooden construction, while the caboose was of steel construction. The train passed Royalton at 3.04 a. m., passed signals 975, and 985, passed over a lighted fuse~~l~~ and while traveling at a speed estimated to have been between 30 and 40 miles an hour collided with train No. 3.

Train No. 3 was shoved for and about five car lengths, the rear car being quite badly damaged. The head end of engine 3379 was badly damaged, while the tender was derailed; the first two cars in this train were practically destroyed, and the next two cars were considerably damaged.

Summary of evidence.

Engineman Shunk and Fireman Dressner, of train No. 3, stated it was very foggy en route, that when their train passed signal 975 a caution indication was displayed and the speed was reduced accordingly; signal 985 was also displaying a caution indication, and the train continued to move at a speed of about 10 miles an hour. The following signal, 992, was observed to be displaying a clear indication, the engineman began to work steam, and at about this time the accident occurred. Engineman Shunk said he could see signals when about three or four car lengths from them. Conductor Thompson and Head Brakeman Hibbs were riding in the fourth car from the head end and the fog was so dense that they both went out on the platform to watch for signal indications; the conductor estimated the speed at this time to have been about 5 miles an hour. Seeing the clear indication displayed by signal 992, they went back inside the car and the accident occurred just as the speed started to increase. Flagman Waters stated he first noticed his train reducing speed at a point about 2 miles east of Highspire; he was riding on the rear end of the train with full flagging equipment and saw signal 975 displaying a caution indication, but did not throw off a five-minute lighted fuse until a point about halfway between Highspire and the point of

accident was reached, or more than half a mile beyond signal 975, taking note of the time so as to know when to throw off the next one; he said he could see the burning fusee plainly for about a car length. Flagman Waters was unaware extra 3379 was following his train, and was still standing on the rear end when the accident occurred.

Engineman Smith, of extra 3379, stated that signal 975 was displaying a clear indication when his train passed it; he did not see signal 985, or the fusee thrown off by the flagman, and the first intimation he had of anything wrong was on seeing the markers on the rear end of train No. 3, when about three or four car lengths distant at which time he applied the air brakes in emergency, reducing the speed from about 50 miles an hour to between 30 and 40 miles an hour at the time of the accident. Engineman Smith stated the air brakes were tested and worked properly, and that the headlight was burning brightly. He explained his failure to see the lighted fusee by saying that this was probably due to the glare from the coke ovens in the immediate vicinity of the point of accident, and stated that it was a large flare, coming out of the stack of one of these ovens, that first enabled him to see the rear end of the train ahead. Engineman Smith admitted that the accident was caused by his failure to see signal 985. Fireman Gillums stated that prior to the accident the engineman had called the indication of a signal, and he answered him without seeing the indication displayed, he said he was putting in a fire when passing signal 985, and the first knowledge he had of anything wrong was when the air brakes were applied in emergency. Conductor Kendig stated he was riding in the caboose, standing up and facing the rear door, and just before the accident occurred he noticed that his train had passed over a lighted fusee. Flagman Bloom, of extra 3379, stated this fusee was on the 235th tie east of where the caboose of extra 3379 stopped.

Immediately after the accident signal 975 was displaying a caution indication and signal 985 a stop indication while subsequent tests showed them to be in proper working order.

Conclusions.

This accident was caused by the failure of Engineman Smith, of extra 3379, properly to observe and obey signal indications; a contributing cause was the failure of Flagman Waters, of train No. 3, properly to protect his train.

Engineman Smith admitted that he failed to see the indication displayed by automatic signal 985, or the lighted fusee, and on account of the fog he did not see the markers on the rear end of train No. 5 until glare from the stack of one of the coke ovens in the immediate vicinity lighted up the surrounding countryside, at this time the speed of his train was about 50 miles an hour, and although he immediately applied the air brakes in emergency it was too late to prevent the accident. Engineman Smith could not explain how he had passed signal 985, such a great distance without knowing it, although he thought the glare from the coke ovens might have affected his view of the fusee.

Rule 172 of the book of rules, reads in part as follows:

"When a train is moving under circumstances in which it may be overtaken by another train, the flagman must take such action as may be necessary to insure full protection. By night, or by day, when the view is obscured, lighted fusees must be thrown off at proper intervals."

Flagman Waters, of train No. 3, only partially complied with this rule. He was fully aware that the speed of his train began to be reduced at a point about 2 miles east of Highspire, and the indications are that it had been running a slow speed for a period of approximately 10 minutes, yet he did not throw off a lighted fusee until his train had reached a point about $2\frac{1}{2}$ miles from where he first noticed the speed being reduced.

Had Flagman Waters fully complied with this rule, throwing off fusees at proper intervals, this accident might have been prevented.

This accident again directs attention to the necessity for the use of automatic train-control devices which will intervene to stop a train whenever for any reason an engine or fails to observe or obey a stop indication. Had an adequate automatic train-control device been in use on this line, this accident could have been prevented.

All of the employees involved were experienced men. At the time of the accident none of the members of either crew had been on duty in violation of any of the provisions of the hours of service law.

Respectfully submitted,

W. P. BORLAND,
Director.