

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 SEWARD, PA., ON OCTOBER
14, 1925.

January 20, 1926.

To the Commission.

On October 14, 1925, there was a rear-end collision between two freight trains on the Pennsylvania Railroad near Seward, Pa., resulting in the death of one employee, and the injury of two employees.

Location and method of operation

This accident occurred on that part of the Pittsburgh Division extending between Pittsburgh and Altoona, Pa., a distance of 113.8 miles, a four-track line over which trains are operated by time-table, train orders, and an automatic block-signal system. The signals are of the three-position, upper-quadrant type, and are mounted on signal bridges which span all four tracks. The signals involved in this accident were those mounted on signal bridges 2822 and 2812, located 9,895 and 5,346 feet, respectively, west of SQ block station. The tracks are numbered from north to south as follows: 4, 3, 2, and 1, the accident occurring on track 1 at a point 3,354 feet west of SQ block station. Approaching this point from the west the track is tangent for about 1 mile, followed by a curve to the right of 0° 30' which is 855 feet in length, the accident occurring at the leaving end of this curve. The grade at the point of accident is slightly ascending for eastbound trains

It was dark and the weather was foggy at the time of the accident, which occurred at about 4.45 a.m.

Description

Eastbound freight train extra 1440 consisted of 49 cars and a caboose, hauled by engine 1440, and was in charge of Conductor Myers and Engineman Boyer. On reaching a point about $1\frac{1}{2}$ miles east of New Florence, which station is 8.2 miles west of SQ block station, the train stopped on account of the failure of the engine to steam properly, being overtaken by the following train, extra 3721. Extra 1440 then proceeded and after moving about a train length was again stopped for the same reason, while the following train was again flagged and stopped accordingly. At this point the crew of extra 3721 received instructions to cut off their engine and push extra 1440 to SQ block station, which was

done, the train arriving at this point at about 4.05 a.m., after which engine 3721 uncoupled and returned to its own train. While extra 1440 was still standing at this point its rear end was later struck by extra 3721.

Eastbound freight train extra 3721 consisted of 58 cars and a caboose, hauled by engine 3721, and was in charge of Conductor Eckhardt and Engineman Zink. Engine 3721 had helped extra 1440 to SQ block station and had returned and coupled to its train; it then proceeded, passed the signal on signal bridge 2822, which was displaying a caution indication, passed the signal on signal bridge 2812, which was displaying a stop indication, passed the flagman of extra 1440, and on reaching a point 1,992 feet east of signal bridge 2812, while traveling at a speed estimated to have been between 10 and 12 miles an hour, collided with the rear end of extra 1440.

Engine 3721 came to rest diagonally across track 1, badly damaged, but remained upright, four cars in this train, the first, ninth, tenth and eleventh, were derailed and damaged. The caboose of extra 1440 was demolished; the first three cars ahead of the caboose were derailed, one of these being overturned and another being destroyed. The employee killed was the conductor of extra 1440, who was in the caboose at the time of the accident.

Summary of evidence

Flagman Sauers, of extra 1440, stated that after being pushed to SQ block station he uncoupled engine 3721 from the rear of his train and that engine returned to its own train. He then started back to protect his train, stopped to get a drink of water at a point about 12 car-lengths from the caboose, and on reaching a point about 30 car-lengths from the caboose he placed torpedoes on the rail. Some time afterwards, while in this approximate location, he saw the headlight of extra 3721 approaching, as well as the headlight of a passenger train on track 3. He then picked up the torpedoes, thinking the engineman of extra 3721 knew he was there, and walked back an additional distance of about five car-lengths, placing him at a point he thought was about 1,200 feet from his caboose. He began giving stop signals with his lantern when extra 3721 had reached a point about 50 car-lengths from him, and when he saw the train getting closer, no attempt to stop being made, he lighted a five-minute red fusee and gave stop signals with both the lantern and the fusee; at this time it was too late to replace the torpedoes on the rail. Flagman Sauers said that his flagging signals were not acknowledged and that he did not see any one on engine 3721 when it passed him, at which time he shouted in order to attract the attention of the engine crew. After the accident Fireman Robertson, of extra 3721, told him he was putting coal in the conveyor and when he turned

around he saw the reflection of the fusee and called to Engineman Zink. He also said that while at SQ block station, just prior to the accident, the weather conditions did not materially interfere with his range of vision and he could see the rear end of his caboose from the point where he was flagging. Flagman Sauers further stated that when he flagged extra 3721 for the first time, just east of New Florence, it was very foggy, his range of vision being restricted to about 10 car-lengths, that he was standing just east of an automatic block signal which was displaying a stop indication, and in making this stop extra 3721 ran by the block signal about the length of the engine and one car.

Engineman Boyer and Fireman Powers, of extra 1440, stated that they experienced no difficulty in observing signal indications when approaching SQ block station, while Flagman Sauers said the signal on signal bridge 2812 was displaying a stop indication when the caboose passed it at this time; immediately after the accident Head Brakeman Bocker, also of extra 1440, observed that this signal was still displaying a stop indication.

Engineman Zink, of extra 3721, said that when proceeding toward SQ block station with his own train after having pushed extra 1440 to that point he found clear indications being displayed by each of the various automatic signals. The speed of his train was about 15 or 18 miles an hour when it reached signal bridge 2812, at which time he had his head out of the cab window and was able to see the signal when about one car-length from it. He said this signal was clear, that he called its indication, and that Fireman Robertson answered in the affirmative. Engineman Zink stated that his headlight was burning; but that he did not see Flagman Sauers, the fusee, or the rear end of extra 1440, and that he was working a light throttle when his train struck the caboose, at which time he estimated its speed to have been between 10 and 12 miles an hour. Engineman Zink further stated that it was foggy, that steam was leaking from both cylinder heads and that it was difficult to see the signal indications unless the speed was increased to 25 or 30 miles an hour, while at the time his engine pushed extra 1440 to SQ block station he could not see the caboose ahead of his engine, he felt certain, however, that had Flagman Sauers been back with a lighted fusee he would have seen it regardless of the fog and steam leaks, which restricted his vision to about two car-lengths. He knew exactly where he had left the rear end of extra 1440, and had in mind that the train might still be standing at that point, but he did not know whether he was looking ahead or engaged with the injector at the time of the accident. Engineman Zink admitted that his engine ran by the signal about one car-length when he was flagged the first time, just east of New Florence. He further stated that he had never previously encountered a false-

clear signal indication, and while he was thoroughly satisfied in his own mind that all the signals he encountered just prior to the accident were displaying proceed indications, and that he properly read them, yet in view of the evidence and the tests made of the signals subsequent to the accident which showed the signals to be operating properly, he thought he must have made a mistake in reading the indications displayed on signal bridges 2822 and 2812. He also said that if there was a burning fusee under his train after the accident it must have been placed there after his train had passed that particular point or he would have seen it.

Fireman Robertson, of extra 3721, stated that there were steam leaks on the engine while the weather was foggy, and that he did not actually see the indications displayed by the signals on signal bridges 2822 and 2812, although he answered when Engineman Zink called them as clear. Immediately after the accident he found that he could see back along the train about 12 car-lengths, and he said he saw a burning fusee under the train at about this point, which he imagined his train had passed over. He also saw the flagman cross over the train toward track 2, about at the location of the burning fusee, the flagman then coming up to where Fireman Robertson was standing. He told Flagman Sauers he saw the reflection of the fusee, but did not intend to convey the impression he had seen it at the time his train passed it, for this was not the case.

Conductor Eckhardt, Head Brakeman Croushore, and Flagman Calhoun, of extra 3721, were riding in the caboose and were unaware of anything wrong until the accident occurred. Conductor Eckhardt stated that immediately after the accident he found that his range of vision was restricted to about 10 car-lengths, owing to the fog. He immediately started at a rapid pace toward the head end of his train and on reaching a point about 10 or 15 car-lengths from the caboose of his 58-car train, about 1½ minutes after the accident, he met Flagman Sauers, who had a red lantern and a white lantern, and the flagman informed him of the accident. Conductor Eckhardt also saw the signal on signal bridge 2812 displaying a stop indication after the accident. Head Brakeman Croushore stated that the caboose of his train stopped right under the signal on signal bridge 2812, and that this signal was displaying a stop indication. He said he could see a distance of about 40 car-lengths along the train, and that when going back to protect the train by flag, the regular flagman having been injured as a result of the accident, he found that after going back a distance of 50 or 60 car-lengths he could see the signal and also the rear of his caboose. Head Brakeman Croushore further stated that en route to New Florence he had been riding on the engine and had noticed steam leaks, on both sides of the engine, which interfered with the view of signal indications.

Engineman McConnell, of train No. 20, stated that he passed extra 3721 just east of Seward, which is half way between New Florence and SQ block station, shortly before the accident occurred, at which time his train was traveling at a speed of about 70 miles an hour and extra 3721 at a speed of about 15 or 18 miles an hour. He looked across from track 3 at the signal indications displayed for the other tracks, as is his custom, and noticed that the signals on signal bridges 2822 and 2812 displayed caution and stop indications, respectively, for track 1. He also saw the markers on the rear of extra 1440, and noticed Flagman Sauers, about six or eight car-lengths in the rear of the caboose of extra 1440, walking back with his lanterns toward extra 3721. There was a fog but it appeared to be rather high in this particular locality; he estimated he could see the signals on track 3 a distance of 6 or 8 times the length of his engine, and that the rear end of extra 3721 was visible a distance of about 15 car-lengths.

Tests of the signals involved made subsequent to the accident disclosed them to be in proper working order.

Conclusions

This accident was caused by the failure of Engineman Zink, of extra 3721, properly to observe and obey signal indications.

Engineman Zink was positive he received clear signal indications but said he did not see the flagman, his fusee, or the rear end of the train ahead, the accident occurring while he was still working steam. Not only did all the evidence indicate that the signals were displaying the proper indications, caution at signal bridge 2822 and stop at signal bridge 2812, but Engineman McConnell, who was passing on track 3, said he saw the flagman going back to protect the rear of extra 1440. It is a matter of conjecture as to the extent to which the steam leaks obscured the view of Engineman Zink, but while they might have restricted his view very materially this circumstance would not explain how he could see the indications on the signal bridges and call them clear when as a matter of fact one was displaying a caution indication and the other a stop indication. It seems clearly apparent either that Engineman Zink passed the signals in question without observing their indications, or else that he failed to obey their indications; in either event he is primarily responsible for the occurrence of this accident.

Under the flagging rule of this railroad the use of torpedoes is mandatory; Flagman Sauers said he put down torpedoes, but he picked them up when he saw extra 3721 approaching, supposing that the engineman of that train knew he was there and was fully aware of the situation. Flagman

Sauers was not justified in violating the flagging rule in this manner and had he left the torpedoes where he put them it is possible their explosion would have aroused Engineman Zink to the situation in time to have enabled him to stop his train. There was a doubt as to whether Flagman Sauers went back a sufficient distance to provide proper flag protection but as Engineman Zink admits he did not see either the flagman or the rear end of the train ahead, it does not appear that the distance the flagman went back from the caboose was a factor in the case.

Had an adequate automatic train stop or train control device been in use on this line, this accident would not have occurred.

The employees involved were experienced men, and at the time of the accident none of them had been on duty in violation of any of the provisions of the hours of service law

Respectfully submitted,

W. P. BOPLAND,

Director.