

INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE
INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE
PITTSBURGH & WEST VIRGINIA RAILWAY AT MINGO, OHIO,
ON SEPTEMBER 18, 1925.

January 12, 1926.

To the Commission:

On September 18, 1925, there was a head-end collision between two freight trains on the Pittsburgh & West Virginia Railway at Mingo, Ohio, which resulted in the death of one employee and the injury of eight employees.

Location and method of operation

This accident occurred on the main line of this railway which extends between Pittsburgh, Pa., and Pittsburgh Junction, Ohio, a distance of 59.8 miles; in the vicinity of the point of accident this is a single-track line over which trains are operated by time-table and train orders, no block-signal system being in use. The collision occurred within yard limits, at a point approximately 275 feet west of the station at Mingo and about 50 feet from the eastern portal of Coen tunnel; approaching this point from the west there are 3,400 feet of tangent and then a slight compound curve to the right 300 feet in length, followed by tangent track to the point of accident, about 980 feet distant, about 700 feet of this last-mentioned tangent being in Coen tunnel. Approaching from the east the track is tangent for more than 1 mile to the point of accident. From a point 3,800 feet east of the point of accident the grade is descending for westbound trains, being 0.70 per cent at the point of accident.

The passing track at Mingo is on the north side of the main track, the west switch being about 332 feet east of Coen tunnel and 100 feet east of the station. The station and the train-order signal are on the south side of the main track. The connection switch of the Wheeling & Lake Erie Railway is also on the south side of the main track, 577 feet east of the station. The switch stand is of the ground-throw type, with a lamp which is about 32 inches above the rails, while the lamp of the train-order signal is about 19 feet above the rails.

It was very foggy at the time of the accident, which occurred at 3.29 a.m.

Description

Eastbound freight train extra 901 consisted of 23 empty cars and a caboose, hauled by engine 901, and was in charge of Conductor Fithen and Engineman Donnelly. It departed from Pittsburgh Junction at 12.35 a.m., holding an order directing it to run extra to Mingo and also a copy of train order No. 2, addressed to westbound freight train second No. 95 which directed that train to run two hours late from Avella to Pittsburgh Junction. After setting out 22 of the cars in its train it arrived at New Alexandria, 4 miles from Mingo, where it backed in on the passing track to clear train second No. 95. While at this point, however, Conductor Fithen received from the dispatcher a copy of train order No. 16, which read as follows:

"Second 2nd Ninety five 95 Eng 918 Eng 1001
Assisting to Wayco meet Extra 901 east at Mingo
Second 2nd Ninety five 95 gets this order at
Mingo. Eng 901 Run extra Mingo to Avella."

This order was made complete at 3.14 a.m., and the train departed immediately afterwards, colliding with train second No. 95 in the tunnel at Mingo; the train had either stopped or nearly stopped when the accident occurred.

Westbound second-class freight train second No. 95 consisted of engine 918, 5 cars, engine 1001, 53 cars and a caboose, in the order named, and was in charge of Conductor Parker and Enginemen Daugherty and Duff. It departed from Rook, Pa., at 12.45 a.m., after receiving a copy of train order No. 2, previously mentioned, and passed Avella, the last open office, 9.4 miles from Mingo, at 3.08 a.m., according to the train sheet. Train second No. 95 passed the train-order signal at Mingo, which was displaying a stop indication, and collided with extra 901 while traveling at a speed variously estimated to have been from 15 to 35 miles an hour.

The force of the collision drove extra 901 backward a distance of about 545 feet. The caboose broke away from the one car which then remained in the train and as the air brakes on the caboose had been cut out it moved backward an additional distance of about 440 feet before being brought to a stop by means of the hand brakes. The two engines of train second No. 95 and the first 12 cars in the train were derailed and badly damaged. The employee killed was the flagman of extra 901.

Summary of evidence

Operator Polen, who was on duty at Mingo at the time of the accident, said he received train order No. 16 at 3.13 a.m., and was told by the dispatcher that if extra 901 got into clear before the arrival of train second No. 95 it would then be possible to take down the train order and allow train second No. 95 to pass without stopping. Operator Polen said that when a meet order is put out at the meeting point the operator is required to exercise extra precaution and to use fuses and torpedoes when necessary to insure proper delivery of the order; but in this case, after his conversation with the dispatcher, he thought extra 901 would be able to clear train second No. 95 in time and that it would not be necessary to stop that train and deliver the order and consequently he did not place torpedoes on the rail east of the station nor did he use a lighted fuse. On three occasions he went outside of the office to listen for the approach of the trains; the third time he went out he heard the whistle of extra 901 as that train approached Mingo, went back and cleared the eastbound train-order signal, and then hurriedly left the office to protect that train while it moved into clear on the passing track and while on his way eastward he saw the reflection of the headlight of train second No. 95. He said he went toward this train a distance of about 600 feet giving stop signals with his red lantern but his signals were not acknowledged, and he let the lead engine get within 10 feet of him before he got off the track and then started to run with the train, on the engineman's side, shouting "red block". He said the engines were working steam at this time, traveling at a speed of about 35 miles an hour, and thought steam on the lead engine was shut off at about the time it was opposite the station, the collision occurring immediately thereafter without the speed of the train having been materially reduced. When he returned to the station, about four minutes afterwards, he noted that the train-order signal was still displaying a stop indication for train second No. 95, and he said it was after this that Fireman Rudge entered the office. He thought he had told the dispatcher about the fog, but apparently was not certain about it.

Engineman Daugherty, of the lead engine of train second No. 95, said he made a heavy brake-pipe reduction as his train approached Mingo and after sounding the whistle for the train-order signal the head brakeman called "green block" and he immediately released the brakes, although he himself had not seen the train-order signal. At this time he heard the fireman and brakeman talking but could not understand what they were saying and before he could ask about it he saw the reflection of a headlight through the fog. He did not then look for the train-order signal but immediately placed the brake valve in the emergency position, sounded a

succession of short blasts on the whistle as a warning to the crew of the second engine, and jumped just before the engine entered the tunnel. He thought the train was running at a speed of about 15 or 18 miles an hour at the time of the collision. Engineman Daugherty further stated that he did not see the stop signals of the operator, although he had his head out of the cab window and was in a position to see any signals given.

Fireman Rudge, also of the lead engine, said he was sitting on his seat box with his head out of the window as his train approached Mingo; a very heavy fog was encountered about the time the train-order signal should have been visible and it was while he was endeavoring to locate the train-order signal that Flagman Boyce, of the helper engine, who was sitting on the seat box behind him, mistook a switch light indication for the train-order signal and called "green block" and although he immediately corrected the flagman, the engineman in the meantime had released the air brakes. It was very shortly after this that he saw the reflection of the headlight of an opposing train, called a warning, and jumped from the engine about the time it was passing the west end of the station; he had not seen the indication of the train-order signal. Immediately after regaining his feet he went into the station and saw two men, one of whom was armed, obviously the agent, the other apparently was the operator, although he was not acquainted with him. He said the operator was the one who had opened the double door at the east end of the station to let him enter, and was positive and emphatic in his statements that the operator was not out flagging as train second No. 95 approached Mingo, saying that if he had been flagging from a point approximately 600 feet from the station the operator would not have had time to crawl over or under the train and return to the office before he himself reached the office after jumping from a point opposite the station platform.

Flagman Boyce, of helper engine 1001, said the speed of his train had been reduced from 25 to 15 miles an hour as it approached Mingo; there had been some fog en route but as they approached the point of accident the fog became so dense that it was practically impossible to see a greater distance than three car-lengths. He was sitting on the fireman's seat box looking ahead and called "green block" when he saw what appeared to him as the train-order signal but it later developed that this was the switch target of the Wheeling & Lake Erie connection switch. Immediately after he had miscalled this indication Fireman Rudge corrected him, saying that it was a switch target. Head Brakeman Boyce did not know whether or not the engineman released the brakes when he miscalled the signal indication but when the fireman had corrected him the train was practically at the train-order signal, and it was at this time that the headlight of the opposing train was seen in the tunnel ahead.

The statements of Engineman Duff and of Fireman Stafford corroborated those of Engineman Daugherty as to the heavy fog at Mingo, both of these employees saying that their own engine was practically upon the train-order signal before its indication could be distinguished. Engineman Duff and Fireman Stafford were looking forward with their heads out of their respective windows as their train approached Mingo and both stated that they had not seen the stop signals which Operator Polen claimed to have given; their first warning of the collision was when Engineman Daugherty applied the air brakes in emergency and sounded a succession of short blasts on the engine whistle, the collision occurring before either realized what was transpiring.

The statements of Conductor Parker, Head Brakeman Christoff and Flagman Graham, of train second No. 95, all of whom were in the caboose at the time of the collision, brought out no additional facts of importance.

Engineman Donnelly, of extra 901, said he saw the reflection of the headlight of train second No. 95 just prior to the time his train entered the tunnel, concluded that it was waiting at Mingo and mentioned this fact to the fireman, but as his train neared the eastern portal of the tunnel he realized that train second No. 95 was rapidly approaching and that a collision was inevitable. He at once applied the air brakes and thought he had succeeded in bringing his train to a stop before the accident occurred. The statements of Fireman Davis were in effect the same as those of Engineman Donnelly and brought out no additional facts of importance, as was also the case with the statements made by the train crew.

Dispatcher Robinholt said that at the time Conductor Fithen, of extra 901, called from New Alexandria at 3.13 a.m., train second No. 95 had departed from Avella, 10 miles distant from Mingo, having left at 3.08 a.m. He said the running time of train second No. 95 between Avella and Mingo was 25 minutes while he estimated that extra 901 would be able to run from New Alexandria to Mingo in about 15 or 16 minutes, and although the clearance would necessarily be close by arranging the meet at that point yet it would save a delay of about 50 minutes to extra 901, the crew of which would then be enabled to reach Avella and go off duty within the 16-hour limit. Dispatcher Robinholt said he had put out similar orders before, and that on this occasion he did not caution the operator at Mingo in regard to taking the extra precautions as prescribed by rule 208 as Operator Polen was an experienced man and thoroughly familiar with the handling of orders of this kind. This rule reads in part as follows:

"Train orders that restrict the superiority of a train will not be issued for it at the point where such superiority is restricted, unless to avoid very serious delay and a 'stop' signal in addition to the 'fixed' signal is displayed and two torpedoes placed upon the rail. At night (or when owing to weather or other conditions day signals can not be plainly seen) also display a burning fusee."

The weather report Dispatcher Robinholt received from Avella at 12.01 a.m. showed that the weather was clear, and his statements indicated that he knew nothing about the condition of the weather at Mingo.

Agent Sturges, who was sleeping in the station at Mingo, had gotten up once or twice during the night and had been talking with Operator Polen; he said that about five minutes prior to the arrival of train second No. 95 he saw the operator go out with a red lantern and walk rapidly east toward that train, but did not however observe the approach of the train. Car Inspector Green, who had been sleeping in a small building across the track from the station and about 45 feet west of the train-order signal, said he had gotten up for some water when he heard train second No. 95 approaching. He looked out of a window to watch it, and while he did not pay particular attention to the weather he thought he could see the headlight when it was 300 or 400 yards distant. When the train was 150 yards distant he saw some one with a red lantern run out of the station and start toward the approaching train, which passed the station at a speed estimated by him to have been about 35 miles an hour.

Conclusions

This accident was caused by the failure of Operator Polen, on duty at Mingo, to take the precautions required by rule to insure delivery of a train order addressed to the superior train at the meeting point; by the failure of Engineman Daugherty, of the lead engine of train second No. 95, to have his train under proper control within yard limits and also when approaching a train-order signal which was obscured by fog; and by the error of Flagman Boyce, of helper engine 1001, in calling the indication of the train-order signal as clear when as a matter of fact all he had seen was the indication of a switch lamp.

Operator Polen was an experienced man, knew of the weather conditions prevailing, and knew of the precautions required in order to make sure of stopping the superior train at the meeting point, and while he said he went outside on several occasions to watch for the approach of

either of the trains involved, it appeared that he did not put down any torpedoes or place a fusee, in accordance with that part of rule 208 previously quoted. The investigation indicated, however, that Operator Polen's failure to observe the rule strictly may have been influenced to some extent by the instructions he had received from the dispatcher about watching the situation closely with a view to avoiding stopping train second No. 95 if possible. There was a discrepancy in the testimony as to the steps taken by Operator Polen to flag that train, but while no positive statement on this point can be made, yet it is not believed that he went as far eastward as he claimed was the case.

Engineman Daugherty said his train encountered the thick fog quite suddenly and that he at once applied the air brakes with a view to bringing his train under control; when told by Flagman Boyce that the train-order signal was displaying a clear indication he released the brakes but almost immediately he applied them in emergency on account of having seen the headlight of extra 901. Not only did the evidence indicate, however, that the fog extended some distance on each side of the signal, and that he could not possibly have stopped his train before running past the train-order signal, but his own statements showed he was paying scant attention to the yard-limit rule, which provides that all except first-class trains must run prepared to stop within half the range of vision.

Flagman Boyce observed a switch light less than 3 feet above the rails and mistook its indication for that of the train-order signal, approximately 19 feet above the rails. Had it not been for this error in calling the indication of the wrong signal Engineman Daugherty undoubtedly would not have released the brakes and probably would have been able so to reduce the speed of his train as to cause the result of the accident to have been much less serious, if, in fact, he could not have stopped in time to prevent its occurrence. Flagman Boyce had been employed on this railway about nine months, but had had considerable experience on other railroads.

The physical conditions existing in the vicinity of Mingo, including the prevalence of fogs and the restricted view of the train-order signal even in clear weather, introduce an element of danger in the issuance of an order of this character, restricting the right of the superior train at the meeting point, although it may be pointed out that in this particular case it did not appear that the dispatcher had any definite information concerning the presence of fog in that vicinity.

Attention is called to the fact that the air brakes were cut out on the caboose of extra 901, and apparently they had been in that condition for some time. In this particular case, since the train consisted only of an engine, tender, one car and caboose, this resulted in the operation of the train with only 75 per cent of the air brakes in use and under the control of the engineman; this is a violation of the Commission's order which requires a minimum of 85 per cent.

Had an adequate block-signal system been in use this accident probably would not have occurred; an adequate automatic train stop or train control device would have prevented it.

The majority of the employees involved were experienced men. The crew of train second No. 95 had been on duty between 3 and $3\frac{1}{2}$ hours after 11 hours or more off duty; the crew of extra 901 had been on duty about $13\frac{1}{2}$ hours after 18 hours or more off duty; the operator had been on duty about $3\frac{1}{2}$ hours after 16 hours off duty, and the dispatcher had been on duty about $4\frac{1}{3}$ hours after $15\frac{1}{2}$ hours off duty.

Respectfully submitted,

W. P. BORLAND,

Director.