

## INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE CHESTERPAKE & OHIO RAILWAY NEAR DAYTON, KY., ON AUGUST 15, 1924.

September 23, 1924.

To the Commission:

On August 15, 1924, there was a rear-end collision between a Big Four freight train and a C. & O. employees commuter train on the Chesapeake & Ohio Railway near Dayton, Ky., resulting in the death of one employee and the injury of one employee.

Location and method of operation.

This accident occurred on the Cincinnati Division, extending between Cincinnati, Ohio, and Russell, Ky., a distance of 141 miles; in the vicinity of the point of accident this is a double-track line over which trains are operated by time-table, train orders, and an automatic block-signal system. The accident occurred within yard limits, which extend a distance of 12.5 miles between Stevens and Covington, at a point about  $1\frac{1}{2}$  miles east of Dayton. Approaching this point from the east there are 1,260 feet of tangent, then a  $1^{\circ} 15'$  curve to the left 410 feet in length and 360 feet of tangent, followed by a  $2^{\circ} 50'$  curve to the left 340 feet in length, the accident occurring on this curve at a point 234 feet from its eastern end. The grade for westbound trains is 0.25 per cent ascending.

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. The westbound automatic signals in the immediate vicinity of the point of accident are tonnage signals, and under the rules may be passed when in the stop position by freight trains consisting of 25 cars or more, prepared to stop within range of vision. Westbound signal 6571 is located 2,211 feet east of the point of accident, while 2,673 feet farther east is located signal 6565; signal 6573 is located 44 feet west of the point of accident. The view of both of the signals east of the point of accident is unobstructed in clear weather for a considerable distance, but there was a dense fog at the time of the accident, which occurred at about 3.53 a.m.

### Description.

The westbound freight transfer, consisting of 41 cars and a caboose, hauled by Big Four engine 6535, was in charge of Conductor Linstead and Engineman Rubbick, Big Four employees. This train left Stevens at about 3.20 a.m., and on reaching a point 2,211 feet west of signal 6571, while traveling at a speed estimated to have been from 8 to 12 miles an hour, its rear end was struck by the employees commuter train.

The westbound employees commuter train, operating between K.C. Junction and C. S. Cabin, 0.8 and 12.9 miles respectively, east of Covington, under a special schedule, No. 112, consisted of one coach, hauled by engine 87, and was in charge of Conductor Mourer and Engineman Gregory. This train left C. S. Cabin just east of Stevens, at about 3.33 a.m., three minutes late, passed signal 6563, which was displaying a caution indication, passed signal 6571, which was displaying a stop indication, and while traveling at a speed estimated to have been about 20 miles an hour collided with the freight transfer.

After the collision both trains moved forward about 50 feet. The caboose of the freight transfer was demolished, while the car ahead of it was derailed and separated from the rest of the train about 10 feet; this train was also parted in several other places as a result of the accident. Engine 87 came to rest on its left side, its head end fouling the eastbound main track; its tender was also derailed but remained upright. The employee killed was the Big Four conductor, who was riding in the caboose at the time of the accident.

### Summary of evidence.

Engineman Gregory, of the commuter train, stated that he was thoroughly familiar with the territory in this vicinity but it was very foggy en route. Approaching signal 6563 the speed was about 25 miles an hour and he sounded the engine whistle; the steam from the whistle, smoke from some burning barges on the river, and fog, obscured the view through the front window to such an extent that he looked out of the side window and saw the base of the signal and thought it was at caution. He passed the next signal, 6571, without seeing it, at a speed of about 20 or 25 miles an hour, after which he partly closed the throttle, and on realizing definitely that the signal had been passed he called the fireman's attention and sounded a road crossing signal on the engine whistle, and closed the throttle further. Immediately afterwards the fireman gave warning of a caboose ahead and he applied the air brakes in emergency when the caboose

was about four car lengths distant, reducing the speed to about 15 miles an hour at the time of the accident. Conductor Gregory admitted that he was lost in the dense fog and that he should have reduced the speed of his train, but that transfer cuts are seldom encountered on this trip and he was not expecting to find one on this occasion.

Fireman Jackson, of the computer train, stated that he was riding on the seat box from a point about 3 miles east of where the accident occurred, he did not see signal 6570, was watching for signal 6571 and just prior to the collision the engineer inquired as to whether or not this signal had been passed and he informed him that he had not seen it. He saw the markers on the rear of the caboose when about 10 car lengths distant and gave warning of danger, and the engineer applied the air brakes in emergency. Fireman Jackson stated that he was unaware of his location in the fog, and while he felt that the engineer was also lost he did not concern on the high rate of speed at which the train was traveling in view of the existing weather conditions, 20 or 25 miles an hour, as he thought the engineer would probably think that he was attempting to instruct him as to how to operate the engine. Other members of the crew of the computer train were unaware of anything wrong until they felt the air brakes applied in emergency. Conductor Kocner stated that although he looked out occasionally coming up the hill he could not see the signal indications displayed through the fog, and he was satisfied that the engineer could not see them either, but he did not think it necessary to signal the engineer to reduce speed as he was of the impression the engineer knew what he was doing.

Fireman Schuler, of the freight transfer, stated he was riding inside the caboose at the time of the accident. He had been sitting in the stove and the first indication he had of anything wrong was when the accident occurred. The rear door of the caboose did not have a window in it, and he did not see the reflection from the red light of the following train as the door was closed. He estimated the speed of his train to have been about 10 or 12 miles an hour at the time of the accident, and said he had looked out about a minute previously but had not noticed any fog. Other members of the crew of the freight transfer were unaware that an accident had occurred until after investigating the cause of the stop; at first they were of the impression that the stop had been caused by a broken air hose. The engineer estimated the speed to have been 12 or 15 miles an hour just before the train was stopped or brought to a stop; the fireman said the speed was about 12 miles an hour and that he could see signals from 8 to 12 car lengths.

### Conclusions.

This accident was caused by the failure of the engineer of the commuter train properly to observe and obey automatic signal indications, and by the failure of the conductor and flagman of the freight transfer properly to protect their train.

Engineman Gregory thought he saw a caution indication displayed by signal 6563, such an indication was positive information that signal 6571 was then displaying a stop indication. Instead of reducing the speed of his train sufficiently to make sure of observing signal 6571, he merely eased off on the throttle, then became lost in the fog, and apparently did not realize that he had passed the signal until the fireman gave him warning of the train ahead. Engineman Gregory admitted that the speed of his train should have been reduced, but said transfer trains were seldom encountered on this trip and he was not therefore expecting to overtake another train.

The investigation indicates that Conductor Linstead and Flagman Schuler, of the freight transfer, took no measures whatever for the protection of their train, although it was moving at a low rate of speed and was likely to be overtaken by the commuter train, already due. In view of the dense fog they should have been particularly diligent in providing the necessary and proper protection; had lighted fuses been thrown off at regular intervals, it is probable that the engineer of the commuter train would have observed them in time to prevent the accident. This accident is also one which could have been prevented had an adequate automatic train stop or train control device been in use.

All of the employees involved were experienced men. At the time of the accident the crew of the commuter train had been on duty less than 6 hours, and the crew of the freight train less than 10-1/2 hours, prior to which they had been off duty 11 hours or more.

Respectfully submitted,

J. P. BORLAND,

Director.