INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE SEABOARD AIR LINE RAILWAY AT LAKEVIEW, N.C., ON MAY 21, 1924.

July 12, 1924.

To the Commission

On May 21, 1924, there was a rear-end collision between two freight trains on the Seaboard Air Line Railway near Lakeview, N. C., which resulted in the death of one employee, and the injury of one employee.

Location and method of operation

This accident occurred on that part of the North Carolina Division extending between Raleigh and Hamlet, N. C., a distance of 97.3 miles, in the vicinity of the point of accident this is a single-track line over which trains are operated by time-table, train orders, and a manual block-signal system. The accident occurred at a point approximately 1,640 feet south of Lakeview, a non-telegraph station located 34.4 miles north of Hamlet. Approaching the point of accident from the south the track is tangent a distance of 2,827 feet, then there is a 3° curve to the left 634 feet in length and 1,317 feet of tangent, followed by a 3° curve to the right 967 feet in length, the point of accident being on this curve 325 feet from its southern end. The grade for about 3 miles is descending for northbound trains, averaging about 1 per cent for the greater part of this distance, and is then level to the point of accident, 500 feet distant. An embankment beginning south of the curve on which the accident occurred and reaching a height of about 20 feet on the inside of the curve obscured the view of the cars in the first train, but the rear end of the caboose was visible to an approaching northbound train a distance of approximately 1,640 feet. The weather was clear at the time of the accident, which occurred at 3.55 p.m.

Description

Northbound third-class local freight train No. 56 consisted of 42 cars and a caboose, hauled by engine 300, and was in charge of Conductor Howell and Engineman Vaughan. It left Hamlet yard, its initial terminal, at 6.30 a m., 15 minutes late, departed from Southern Pines,

the last open telegraph office and 6.3 miles from the point of accident, at 1.28 p.m., two hours and six minutes late, picked up 7 camp cars at Forbes Spur, 4.2 miles south of the point of accident and arrived at Lakeview at about 3.10 p.m. It had been standing at this point about 45 minutes when the rear end of the train was struck by train first No. 72.

Northbound third-class through freight train first No. 72 consisted of 49 cars and a caboose, hauled by engine 355, and was in charge of Conductor Jeffreys and Engineman Howie. This train left Hamlet at 1.50 p.m., 3 hours and 20 minutes late, and at Southern Pines a permissive card, Form 356, letter B, and a clearance card, Form 23, were received, the permissive card reading as follows:

> "Conductor and Engineman 1-72
> Use permissive block from Southern Pines to Vass. Train No. 56 entered at 1.28 p.m."

Vass is the next station north of Lakeview, the distance between them being about 2.5 miles. Train first No. 72 passed Southern Pines at 3.41 p.m., according to the train sheet, 3 hours and 16 minutes late, without stopping, slowing down only to receive the permissive and clearance cards, and while traveling at a speed variously estimated to have been from 2 to 10 miles an hour collided with the rear of train No. 56 at Lakeview.

The caboose of train No. 56, of steel-underframe construction, was only slightly damaged; the two camp cars ahead of it, which were of wooden construction and built in 1898 and 1896, were totally demolished, as was the rear of the third car, also a camp car. There was no damage to the other equipment of either train. The employee killed was a laborer who was riding in one of the camp cars.

Summary of evidence

Conductor Howell, of train No. 56, stated that his train arrived at Lakeview at 3 10 p.m. After performing the necessary switching duties and other routine work, the engine was about to couple to the train preparatory to departing when he heard the action of the air brakes on the head end of the train, there was a slight noise and the appearance of dust at the rear of the train, and he realized that there had been a collision, as he had heard an engine whistle in the direction of the rear of his train only a short time previously. He looked at his watch about one

minute after the collision occurred and noted that it was then 3.50 p.m. At the time of the investigation, three days later, his watch was 1 minute and 35 seconds fast.

Flagman Flaherty, of train No. 58, said that before leaving Fleet, a station approximately 2 miles south of the point of accident, he placed two torpedoes on the east rail as a caution signal, and approaching Lakeview he dropped off the caboose as the train slowed down, walked back and placed two additional torpedoes on the east rail at a point which he counted as 78 rail-lengths from the rear of the caboose after it had been brought to a stop; he then returned to a point 36 rail-lengths from the caboose. Upon the approach of train first No. 72, which he had heard explode the torpedoes put down at Fleet, he put down one torpedo, lighted a fusee, and commenced to give stop signals with his red flag. He could not recall hearing the engineman of train first No. 72 acknowledge his stop signals or the torpedoes, although the speed of the train appeared to have been reduced to about 15 miles an hour at the time it passed him. The brakes were applied at that time, but did not appear to be properly checking the speed of the train.

Engineman Howie of train first No. 72, stated that before his train left Hamlet yard the usual brake test was made; he did not remember just what this test showed, but said the car inspector reported that the brakes on either 4 or 6 were cut out; the brakes operated efficiently, however, and no difficulty was experienced in making several station stops before reaching Southern Pines. At this point he received the permissive card and proceeded under caution, at about 3.39 p.m., used about 12 minutes between Southern Pines and Fleet, and estimated the speed of his train to have been between 20 and 25 miles an hour at the time of encountering the torpedoes at Fleet. A brake application was made at this time, being held for about a train length, after which the brakes were released and the brake-pipe pressure recharged to 70 pounds. Another reduction was made shortly afterwards and the brakes had just been released, at a speed of about 15 miles an hour, when two additional torpedoes were exploded, at a point about three telegraph poles south of a farm crossing which is about 1,350 feet from the point of accident; the fireman informed him at about this time that he saw a caboose ahead, and he applied the air brakes in emergency and opened the sanders. He himself saw the flagman at the crossing, with a fusee and flag, and he also said one torpedo was exploded near the crossing, while he saw the caboose when he had reached a point about two car-lengths south of the crossing. He estimated

the speed of his train at the time of the collision to have been about 3 miles an hour and expressed the opinion that his train would have been stopped within five car-lengths additional distance.

Fireman Dunbar and Head Brakeman McCollum, of train first No. 72, corroborated the testimony of Engineman Howie, except they both stated the accident occurred at 3.55 p.m., whereas Engineman Howie said it occurred at 4 p.m.

Conductor Jeffreys, of train first No. 72, stated that just prior to the emergency application of the air brakes approaching the point of accident, the air gauge in the caboose showed between 50 and 55 pounds brake-pipe pressure, the speed of his train at this time being between 12 and 15 miles an hour, he said the collision occurred at 3.56 p.m. Flagman Phifer, of train first No. 72, corroborated the testimony of Conductor Jeffreys except he said the accident occurred at 3.55 p.m.

Car Inspector McDuffie said he assisted in making the terminal test of the brakes in train first No. 72 at Hamlet yard and found the brakes on 46 cars operative while on 4 cars the brakes were cut out, this test including the caboose. Wrecking Foreman Bozette said he found the brakes cut out on six cars, these being scattered throughout the train.

Conclusions.

This accident was caused by the failure of Engineman Howie, of train first No. 72, properly to operate his train in accordance with the rules governing the use of permissive blocks.

Rules 308-A and 308-B, of the rules governing the use of the absolute and permissive manual block system, read as follows:

> "308-A. Enginemen and Conductors running under permissive block must handle train with great caution. Where view is obscured speed must be reduced to insure against collision with another train occupying the block.
>
> "308-B. The responsibility for colliding with trains in block when permissive card is given will rest with train receiving and moving under such permissive card. This does not relieve Conductor and Engineman of train occupying block from protecting as required by Rule No. 99."

According to the statements of Engineman Howie, he released the air brakes on a 1 per cent descending grade in a cut on a curve to the left where he had practically no view of the track ahead. The fireman was the first to give warning and Engineman Howie then applied the air brakes in emergency, but on account of the fact that he had just made a service application of the brakes it seems probable that he did not obtain an emergency effect. On account of the discrepancy in the figures as to time, it is impossible to say definitely at what average rate of speed the train had been operated from Southern Pines to the point of accident. The statements of the engineman indicate that the speed was 30 miles an hour on straight track, and that it was higher than he estimated it to have been when he approached the point of accident seems evident from the fact that he was unable to bring it to a stop, even with what probably amounted to only a service application, in the distance of about 1,600 feet within which the caboose of train No. 56 was visible. Had Engineman Howie kept the brakes applied until his engine had reached a point where he could have a view of the track ahead, then undoubtedly he would have kept them applied and the accident would have been avoided.

In view of the short curve which begins at a point about 400 feet south of where the flagman was located, and also in view of the long descending grade, Flagman Flaherty would have shown much better judgment had he gone back to a point on this curve where he would have been visible to a train on the 2,200-foot tangent approaching the curve, had he done so, he would have been seen by Engineman Howie in ample time to have enabled the engineman to bring his train to a stop.

The investigation of this accident disclosed the need of a more strict enforcement of the rules Particular reference is made to rules 561 and 562 of the Rules and Regulations for the Government of the Operating Department. These rules read as follows:

> "561. Conductors must know that the cars in their trains have been inspected, and that the brakes, heating apparatus, and air signal are in proper working order. Any omission on the part of the inspectors must be regarded as a danger to the train and at once be reported to the Superintendent.
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> "562. They must know that there is a sufficient number of good brakes in each train to insure safety, and that the rear car of every train has an efficient brake."

The testimony indicates that the train crew of train first No. 72 knew practically nothing concerning the condition of the air-brake equipment in their train and apparently it has not been the custom for the car inspectors to notify conductors concerning the condition of the air brakes. When the officials of a railway do not enforce the rules it is not to be expected that the employees under their supervision will render that obedience which should be required.

Had an automatic block-signal system been in use on this railway and had its indications been obeyed, this accident would not have occurred. This is also a type of accident which would have been prevented by an adequate system of automatic train control. The employees involved were experienced men; at the time of the accident the crew of train first No. 72 had been on duty about 7½ hours, previous to which they had been off duty 13 hours or more.

Respectfully submitted,

W. P. BORLAND

Director.