INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE BALTIMORE & OHIO RAILROAD AT BARD, W. VA , ON MAY 6, 1928.

June 19, 1928.

To the Commission:

On May 6, 1928, there was a rear-end collision between two freight trains on the Baltimore & Ohio Railroad at Bard, W. Va., resulting in the death of one employee.

Location and method of operation

This accident occurred on the Hartzel-Benwood Sub-division of the Wheeling Division, extending between Hartzel and Narrows, W. Va., a distance of 66 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 1,116 feet east of the east switch of the passing siding at Bard, approaching this point from the west there is a compound curve to the left 2,441 feet in length, the first part of which, 1260 feet in length, has a curvature of 1° 30', and the last part, 1,181 feet in length, a curvature of 8°, the accident occurring on the last part of the curve at a point about 150 feet from its eastern end. The grade is level for a distance of 4,620 feet and then it is 0.37 per cent descending for a distance of 990 feet to the point of accident and for some distance beyond that point. The point of accident was in a cut which is from 20 to 25 feet indepth and extends almost the entire length of the 8° portion of the curve, limiting the view from the fireman's side of the engine to about 400 feet.

There was a dense fog at the time of the accident, which occurred at about 3.10 a. m.

Description

Eastbound freight train extra 4879 consisted of 61 cars and a caboose, hauled by engine 4879, and was in charge of Conductor Henderson and Engineman Linn. This train passed Porters Falls, the last open office, 5.8 miles west of Bard, at 2.48 a. m., according to the train sheet,

under a caution block-signal indication, passed Bard, and shortly afterwards, while traveling at a speed estimated to have been between 10 and 18 miles per hour, the rear end of the train was struck by extra 4060.

Eastbound freight train extra 4060 consisted of 46 cars and a caboose, hauled by engine 4060, and was in charge of Conductor Goodwin and Engineman Mason. This train passed Porters Falls at 2.56 a. m., also under a caution block-signal indication, and collided with extra 4879 while traveling at a speed estimated to have been between 18 and 27 miles per hour.

The caboose of extra 4879 and the car ahead of it were derailed and slightly damaged. The front end of engine 4060 was slightly damaged and the engine truck was derailed. The employee killed was the conductor of extra 4879.

Summary of evidence

Considerable trouble had been experienced with the coal feeding properly through the stoker on engine 4879. Just after leaving Pine Grove, 13.5 miles west of Bard, the train broke in two, and Flagman Chambers went back to flag, remaining out for a considerable length of time and flagging the following train, extra 4060. During this time a bad-order car in extra 4879 was chained up and taken to Galmish, a short distance eastward, and set off, after which the train was recoupled, the flagman called in, and the train started. Extra 4879 approached Porters Falls prepared to stop, on account of the dense fog, but on receiving a caution block-signal indication Engineman Linn opened the throttle and increased the speed to about 20 miles per hour. Just after passing Minnie, 3 1 miles west of Bard, trouble was again experienced with the stoker, making it necessary to resort to hand firing occasionally, and by the time the stoker was again started by Fireman Roop and Head Brakeman Hardman the steam pressure and water were low and the speed of the train had been reduced, these employees estimating the speed to have been between 10 and 18 miles per hour at the time of the accident.

Flagman Chambers, of extra 4879, stated that the speed was reduced when the train was approaching Porters Falls and that he threw off a lighted fusee. The speed then increased, but after passing Minnie the speed decreased to about 12 miles per hour. Flagman Chambers, who then was engaged in finishing work on the reports, said that when the caboose of his train was about 40 cars lengths west of the west switch of the passing siding at Bard, this siding being 4,147.4 feet in length, he saw Conductor Henderson throw off

a lighted fusee, which burned properly. Flagman Chambers finished working on the reports and then went out on the rear platform of the caboose and looked back but did not see or hear any indication of the following train. He remained out on the rear of the caboose a short time and when about 10 car-lengths west of the east switch he saw the headlight of extra 4060, burning dimly through the dense fog. He lighted a fusee immediately and suggested that he get off but the conductor told him to throw off the fusee, which he did, this fusee struck in the middle of the track and was extinguished. Flagman Chambers then stepped inside the caboose door, secured another fusee and lighted it, and at about that time he saw that the approaching train was only about three car-lengths distant. He told Conductor Henderson that the latter had better get off, waved the fusee once or twice as a stop signal, and then got off himself, at which time the following train was less than a car-length distant. He said extra 4060 passed him at a speed of about 25 miles per hour, working steam. After the accident Flagman Chambers went back to a telephone booth in the vicinity of the east switch of the passing siding and reported the accident. On his return, while in company with Head Brakeman Johns, of extra 4060, the head brakeman found the extinguished fusee in the middle of the track, near the east switch of the passing siding, under one of the cars in extra 4060. Flagman Chambers admitted that he was fully aware that his train was traveling at a low rate of speed and that there was another train following closely.

Engineman Mason, of extra 4060, stated that at Jacksonburg, 4.4 miles west of Pine Grove, a message was handed on by the operator to the effect that extra 4879 was experiencing trouble east of Pine Grove, and on reaching Pine Grove the flagman of that train was picked up and extra 4060 was then brought to a stop a short distance behind extra 4879. Shortly afterwards extra 4879 departed and after waiting about four or five minutes extra 4060 followed and at Porters Falls a caution block-signal indication was received. Engineman Mason said that he sounded the engine whistle at the west switch of the passing siding at Bard, two long and two short blasts, and on reaching a point about halfway between the switches he shut off steam and worked a drifting throttle. While rounding the curve through the cut at a speed of 18 or 20 miles per hour Fireman Odell shouted a warning of danger and he immediately applied the air brakes in emergency and opened the sanders, and on looking out of the window he saw a caboose marker just before the accident occurred. He stated that the headlight on his engine was burning brightly, that the air brakes worked properly, and that he did not encounter any torpedoes or fusees. Engineman Mason acknowledged that he thought extra 4879 was out of the way and that he operated his train from Porters Falls to Bard, through a dense fog which restricted his range of vision to about four or five car-lengths, at a speed of about 25 miles per hour, although he was fully

aware that the rules require that under a caution block-signal indication trains should be operated under control, prepared to stop within range of vision. He admitted that he did not so operate his train, saying that he knew the train ahead was similar to his own train and that he never expected to overtake it; he also said he assumed that in the event extra 4879 slowed down or stopped it would be afforded proper rear-end protection.

The statements of Fireman Odell and Head Brakeman Johns corroborated in substance those of Engineman Mason, they said that the caboose of extra 4879 was from three to six car-lengths distant when they saw it through the fog and at that time Flagman Chambers was lighting a fusee. Head Brakeman Johns said that he knew extra 4060 was ahead of his train and that he was maintaining a proper lookout ahead. He saw both of the caboose markers before the flagman lighted the fusee and said that he and the fireman shouted a warning of danger at about the same time. Between Minnie and the point of accident no torpedoes or lighted fusees were encountered prior to the time the flagman lighted a fusee just before the accident occured. Head Brakeman Johns thought that the speed of his train was a little high in view of the existing conditions but said nothing about it to the engineman. After the accident Head Brakeman Johns, in company with Flagman Chambers, walked along the train with a lantern in order to find the fusee that the flagman said he had thrown off, and the head brakeman found a partly burned fusee under one of the cars in extra 4060 at a point about one car-length east of the east switch of the passing siding at Bard.

Conductor Goodwin and Flagman Ames were riding in the caboose and were unaware of anything wrong prior to the accident. Conductor Goodwin said that the only control he had over the speed of his train was to make an emergency application of the air brakes from the rear, which he said he would have done provided he had thought there was any great danger. Flagman Ames thought that the speed of his train was too high in view of the existing conditions.

Trainmaster Bull arrived at the scene of the accident about 1½ hours after its occurrence and took various measurements after the track had been cleared and extra 4060 had departed. The distance from the east switch of the passing siding at Bard to the point of accident was found to be 1,116 feet, a tape from the cap of a fusee was found at a point 325 feet east of the switch while the top of a fusee was found 626 feet east of the tape and the base or spike of a fusee was found 135 feet farther east, this last-mentioned point being 30 feet west of the point of accident. A burned fusee was also found at a point 1,350 feet west of the east switch, but there was no indication of a burned fusee in the vicinity of the point at which Flagman Chambers said Conductor Henderson threw off a lighted fusee, about 40 car-lengths

west of the west switch of the passing siding.

General order No. 42 establishes certain "slow orders," effective April 22, 1928, the speed limit fixed by this order for the territory between Hartzel and Brooklyn Junction, where the accident occurred, is 30 miles per hour for extra trains. The same general order, however, further provides that its provisions do not "replace slow orders covered by the current Wheeling Division time-tables," and the current time-table, effective May 22, 1927, establishes a speed limit of 25 miles per hour for extra trains between Hartzel and Brooklyn Junction.

Conclusions

This accident was caused by the failure of Engineman Mason, of extra 4060, to operate his train under proper control in view of the existing conditions, and by the failure of Conductor Henderson and Flagman Chambers, of extra 4879, properly to protect the rear of their train.

According to Engineman Mason's statements a permissive signal indication was received at Porters Falls, which authorized him to proceed prepared to stop short of a train or obstruction. He admitted that he did not so operate his train, in fact the evidence indicated that he actually exceeded the speed limit to some extent, although he knew his train was closely following extra 4879, in a dense fog, and on a curve to the left which entirely cut off his own view and which interfered materially with the view from the fireman's side of the engine. Engineman Mason said he had figured that extra 4879 had time enough to enable it to be out of the way and that he never expected to overtake it, and he assumed that in the event it slowed down or stopped it would be afforded proper rear-end protection. Had Engineman Mason operated his train under proper control, as required, especially in view of the existing conditions, the accident probably would have been averted.

Under the rules when a train is moving under circumstances in which it may be overtaken by another train, such action must be taken as may be necessary in order to insure full protection, by night, or by day when the view is obscured, lighted fusees are required to be thrown off at proper intervals. There was evidence to bear out the fact that Flagman Chambers took action toward affording protection but not until after he became aware of the presence of the following train, when the rear of his own train was in the vicinity of the east switch of the passing siding. At that time he lighted a fusee and threw it off but it was extinguished when it struck in the middle of the track, by the time he had secured and lighted another fusee, however, it was too late to avert the accident. No indication of a burned fusee was found anywhere in the vicinity of the point at which Flagman Chambers said a fusee had been thrown off

by Conductor Henderson, about 40 car-lengths west of the west switch of the passing siding. Flagman Chambers admitted that he was fully aware that another train was following closely and that his own train was traveling at a low rate of speed. Had he complied with the rules and thrown off lighted fusees at proper intervals, the accident probably would not have occurred. Why Conductor Henderson did not see to it that proper rear-end protection was afforded is not known, as he was killed in the accident.

The block within which this accident occurred extends from Porters Falls to Brooklyn Junction, a distance of 10.1 miles. Owing to yard work and the coaling of engines on the main track at the latter point, practically every eastbound freight movement is made through the block under a permissive signal indication. A check of the daily block record at Porters Falls for the month of April, 1928, with the exception of April 15, on which day there were 6 freight train movements, disclosed that there were 197 eastbound freight movements through the block, all of these movements were made under a permissive signal indication. Under such circumstances it is obvious that virtually no protection is afforded by the block system.

All of 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 BORLAND,

Director.