

INTERSTATE COMMERCE COMMISSION.

REPORT OF THE CHIEF OF THE BUREAU OF SAFETY IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE CHICAGO, ROCK ISLAND & PACIFIC RAILWAY AT KEATS, KANSAS, ON MAY 20, 1922.

June 12, 1922.

To the Commission:

On May 20, 1922, there was a rear-end collision between two freight trains on the Chicago, Rock Island & Pacific Railway at Keats, Kans., which resulted in the death of 2 passengers, and the injury of 3 employes and 1 trespasser.

Location and Method of Operation.

The sub-division on which this accident occurred extends between McFarland and Belleville, Kansas, a distance of 104.1 miles, and is a single-track line over which trains are operated by time-table and train orders, no block-signal system being in use. Trains moving in the same direction are required to keep 10 minutes apart, except when closing up at stations. The accident occurred at the station at Keats; approaching this point from the west the track is tangent for more than 2 miles, followed by a curve to the right of 19 which is 1,210 feet in length, and 790 feet of tangent extending to the point of accident. The grade is ascending, being 0.33 per cent at the point of accident. Under rule 85, third-class trains may pass and run ahead of second-class trains. The weather was clear at the time of the accident, which occurred at about 6:15 p. m.

Description.

Eastbound third-class freight train No. 86 consisted of 12 cars and a caboose, hauled by engine 1914, and was in charge of Conductor Walker and Engineman Parrish. It left Clay Center, 27.3 miles from Keats, at 4:10 p. m., 5 hours and 10 minutes late, and 45 minutes behind the schedule departing time of second-class train No. 994, which was following it. It left Riley, 8.6 miles from Keats, and the last open office, at 5:50 p. m., 55 minutes behind the schedule of train No. 994, and arrived at Keats at 8:08 p. m. While standing at this point it was struck by train No. 994.

Eastbound second-class freight train No. 994 consisted of 35 cars and a caboose, hauled by engine 2527, and was in charge of Conductor Johnson and Engineman T. J. Cunningham. It left Clay Center at 5:25 p. m., 3 hours late. This was the last open office passed by this train, the three intermediate telegraph stations having been closed for the night.

Train No. 994 made up 1 hour and 5 minutes on the run to Keats, being 55 minutes late when it collided with train No. 86 while traveling at a speed estimated to have been about 15 miles an hour.

The caboose and two cars of train No. 86 were derailed and practically demolished, while two other cars were considerably damaged. The front end of engine 2527 was considerably damaged, but the engine remained upright with only one pair of driving wheels derailed.

Summary of Evidence.

When train No. 86 approached Keats, Engineman Parrish reduced the speed of the train so that the flagman might get off at the western end of the curve in accordance with the usual practice, and after the flagman had gotten off and had given him the proceed signal, he pulled ahead to the station, some cars were cut off and switching done, and the engine was backing on to the train when train No. 994 was heard sounding the station whistle. Conductor Walker immediately gave his engineman a "hurry" back-up signal and the coupling had been made and the train moved ahead about a car-length when the collision occurred.

Under rule 99, a flagman is required to put down one torpedo one quarter of a mile from the rear of his train and then put down two torpedos three quarters of a mile from the train, after which he may return to the location of the single torpedo and remain there until recalled or relieved. Flagman Brown said he got off the caboose when it was about at the western end of the curve, went back to a telegraph pole which is located 2,252 feet from the point of accident and put down two torpedoes, and then started walking in towards his train planning to return to within one quarter of a mile of it and put down one torpedo, and also planning on not delaying his train when it was ready to proceed. When he had walked towards his train a distance of about 3 telegraph poles he looked around and saw train No. 994 approaching; he then started toward it giving stop signals. The approaching train sounded the station whistle, and he said he continued walking toward it giving stop signals but had not reached the two torpedoes when the train passed him. He estimated the interval between the time he saw train No. 994 and the time it passed him to have been 2 or 3 minutes. Flagman Brown said that he did not have time to comply with the requirements of rule 99. Conductor Walker thought the flagman had gotten off at a point about 2,000 feet from the station, and said the flagman was walking westward when he last saw him as the train went out of sight around the curve.

Engineman Cunningham, of train No. 994, said the speed of his train was about 35 miles an hour when his engine exploded two torpedoes, about opposite a whistling post which is 1,851 feet from the point of accident. He at once sounded two short blasts on the whistle, made a brake-pipe reduction estimated by him to have been from 7 to 10 pounds, and just afterwards saw the flagman standing near the eastern end of the curve, he then applied the air brakes in emergency reversed the engine, and opened the sanders. He estimated that the speed had been reduced from 35 miles an hour to 15 miles an hour at the time of the accident, and said he did not think he had obtained a full emergency effect of the air brakes on account of the previous service application. Fireman Davis said the flagman was about 5 poles distant and about 2 poles west of the eastern end of the curve, while Head Brakeman Gilbert, who was also riding on the engine, said the flagman was about 7 or 8 poles distant when he first saw him and about 100 feet west of a cattle guard which is close to the eastern end of the curve. Conductor Johnson of train No. 994 said the caboose of his train stopped on the curve near its eastern end and that Flagman Brown then was about 7 car-lengths east of the caboose.

Flagman Jones, of train No. 994, said Flagman Brown accompanied him to the point where the torpedoes had been placed on the rails, and they found one clamp on the rail which he thought was at a point about 2,000 feet from the point of accident. Trainmaster Breheny said that in company with Division Engineer C. C. Cunningham, he found mashed torpedoes and spots on the rail which had been discolored as a result of their explosion, the most westerly torpedo was at a point about 1,870 feet from the point of accident, while the other was 48 feet east of it.

Conclusions.

This accident was caused by the failure of Flagman Brown properly to protect his train.

Flagman Brown said he did not have time in which to protect his train as required by rule 99. It appears, however, that his train had been standing at Keats for at least 7 minutes and that he had gotten off probably 1,800 or 2,000 feet before it came to a stop. Full compliance with the rule therefore, would have required him to go back an additional distance of about 2,000 feet and considering the favorable weather conditions there is no apparent reason why this could not have been done. But it further appears that he made no attempt to go back the required distance, or as far as possible in the time at his disposal, but placed two torpedoes on the rail in the immediate vicinity of where he got off the caboose and then started in toward his train, having in mind preventing any delay when it was ready to proceed. Had Flagman Brown

complied with the rule, or had he even remained at the point where he placed the torpedoes on the rail, he would undoubtedly have been able to flag train No. 994 in time to avoid the accident.

The employes involved were experienced men. At the time of the accident the crew of train No. 86 had been on duty about 10 hours, previous to which all of them except the fireman had been off duty 9½ hours, the fireman had been off duty more than 2 days. The crew of train No. 994 had been on duty nearly 4 hours, previous to which they had been off duty 26 hours or more.

Respectfully submitted,

W. P. Borland.

Chief, Bureau of Safety.