IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE CHICAGO, MILWAUKEE & ST. PAUL RAILWAY AND THE MINNEAPOLIS & ST. LOUIS RAILROAD AT PERRY, IOWA, ON JULY 30, 1921.

September 23, 1921.

On July 30, 1921, there was a side collision between a freight train of the Chicago, Milwaukee & St. Paul Railway and a passenger train of the Minneapolis & St. Louis Railroad at the intersection of the tracks of these railroads at Perry, Iowa, which resulted in the death of 1 employee. This accident was investigated in conjunct - with representatives of the Board of R. .road Commissioners of the State of Iowa, and as a result of this investigation the Chief of the Bureau of Safety reports as follows:

Location and method of operation.

That part of the Iowa Division of the Chicago, Milwaukee & St. Paul Railway on which this accident occurred extends between Atkins Yard and Perry Yard, Iowa, a distance of 121.6 miles. It is a double-track line over which trains are operated by time-table, train orders, and an automatic block-signal system. Approaching the crossing from the east on this railway, there is about 1/2 mile of tangent, followed by a slight reverse curve extending to within about 200 feet of the crossing, beyond which point the track is tangent for some distance.

That part of the second district of the Central Division of the Minneapolis & St. Louis Railroad on which this accident occurred extends between Fort Dodge and Des

Moines, Iowa, a distance of 88.5 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. Approaching the point of accident from the west on this railroad the track is tangent for more than 1 mile, the grade is nearly 1 per cent descending for a distance of about 3,000 feet, followed by a slightly ascending grade extending beyond the point of accident, 2,000 feet distant.

Stop boards are located beside the tracks of each railroad, in both directions, 400 feet from the crossing. There is no interlocking plant at this point, and the automatic block system of the Chicago, Milwaukee & St. Paul Railway is not affected by the movement of trains of the Minneapolis & St. Louis Railroad over the crossing. The weather was foggy at the time of the accident, which occurred at about 6.10 a.m.

Description.

Chicago, Milwaukee & St. Paul westbound freight train extra 8653 consisted of 50 cars and a caboose, hauled by engine 8653, and was in charge of Conductor Clark and Engineman McLuen. It arrived at Perry at 6.00 a.m. and after stopping for the crossing proceeded over the crossing and again stopped at an automatic signal located about 685 feet west of the crossing. Extra 8653 then proceeded, en route to the yard, and was moving at a speed of about 4 miles an hour when the 23rd and 24th cars in

the train were struck on the crossing by Minneapolis & St Louis train No. 4.

Minneapolis & St. Louis eastbound passenger train No. 4 consisted of 1 mail car, 1 baggage car, 1 coach, 1 chair car, and 1 Pullman sleeping car, hauled by engine 216, and was in charge of Conductor McGiven and Engineman Brooks. It left Grand Junction, Iowa, 15.6 miles from Perry and the last scheduled stopping point, at 5.25 a.m., 3 minutes late, and struck extra 8653 on the crossing at Perry while traveling at a speed estimated by the crew of the passenger train to have been about 10 miles an hour.

The 22nd, 23rd and 24th cars of the freight train were derailed and considerably damaged, while engine 216 went part way down the embankment, but remained in an upright position. None of the cars in the passenger train was derailed. The employee killed was off duty, being struck by one of the derailed freight cars.

Summary of evidence.

The first the members of the crew of extra 8653 knew of the accident was when the air brakes on their train were applied in emergency, due to the breaking of the train line as a result of the accident. Their estimates indicated that on account of the fog the view was restricted to about 400 feet.

Engineman Brooks, of train No. 4, estimated the speed of his train in the vicinity of the mile board, which is about 1 mile from the crossing, to have been

about 40 miles an hour. According to his statements he made a slight application of the air brakes at this point and then released them, this being in the nature of a running test. When about 1/2 mile from the crossing he made an 18-pound application of the air brakes, keeping them applied until the speed was reduced to about 12 miles an hour. He said that if he had left the brakes applied the train would have stopped and not knowing that he was close to the crossing he released the brakes and had placed the brake valve in the running position when he saw the stop board and at once placed the brake valve in the emergency position and reversed the engine, he did not, however, think that the auxiliary reservoirs had had time to recharge. Engineman Brooks said he saw the freight train as his own train passed the stop board and estimated the speed of his train at this time at 12 miles an hour, and at about 10 miles an hour when the accident occurred.

Fireman Hammill said he had been working on the fire and did not know much about how the train was handled approaching the crossing except that he knew of two brake applications prior to the emergency application; the first of these was a running test about a mile from the crossing Conductor McGiven had felt the brakes applied in the vicinity of the mile board and then released, he did not notice any other application. The estimates of these employees as to the speed at the time of the accident agreed

with that of Engineman Brooks, while the statements of all the members of the crew were to the effect that the brakes were in proper operative condition at all times.

Conclusions.

This accident was caused by the failure of Engineman Brooks, of train No. 4, to operate his train so as to be able to stop at the stop board protecting the crossing.

According to Engineman Brooks, he had made an 18-pound application of the air brakes, reducing the speed of his train from 40 to about 12 miles an hour, and had then released the brakes because he did not know he was so close to the crossing. After releasing the brakes he saw the stop board and then made an emergency application and reversed the engine, but was only able to reduce the speed to 10 miles an hour. The condition of the wreckage indicates that the 10-mile-an-hour estimate as to the speed of train No. 4 at the time the accident occurred undoubtedly is the minimum estimate, and it is probable that the speed of the train was higher than has been estimated. Engineman Brooks was acquainted with the physical conditions surrounding this point, and there were land marks, including a bridge about 1/4 mile from the crossing, which should have enabled him to determine his location with sufficient accuracy to stop his train at the required point.

Investigation developed that the crossing at which this accident occurred is not protected by any form of fixed signals other than the stop boards located on

each railroad 400 feet from the crossing. Excluding frequent yard movements, there is an average movement over this crossing in a 24-hour period of 30 trains of the Chicago, Milwaukee & St. Paul Railway and 14 trains of the Minneapolis & St. Louis Railroad. Traffic of such density at a crossing of two railroads at grade warrants the installation of an interlocking plant, in order that full protection may be given to trains moving over the crossing.

All the employees involved were experienced men; none of them had been on duty in violation of any of the provisions of the hours of service law.