

In re investigation of an accident which occurred on the Pere Marquette Railway at Riverside, Mich., on September 20, 1917.

October 31, 1917.

On September 20, 1917, there was a head-end collision between a passenger train and a freight train on the Pere Marquette Railway at Riverside, Mich., which resulted in the death of 1 employee and injury to 4 employees and 15 passengers. After investigation of this accident, the Chief of the Bureau of Safety reports as follows:

The Chicago Division of the Pere Marquette Railway, upon which this accident occurred, is a single-track line, with the exception of two short stretches of double track, one of which extends from Riverside south to St. Joe River bridge, a distance of about $7\frac{1}{2}$ miles. The accident occurred on a single track about 1,950 feet north of the beginning of the double track at Riverside. Train movements over this line are governed by time-table and train orders transmitted by telephone, and between Riverside and Porter, Ind., a station 56 miles south, the line is equipped with automatic block signals, but between Riverside and Cross, a station $7\frac{1}{2}$ miles north, there are no block signals in use.

Southbound passenger train No. 16, consisting of locomotive 152, 1 express car, 1 combination baggage and smoking car and 1 coach, in charge of Conductor Kent and Engineman Mohr, left Grand Rapids, on route to New Buffalo, Mich., at 3.00 p.m., on time, and left Coloma, the last telegraph station before reaching the point of accident, at 6.36 p.m., 33 minutes late. The distance between Coloma and the point of accident is $3\frac{1}{2}$ miles. Train No. 16 covered this distance in 3 minutes and collided head-on with freight train extra 925 at 6.39 p.m. The speed of train No. 16 prior to the accident was about 70 miles an hour and it had been reduced to 30 or 40 miles an hour when the trains struck.

Northbound freight train extra 925 consisted of locomotive 925, 48 loaded cars, 1 empty car and a caboose, and was in charge of Conductor Stowe and Engineman Derrick. At Benton Harbor, which is located 5.84 miles south of Riverside, the crew received a clearance card and among others, train order No. 69, reading in part as follows:

"Engine 925 run extra, Benton Harbor to Waverly. *** All trains up to 5.50 p. m. have passed Riverside. No. 16 Eng. 152 has no signals."

After receiving this order, extra 925 left Benton Harbor at

6.10 p.m., this being the last telegraph station before reaching Riverside and the distance to Riverside was covered in about 26 minutes. The engineman overlooked the fact that train No. 16 did not pass them on the double track and ran by Riverside, colliding with train No. 16, as above stated, at 6.30 p.m. The speed of extra 925 at the time of the accident was estimated to have been between 5 and 8 miles an hour.

The locomotives of both trains were badly damaged, but remained on the track, the passenger locomotive telescoping the express car for a distance of about 11 feet. The tender of the freight locomotive landed on top of the first car of its train, which was a gondola car loaded with sand, this car being completely destroyed. The second, third and fourth cars of the freight train were also considerably damaged.

The switch point at the north end of the double track at Riverside is located directly in front of the telegraph office in the station, the station being located on the east side of the track while the train order signal is located on the west side of the track. The normal position of the train order signal is clear.

Approaching Riverside station from the south the track is straight for 1,500 feet and then beginning at the station and proceeding northward, there is a 2-degree curve to the left 1,560 feet in length, followed by 370 feet of tangent track to the point of collision. Approaching the point of collision from the north the track is straight for 4,900 feet. On the inside of the curve between Riverside station and the point of accident, there is a heavy growth of trees which restricts the view from an approaching northbound train to a distance of approximately 900 feet. The tangent north of this curve being approximately 1 mile in length, the vision of the engineman of a southbound train is not restricted to such a short distance. The locomotives of both trains involved in this accident were equipped with oil headlights which were in fair condition and burning at the time. The grade for northbound trains is slightly descending to the point of collision and slightly descending for southbound trains to within about 1,500 feet of the point of collision. The weather at the time of the accident was clear, but dark.

Engineman Mohr, of train No. 16, stated that approaching the point of accident he was running at a speed of 60 or 70 miles an hour. When he first saw the reflection of the headlight of extra 925 he thought it was an automobile on the highway which crosses the track at Riverside. When the trains came to within one-fourth of a mile apart he discovered that it was the headlight of a train and immediately applied the air brakes in emergency, reducing the speed to about 30 or 40 miles an hour when the collision occurred. He said that the air brakes were working properly and also that his headlight was burning and was in good condition.

Fireman Sweet, of train No. 16 stated that when he first saw the reflection of the headlight of extra 925 he also thought that it was the headlight of an automobile and that the two trains were no more than 15 or 20 car lengths apart when he first discovered that it was the headlight of a train. He then called it to the attention of the engineman who applied the brakes in emergency. He said that the brakes did not seem to take hold as well as they should have and that at two or three stations the train had run by, although he did not know what the difficulty was.

Conductor Kent, of train No. 16, stated that the first intimation he had of the accident was the application of the brakes. He also said that a test was made of the brakes before starting this trip and that they seemed to be working properly.

Engineman Derrick, of extra 925, stated that when he left Benton Harbor he understood that he was to meet train No. 16 before leaving the double track at Riverside; approaching Riverside he was assisting his fireman who was an inexperienced man and overlooked the fact that train No. 16 had not passed. He said that there was nothing in the rules which requires trains to stop at Riverside unless signalled to do so and that trains register at this station by means of a slip which the conductor throws off. Approaching Riverside there are two highway crossings and Engineman Derrick stated that he sounded the whistle for both of these. The switch at the end of the double track was in the clear position and the operator signalled him to proceed. He left Riverside at a speed of about 15 or 20 miles an hour and after going about 10 car lengths on the single track, it suddenly occurred to him that train No. 16 had not passed. He then applied the brakes in emergency, after which he saw train No. 16. He stated that the brakes worked properly and he succeeded in reducing the speed of his train to 5 or 6 miles an hour when the collision occurred. He thought he could see the headlight of train No. 16 a distance of about 10 car lengths. Engineman Derrick further stated that he was planning on getting to Watervliet for train No. 6 and that this train was more on his mind than was train No. 16.

Fireman Luce, of extra 925, stated that he expected his train would meet train No. 16 at Riverside and upon reaching that station supposed that train No. 16 had been met. The engineman asked him about the signal and switch and he told him that the switch was lined up and that the agent had given him a proceed signal with his lantern. He stated further that he was putting in a fire between the station and the point of accident and that the head brakeman who was killed in the collision was the first to see train No. 16, and called out to the engineman, "Here she comes." He felt the air being applied

from the rear of the train and at about the same time the engineman applied the brakes, but not until after train No. 16 had been seen. Fireman Luce further stated that at the time of the collision the speed of the train had been reduced from about 25 miles an hour to about 5 or 6 miles an hour.

Conductor Stove, of extra 925, stated that when he received the train orders and clearance card at Benton Harbor, he gave copies to the engineman, but did not wait to have him read them aloud and started back to see if the train was ready to start. He stated that upon the arrival of his train at Riverside, when the locomotive was about in front of the station and the caboose, in which he was riding, was about 50 car lengths therefrom, he stepped out on to the rear platform to see if train No. 16 was coming on to the double track. Not seeing it, he went into the caboose and applied the brakes; he stated that he did not open the valve wide at first, but opened it quite a little and then after going a short distance further, he opened it wide. He thought that the train had stopped or nearly so when the collision occurred.

Rear Brakeman Layman, of extra 925, stated that he was riding on the rear of the train looking for signals as his train approached Riverside. When the caboose was about 20 car lengths south of the station, the conductor, knowing that train No. 16 had not passed, applied the air brakes. The brakeman stated that he then went out on to the rear platform and saw the operator giving stop signals and he told the conductor. As the caboose passed the operator, the operator told him to stop the train quickly and he replied that the air was all on.

Operator Andrus at Riverside stated that prior to the arrival of extra 925, the switch at the north end of the double track was set for southbound movements and that the train order signal indicated clear. He stated that as extra 925 approached, the engineman sounded the whistle calling for the switch and he stepped over to the opposite side of the track from the station, opened the switch, and gave a proceed signal. While in the act of throwing the switch, he heard the dispatcher calling and as soon as he could get into communication with the dispatcher he was asked if extra 925 had arrived to which he replied, "Yes, they are going by." The operator then understood the dispatcher to say, "Stop them," and he jumped through the window and made every effort to stop them. He further stated that he knew that train No. 16 was late but did not know how much. He also said that northbound trains sometimes stop to register at Riverside but that sometimes they were cleared of the register by orders received at Benton Harbor.

This accident was caused by the failure of extra 925 to wait at the end of the double track at Riverside for train No. 16 which was overdue, for which Engineman Derrick and Conductor Stowe were responsible. The engineman admitted that he overlooked this train.

Rules 83 and 83(b) governing the movements of trains on the Pere Marquette Railway read as follows:

"83. A train must not leave its initial station or any division (or subdivision) or a junction, or pass from double to single track, until it has been ascertained whether all trains due, which are superior, or of the same class, have arrived or left."

"83(b). Conductors and enginemen of all trains must, unless otherwise provided, examine register books at such stations and obtain the information required by Rule 83. This information will be furnished the enginemen by the conductor on Form 196."

According to these rules extra 925 should have stopped at Riverside before passing from the double to the single track at that point and ascertained whether or not all southbound trains due had passed. Extra 925's running orders contained information that all trains due at Riverside up to 5.50 p.m. had passed that point, and this was accepted by the conductor and engineman as relieving them of the obligation to check the register; and this appears to have been customary practice at this point, although there is no rule or bulletin order specifically authorizing it. Train No. 16 is scheduled to pass Riverside at 6.10 p.m. and extra 925 passed there about 6.38 p.m. Had Engineman Derrick not held an order that all trains up to 5.50 p.m. have passed Riverside, he would in all probability have observed the requirement of rule 83(b) and brought his train to a stop before leaving the double track. By a general bulletin issued March 16, 1914, employees are directed that:

"the time table, book of rules, general orders and general notices must be rigidly observed, and the claim of 'customary practice' at variance therewith will not be accepted as an excuse for violation."

It would seem that the practice of clearing the register at Riverside by train order, and accepting such order as authority to pass from double to single track without stopping, is at variance with the direction of rules 83 and 83(b), in the absence of any rule or bulletin specifically authorizing such practice. In any event, had the requirements of rules 83 and 83(b) been rigidly observed there is no reason to believe that this accident would have occurred.

Engineman Derrick entered the service of the Pere Marquette Railway Company as a fireman in February, 1901, and resigned in March of the same year. He was re-employed as fireman in November, 1903, and in November, 1909 was promoted to engineman. In June, 1917, he was set back to firing for an indefinite period but resumed rights as engineman again in August, 1917. Conductor Stowe entered the service as a brakeman in August, 1905, and was promoted to conductor in November, 1911.

At the time of the accident the crew of extra 925 had been on duty 1 hour and 40 minutes, prior to which the engineman and fireman had been off duty 17 hours and 45 minutes and the remainder of the crew 17 hours and 55 minutes.

D.W.L.