

In re Investigation of an accident
which occurred on the Michigan
Railway near Rives, Mich.,
September 8, 1916.

On September 8, 1916, there was a head-end collision between two electric motor passenger cars on the Michigan Railway near Rives, Mich., which resulted in the death of 2 passengers, and the injury of 8 passengers and 4 employees. After investigation of this accident the Chief of the Division of Safety reports as follows:

The part of the Michigan Railway on which this accident occurred is a single track electric line, extending between Jackson and Lansing, Mich., a distance of 37 miles. Power for the operation of trains is furnished by means of a third rail. Train movements are governed by train orders and time-card rights, there being no block signal system in use.

Train dispatching is done by telephone, machines containing train order blanks being located in telephone stations along the way, where orders are received by the trainmen. The method of procedure in obtaining train orders is outlined in Rule 217, of the Rules and Regulations of this railway, which reads in part as follows:

"To obtain train orders at telephone stations or through car telephone, the conductor or motorman will call the dispatcher and announce his train and location and give the dispatcher his serial order blank number, which will be repeated by the dispatcher. The dispatcher will then give such orders as are necessary, spelling and pronouncing each meeting or passing point. The one receiving the order will write the same plainly and without (unauthorized) abbreviation on the blank provided for that purpose, with sufficient carbon copies. He will thereupon sign his name upon the order. The one who has not taken the order will then read the order to the dispatcher, spelling as well as pronouncing each meeting or passing point and give the time as shown by his watch and his name to the dispatcher, and, if correct, the dispatcher will then give his initials and the train order number which must be repeated back to the dispatcher by the one then at the telephone. If correct, the dispatcher will say "Complete at" giving

the time which completes the order and puts it in full force and effect.

"Where it is not practicable for both members of the crew to leave the train at the same time, at important places designated by bulletin, or in emergency at other places, after authority has been given by the train dispatcher on duty at that time, one member of the crew may receive the order and the "Complete" thereof, the second member of the crew being required to read the order to the one who has taken and repeated it."

Southbound passenger train No. 111 consisted of motor No. 39, and was en route from St. Johns, Mich. to Jackson, Mich., a distance of 57.47 miles. Leaving St. Johns, it was in charge of Conductor Yallup and Motorman Chamberlain, who operated it to Laxton, Mich., 35.27 miles distant. At Laxton, this train was taken in charge by Conductor Conover and Motorman Hutchings, which crew operated a northbound train, No. 112, from Jackson to Laxton, a distance of 22.2 miles. When this latter crew assumed charge of train No. 111, the crew which had operated train No. 111 to Laxton transferred to them copies of train order No. 38, which had been received at Parkers, Mich., 13.5 miles north of Laxton, and which read as follows:

"Car 39 run on time and rights of 111 Parkers to Jackson.

No. 111, motor 39, meet No. 112, motor 16, at Laxton.

No. 111, motor 39, meet No. 160, motor , at Henry."

Train No. 111 then proceeded to Rives, Mich., 11.7 miles south of Laxton, leaving that place at 3.24 p. m., 11 minutes late, and at about 3.28 p. m. collided with northbound train No. 160 at a point 5,168 feet north of Henry, Mich., and 9,168 feet south of Rives. The speed of train No. 111 at the time was about 25 miles an hour.

Northbound passenger train No. 160, consisting of motor No. 3, was in charge of Conductor McFee and Motorman Challenger. It left Jackson, en route to Owosso, Mich., a distance of 70.2 miles, at 3.05 p. m., on time, and at North Street, 1.2 miles distant, the crew received a copy of train order No. 38, reading as follows:

"No. 111, motor 39, meet No. 160, motor 3, at Henry."

Train No. 160 left North Street at 3.15 p. m., proceeded to Henry, 8 miles north of Jackson, was not brought to a stop there as required by train order No. 38, but continued on and collided with train No. 111, while running at a speed of about 50 miles an hour.

Motor No. 3 having a higher frame than motor No. 39, telescoped the latter about half its length, totally destroying it, while motor No. 3 was also crushed about one-third of its length. The weather at the time was clear.

Approaching from the south the track is straight for about three-fifths of a mile, followed by a two-degree curve to the left, 900 feet in length, the accident occurring 110 feet south of the northern end of this curve. Approaching from the north the track is tangent for about three-fourths of a mile to the curve mentioned. The track is level for a distance of 700 feet north and 1,000 feet south of the point of accident.

The poles carrying the electric feed and other wires are on the outside of the curve, but on the inside of the curve, 34 feet from the center of the track, there are trees and brush beginning 380 feet south of the point of accident and extending southward a distance of about 700 feet, or about 250 feet beyond the southern end of the curve. Therefore, when train No. 111 was 800 feet north of the point of collision, the view of the motorman was limited to 1,400 feet, and when 200 feet north of the point of accident his view was limited to 900 feet. When train No. 160 was at the south end of the curve, 790 feet south of the point of collision, the view of the motorman was limited to 850 feet, and when 600 feet south of the point of accident his view was limited to 1,600 feet.

Motorman Challenger of train No. 160, stated that when train order No. 38 was received at North Street, he heard his conductor repeat it to the dispatcher. He said he had practically forgotten the order, although when his train was passing through Van Horn, 1.7 miles south of Henry, he had read the order. He stated that train No. 111 was about 1,500 feet distant when he first saw it, at which time the speed of his train was about 50 miles per hour, whereupon he applied the air brakes in emergency and reversed the car, but it slid about 300 feet and collided with train No. 111.

Conductor McFee, of train No. 160, stated that at North Street he took train order No. 38, repeated and completed it, and delivered a copy to his motorman, which procedure, while it was not in strict accordance with the requirements of rule 217, was nevertheless permissible. After passing Van Horn he looked at the order and put it in his pocket again. He then

because engaged in trying to handle an intoxicated and disorderly passenger, and while so engaged he looked ahead and saw train No. 111 less than 200 feet distant. He then thought that the crew of that train had overlooked train order No. 38 and had passed Henry, as he had not noticed that his train had passed that station. Conductor McFee stated that he had not at any time forgotten train order No. 38, and that he had no reason to think that his motorman was not on the alert. He said that when he first saw train No. 111 the speed of his train was about 50 miles an hour and that it was reduced but little by the reversing of the car.

Motorman Hutchings, of train No. 111, stated that when he first saw train No. 160 it was not more than 800 feet distant, at which time he reversed his car and applied the brakes, the speed having been reduced from about 40 miles an hour to approximately 25 miles an hour when the collision occurred.

Conductor Conover, of train No. 111, stated that he thought the speed of his train was about 15 miles an hour at the time of collision.

This accident was caused by the failure of the crew of train No. 160 to observe train order No. 38 and meet train No. 111 at Henry.

It is evident that Motorman Challenger entirely overlooked train order No. 38, although he stated that he had read it at Van Horn, 1.7 miles from Henry. This failure on his part was not explained, because, when he was being questioned during the investigation of this accident, he suffered a nervous breakdown, and was, therefore, unable to continue his statement. Investigation disclosed that Motorman Challenger was the oldest motorman on this railway, in point of service, and had been assigned to a preferred run, but that he had relinquished that run for another, in order to be able to spend more time in caring for his wife, who was an invalid. It is, therefore, thought that possibly this matter may have caused him considerable worry and exerted its influence in causing him to overlook the fact that his train was to meet train No. 111 at Henry.

During the investigation it was also developed that after leaving Van Horn, Conductor McFee experienced considerable difficulty with a disorderly passenger and it is believed that his train passed Henry while he was thus engaged. Had his attention been unoccupied in this manner, he would, undoubtedly, have signaled the motorman to stop, thus obeying train order No. 38 and avoiding the collision.

Undoubtedly the purpose of requiring either member of a crew to copy a train order and the other member to repeat it to

the dispatcher and receive the "complete" on it, as set forth in rule 217, is to insure the correct receiving of the order and to secure the strictest compliance with its requirements by having both members equally concerned in receiving it. However, when train No. 160 reached North Street on this trip Conductor McFee copied and repeated train order No. 38 and received the "complete" on it. There is no reason why this rule could not have been properly observed, and it is probable that had Motorman Challenger taken some active part in receiving train order No. 38 he would have been less liable to overlook it, on account of having it more strongly impressed upon his mind.

Motorman Challenger entered the service of this railway September 24, 1901, and Conductor McFee on November 5, 1911. Both had good records. At the time of the accident the crew of train No. 160 had been on duty 35 minutes and the crew of train No. 111 had been on duty 1 hour and 40 minutes.