

INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE SEABOARD AIR LINE RAILWAY AT APEX, N. C., ON MAY 18, 1924.

June 23, 1924.

To the Commission:

On May 18, 1924, there was a head-end collision between a passenger train and an express train on the Seaboard Air Line Railway at Apex, N. C., resulting in the death of one passenger, one news agent and four employees off duty, and the injury of one passenger and seven employees, one of whom afterwards died.

Location and method of operation.

This accident occurred on that part of the North Carolina Division extending between Raleigh and Hamlet, N. C., a distance of 97 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. At Apex there are two southbound passing tracks, one located north of the station and one south of the station, the latter known as the old southbound passing track. The accident occurred on the main track at a point 2,123 feet south of the station, or 375 feet north of the south switch of the old southbound passing track; this is a facing-point switch for northbound trains and leads off the main track to the east. Approaching the point of accident from the south there is a 2° curve to the left 2,958 feet in length, extending to within 13 feet of the south switch of the old southbound passing track, from which point it is tangent for more than 1 mile. The grade for northbound trains averages 0.78 per cent ascending. Owing to an embankment, and the rear cars of a freight train which was standing on the northbound passing track, located west of the main track and directly opposite the old southbound passing track, the view of the point of accident across the inside of the curve was considerably restricted. The weather was clear at the time of the accident, which occurred at about 4.14 p.m.

Description.

Southbound express train No. 45 consisted of 15 express cars and a coach, hauled by engine 211, and was in charge of Conductor Benton and Engineman Fletcher. The first seven cars were of steel-underframe construction, the coach of wooden construction, and the remainder of all-steel construction. This train left Johnson Street, Raleigh, at 3.30 p.m., on time, and on passing the tower at Apex, at about 4.09 p.m., at a low rate of speed, received a copy of train order No. 158, Form 19, reading in part as follows:

"No 44 Eng 212 will take Old Southward
Siding and meet No 45 Eng 211 at Apex"

Accordingly, train No. 45 was brought to a stop just north of the south switch of this passing track and while standing at this point was struck by train No. 44.

Northbound passenger train No. 44 consisted of one baggage car and two coaches, in the order named, all of wooden construction, hauled by engine 212, and was in charge of Conductor Goodwyn and Engineman Cross. This train left Hamlet, 82.7 miles from Apex, at 1.03 a.m., three minutes late, and on arrival at Sanford, 54.2 miles beyond, Engineman Cross was relieved, without proper authority, by Engineman O'Daniel, who was enroute to Raleigh, deadheading. Engineman Cross went back into the baggage car. At New Hill, 6.2 miles south of Apex, a copy of train order No. 158, previously quoted, was received on Form 31, and the train departed from this point at 4.06 p.m., 21 minutes late, but instead of heading in at the south switch of the old southbound passing track, the train continued on the main track and collided with train No. 45 while traveling at a speed variously estimated to have been between 20 and 40 miles an hour.

Both engines were derailed but remained upright on the roadbed; their head ends were badly damaged. The forward part of the second car in train No. 44 was telescoped for about 25 feet by the rear end of the first car, the rear car was derailed but not materially damaged. The forward part of the fifth car in train No. 45 was telescoped for approximately half its length by the rear end of the fourth car; none of the other cars were derailed. Engineman O'Daniel received injuries from which he died about 50 hours after the accident.

Summary of evidence.

Fireman Napier, of train No. 44, stated that Engineman Cross had complained of feeling ill on the trip down from Raleigh in the morning and also on the return trip, he was not aware, however, of the arrangements made for changing engineman. At New Hill, Conductor Goodwyn delivered a copy of train order No. 158 to Engineman O'Daniel, at which time the conductor and engineman read it to each other, and while Fireman Napier did not personally see this order, he said the way Engineman O'Daniel read it to him it was for their train to take the southbound passing track, which is north of the station at Apex. The station and meeting-point whistle signals were sounded by the engineman when about 1 mile south of Apex, and acknowledged by the air-whistle signal, and the first knowledge he had of anything wrong was on seeing train No. 45 about 10 car-lengths distant, he gave a warning of danger and Engineman O'Daniel immediately applied the air brakes in emergency, the fireman estimating the speed at that time to have been about 40 miles an hour. Fireman Napier said it was customary for the engineman and fireman to compare train orders when several were involved, but when there was only one order, as was the case in this instance, in the event the engineman did not give him the order to read he did not think it necessary to request that this be done. He was of the opinion that the accident was caused either by Engineman O'Daniel not knowing the location of the old southbound passing track or by his overlooking the word "old" in the train order.

Conductor Goodwyn, of train No. 44, stated that he did not know some one other than Engineman Cross was operating the engine until the train was about 1 mile or more from Sanford; that occasionally, through courtesy, an engineman deadheading on the train will relieve the engineman on duty. When he handed train order No. 158 to Engineman O'Daniel at New Hill, the engineman read the order, and he then told the engineman that their train would take the old southbound passing track at Apex. He was unaware of anything wrong until the caboose of the freight train standing on the northbound passing track was passed; he then reached for the emergency cord, the accident occurring immediately afterwards. Conductor Goodwyn further stated that Engineman Cross, who was riding in the baggage car, and the rest of the crew were acquainted with the contents of train order No. 158; that he did not deem it his duty to question the change in enginemen inasmuch as Assistant Road Foreman of Engines Edwards was riding on the train and both enginemen had talked with this official; that the old passing track is seldom used for meeting trains, and that in his opinion the engineman thought the old passing track was on the other side of the station. The air brakes had been tested, and he had noticed nothing unusual with the way they worked en route.

Assistant Road Foreman of Engines Edwards stated he was not aware that Engineman O'Daniel had relieved Engineman Cross until just after the train left Osgood, located about 52 miles north of Sanford, at which time he saw Engineman Cross in the baggage car and inquired as to who was running the engine. It is not customary for enginemen to change off as was done on this occasion, this being the first time he had known of this being done, and although this was not in territory under his supervision he spoke to Engineman Cross in such a manner that had he been in the latter's position he would have immediately returned to the engine, and he thought this was what Engineman Cross would do. He estimated the speed at 40 miles an hour when the brakes were applied and about 30 or 35 miles an hour at the time of the accident. Foreman Edwards was of the opinion that the accident was caused by Engineman O'Daniel failing to read the word "old" in the train order.

Baggagemaster Porter, of train No. 44, stated that although he read the train order he did not understand that his train was to take the old southbound passing track. He did not compare the order with the conductor and said it would have been unusual to do so. He thought the speed was about 40 miles an hour at the time of the accident, and said he had felt no previous application of the air brakes.

Flagman Roseboro and Porter Staten, of train No. 44, understood that their train was to take the old southbound passing track. Owing to the condition of Engineman Cross, no statement from him was obtained.

Engineman Fletcher, of train No. 45, stated that his train had been standing at Apex about four or five minutes before the accident occurred. He and the fireman were working on the injector when train No. 44 sounded the station and meeting-point whistle signals. The first knowledge he had of anything wrong was on seeing a brakeman in the vicinity of the switch, running and waving his hands, and he immediately sounded a warning of danger on the engine whistle. Fireman Shell thought train No. 45 had been standing at Apex a sufficient time for the head brakeman to have gone forward and opened the switch.

Head Brakeman Cook, of train No. 45, stated he did not think his train had been standing at Apex more than three minutes prior to the accident; that he was in the rear car when the train came to a stop, heard the whistle of train No. 44, and had gone forward about four or five car-lengths when train No. 44 came around the curve.

Conductor Benton, of train No. 45, stated that his train had been standing about three minutes prior to the accident. He was of the opinion that had the switch been set for the passing track train No. 44 would have either derailed or collided with the cars standing on this passing track some distance north of the switch. Conductor Benton, as well as Flagman White, estimated that their train had been standing about three minutes when the accident occurred.

Brakeman Knott, of train No. 88, which was occupying the northbound passing track at the time of the accident stated that as train No. 45 was holding the main track he knew it would be necessary for train No. 44 to enter the old southbound passing track, and he therefore ran toward the switch but could not reach it in time to open it and avert the accident, being about two car-lengths from the switch when the collision occurred.

Operator ~~W. J.~~ Ginter, stationed at Apex, stated that freight trains were occupying the southbound and northbound passing tracks, and about 20 or 25 cars were standing on the old southbound passing track, therefore it was necessary to arrange for the meet on the last-named siding. The dispatcher was informed of this condition and of the fact that it would also be necessary for train No. 44 to back out after making the meet. This passing track is only used for meeting trains about three or four times a month. He further stated that train No. 45 passed the tower at 4.09 p.m., at a speed of from 5 to 8 miles an hour, and had been standing about three or four minutes when the accident occurred.

Engine 212 was equipped with a speed indicator and recorder, and an examination of the record made by this instrument disclosed that just prior to the accident a speed of about 53 miles an hour was reached, dropping rapidly to 48 miles an hour, where the record stopped, apparently due to the collision.

The investigation developed that it had been necessary to cut out the tender brakes on engine 212 at Niagara, a station 50.8 miles south of Apex. Fireman Napier said he did not think the brakes held as they should, but afterwards expressed the opinion that part of the difficulty was due to a large engine and a short train, engine 212 being of the 4-8-2 type. The statements of other employees on the train, however, were to the effect that there was no difficulty in properly handling the train.

Under the special instructions contained in the time-table, the speed of all trains is restricted to 15 miles an hour over street crossings within the corporate limits of Apex. Train No. 44 was moving at a speed much in excess of this limit when coming into Apex but had not encountered any street crossings prior to the occurrence of the accident.

Conclusions.

This accident was caused by the failure of the crew of train No. 44 properly to obey the requirements of a train order establishing a meeting point with train No. 45.

Under this order train No. 44 should have headed in on the old southbound passing track, located south of the station, but judging from the manner in which he was operating his train it seems clear that Engineman O'Daniel intended to bring his train to a stop at the station and then proceed to the present southbound passing track, located north of the station, for the purpose of meeting train No. 45. Engineman O'Daniel was employed as an engineman on the railway in March, 1920, while the evidence indicated that the old passing track had not been regularly used as such for several years, and it is possible that Engineman O'Daniel was not fully acquainted with its location, from the testimony it appeared that he had used this track on one of his trips several weeks previously. If he did not know of the location of this track, then it was incumbent on him to have operated his train under such control approaching Apex as to have enabled him to stop within his range of vision. What appears more likely to have been the case, however, is that when reading the train order he overlooked the word "old", and understood that his train was to meet train No. 45 at the regular southbound passing track.

Enginemen O'Daniel and Cross are both open to censure for exchanging places without proper authority for such action. Fireman Naylor said Engineman Cross had been sick, but such other evidence as was available indicated that this was not the case. In fact, the conductor said that enginemen occasionally relieved each other in that manner. Not only was this action contrary to the rules of this railway, but according to the superintendent he failed to find an instance of the kind within the preceding 18 months, while the records showed that in 1922 the road foremen of engines were instructed to take up the matter personally with each engineman and that Road Foreman of Engines Blackwell discussed the matter with Engineman Cross on February 8, 1922.

The testimony shows that the fireman and baggage-man of train No. 44 thought their train was to meet train No. 45 at the passing track north of the station, and it seems probable that the engineman was of the same impression. Under the rules conductors deliver to enginemen train orders written on Form 31, the engineman in question then reading the order back to the conductor. Enginemen are required to read their orders to their firemen, and conductors to read them to their baggagemen and flagmen. In view of the failure, however, of two and probably three of the members of the crew to have a correct understanding of the order in question, it is clear that these rules were obeyed only in the most perfunctory manner. It further appears that Conductor Goodwyn was not paying close attention to the operation of his train as it approached the meeting point, in view of the fact that it was moving at a high rate of speed and had nearly reached the switch at which it should have entered the passing track before he realized the situation. Had he been on the alert and taken the proper steps to bring his train to a stop when it became evident that the engineman was going to pass the switch without stopping, it is probable that he would have been able at least to modify the serious consequences of the collision, even if he could not have prevented its occurrence.

Rule 90-a. of the Rules and Regulations for the Government of the Operating Department, reads as follows:

"Train holding main track at meeting point must in all cases set passing track switch for train to be met."

Head Brakeman Cook, of train No. 45, had been riding in the coach or the rear of his train, however, and was not in position to open the switch prior to the arrival of train No. 44. The custom seems to have been, on passenger trains at least, for the head brakeman not to ride on the engine except when it was anticipated that it would head in on a passing track. In this case train No. 45 was to hold the main track and the head brakeman, therefore, was riding in the only other car available which was the coach on the rear of the train and which car Conductor Benton considered to have been the proper place for him. Had the head brakeman been riding on the engine he would have had sufficient time in which to open the switch prior to the arrival of train No. 44, although in view of the rate of speed at which that train was traveling it is possible it might either have been derailed upon entering the switch or have collided with the cars standing on the passing track several hundred feet beyond the switch.

Had an adequate automatic train-control device been in use on this line this accident would not have occurred.

Engineman O'Daniel entered the service of this railway as an engineman in March, 1920, prior to which he had had experience as a fireman and engineman on another road, his record was clear. All of his experience on the Seaboard Air Line Railway had been in extra freight service and there is no record that he ever operated an engine in passenger service. At the time of the accident none of the employees involved had been on duty in violation of any of the provisions of the hours of service law.

Respectfully submitted,

W. P. EORLAIN

Director.