

IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED
ON THE NORFOLK & WESTERN RAILWAY, NEAR RURAL RE-
TREAT, VA., ON OCTOBER 20, 1920.

November 6, 1920.

On October 20, 1920, there was a head-end collision between two passenger trains on the Radford Division of the Norfolk & Western Railway near Rural Retreat, Va., which resulted in the death of 3 employees and injury to 11 passengers, 3 employees, 2 mail clerks, 1 conductor and 1 porter of the Pullman Co., and 1 express messenger. After investigation the Chief of the Bureau of Safety reports as follows:

The Radford Division, on which this accident occurred, extends from Roanoke, Va., to Bristol, Tenn., a distance of 150 miles. From Roanoke to Radford, 44 miles, the line is double track, from Radford to Bristol, 106 miles, it is single track. The movement of trains is controlled by time-table, train orders, and automatic block-signals, eastbound trains being superior by direction.

In the vicinity of the accident the line extends east and west. Beginning at a point about 4600 feet west from the point of the collision, and proceeding eastward, the line is tangent for 3200 feet at which point is located the west switch of the passing siding at Rural Retreat, which is on the south side of the main track. Beginning at this point there is a curve to the right of 3 degrees and 30 minutes, 540 feet in length, followed by a tangent 300 feet in length, which is followed in turn by a 2 degree curve to the left, 900 feet in length. The track is then tangent for about 2000 feet to the station. It was on the latter

curve about 550 feet from its west end that the accident occurred. At this point and for about 3,000 feet west thereof, there is a grade of 1.2 per cent descending eastward. The view of approaching trains from the west is slightly obscured by a line of telegraph poles on the south side of the track, while on the north side owing to the curve there is practically no vision. The weather at the time of the accident was clear.

Westbound local passenger train No. 37, enroute from Roanoke, Va. to Bristol, Tenn., in charge of Conductor Charlton and Engineman Linkous, was drawn by engine 558 and consisted of Penna. baggage 5525, N&W baggage 423, 439 and 449, all of wooden construction except 439 which had steel reinforced side and center sills, coaches 1208, 1640 and 1612 of all steel construction and baggage car 254, of wooden construction. It left East Radford, its initial station for the dispatching district on which the accident occurred, at 6.44 a.m. At Max Meadows, 28 miles west, it received 19 train order No. 56 reading:

"No. 14, engine 102, meet No. 37, engine 558 at Rural Retreat and No. 41, engine 107 at Crockett. No. 14 take siding at Crockett."

The train departed from Max Meadows at 8.02^{a.m.} and arrived at Rural Retreat, where it stopped at 8.40 a.m. The east switch of the passing siding having been opened, the train pulled in, stopping before the entire train was clear to unload passengers and express. After completing its work the train departed and had proceeded a distance of about 2,000 feet when, while running at a speed estimated to have been from 10 to 12 miles per hour, it collided with train No. 14, also on the passing siding.

Eastbound train No. 14, enroute from Bristol, Tenn., to Roanoke, Va., in charge of Conductor Newman and Engineman Pyeritz, was drawn by engine 102 and consisted of mail car 1210, baggage car 1321, coaches 1639, 1613, 1614 and Pullman car Flamingo, all of all-steel construction. It left Bristol, its initial station, at 6.30 a.m., arrived at Atkins, 50 miles east, at 8.22 a.m., where it received a copy of 19 order 56 and departed at 8.24 a.m. The train arrived at Groseclose, the last reporting station, 4 miles east of Atkins, at 8.34 a.m. and departed at 8.35.

Approaching the west switch of the passing siding at Rural Retreat, automatic signal B-3502, located about 50 feet west of the west switch, was found in the stop position. This indicated that the main track was occupied between that point and the station. The train was brought to a stop and then proceeded, stopping again just clear of the switch. The switch was opened and the train took the siding. It had proceeded about 1600 feet and, while running at a speed estimated to have been between 18 and 20 miles per hour, it collided with train No. 37 at about 8.43 a.m.

The impact forced both engines together, demolishing the pilots and the smoke boxes. The left cylinder on each engine was broken off. The tank of engine 558 was up against the boiler head with the west end of Pennsylvania express car 5525 through the tank; this car was demolished. Baggage car 423 was crushed at its west end. The tank of engine 102 was also up against the boiler head and the east end of mail-baggage car 1220 mashed in about four feet. None of the equipment was derailed. The body of Engineman Pyeritz was found caught between the tender and the cab on the fireman's

side. Both enginemen and the fireman of train No. 37 were killed.

Train Dispatcher Kerr stated that train order No. 56 was issued on account of trains No. 14, 37 and 41 all being late; it is customary on single track to give all passenger trains, train orders fixing the meeting points with each other regardless of whether they are on time or late. He also stated that at the meeting point between train No. 14 and train No. 41 that train No. 14 was invariably required to take the siding. It is the practice in automatic block signal territory to use the "19" form of train order for a meeting order.

Conductor Charlton of train No. 37 stated that he received order No. 56 at Max Meadows and that he understood that his train was to take the siding at Rural Retreat for No. 14. He estimated the speed of his train to have been 8 or 10 miles per hour at the time of the accident. He thinks that there was an application of the brakes just before the crash occurred. He also stated that it is his understanding of Rule 90-C that enginemen and conductors must register personally with each other at meeting points.

Section Foreman Keyes stated that on the morning of the accident he was working with his section gang at the west end of the passing siding at Rural Retreat, putting in a set of switch timbers; train No. 14 stopped west of the signal at the west end of the passing siding; the engineer made a signal with his hand but he paid no attention of it. The train then started, stopping again about 20 feet from the west switch. The engineman shouted "Change the switch over so I can get on the siding." He, Keyes,

then handed his switch key to one of his men, Huston, and told him to go and open the switch for No. 14. After the train was clear Huston closed the switch. His vision was obstructed by the curve so that he could not see No. 37 standing at the station. As the train was pulling in the siding the engineman sounded two blasts of the whistle to indicate to the trainmen that the switch was being cared for. In his opinion No. 14 was moving about 8 miles an hour when the rear car passed him; he thinks the engineman used steam until the train got started and then shut off. He also stated that in several instances he has allowed his men to handle switches upon the express request of enginemen or trainmen. On the morning in question he did not have occasion to open or use the switch prior to the arrival of train No. 14.

Section Laborer Huston stated that as train No. 14 approached, the engineman beckoned with his hand for one of the section gang to open the switch; after train stopped at the switch, the engineman shouted for someone to throw the switch to the side track; Section Foreman Keyes then handed him the key and he unlocked the switch and opened it. As the engine passed him the engineman was looking out of the window and asked him if there was a train on the siding, to which he replied "No." After the train was clear he closed the switch and returned to his work. As the train passed, he saw Conductor Newman looking out from the side of the train on about the second coach.

Conductor Newman of train No. 14 stated that he received order No. 56 at Atkins, requiring No. 14 to meet No. 37 at Rural Retreat and to meet No. 41 at Crockett, No. 14 to take the siding at

Crockett; when the engineman sounded the meet signal for Rural Retreat, Brakeman Martin answered him with the train signal; the train stopped just west of the signal at the west end of the passing siding and stood there about $\frac{1}{2}$ minute before starting. After the train started he looked out on the right hand side and saw the automatic signal in the stop position; he went back into the coach and when the train passed over the switch he realized that it was taking the siding. He looked out on the right side and went over to the left side and looked out again and made the remark to Brakeman Martin "I wonder what he is going into the siding for." He saw the sectionmen on the track near the switch and shouted to them asking them why they put No. 14 on the siding but they apparently did not hear him; he thought the sectionmen were running the train through the siding on account of a broken switch or defective track. He then went back on the right side to see if he could see the flagman or any one who had opened the switch, not seeing anyone he went inside the coach which was the first coach on the train, and pulled the air signal; at that time the train was just clear of the main track. The speed of the train did not appear to slacken. He then started to go to the front end of the car and on his way pulled the conductor's emergency valve just as the collision occurred. He does not recall ever having had to take the siding for No. 37 while running train No. 14 but invariably takes the siding when meeting No. 41.

Trainman Martin of train No. 14 stated that when train order No. 56 was received at Atkins the conductor showed him his copy; the meaning of the order was perfectly plain to him; approaching

Rural Retreat the engineman sounded the whistle to indicate a meeting point which he answered with the train signal; just before the train reached the passing siding at Rural Retreat it came to a stop. He saw that the automatic signal was in the stop position and figured that No. 37 was at the station. When train No. 14 started and was about half way in the siding he first realized that it was taking the siding. At the time it occurred to him that the sectionmen were putting the train in on the siding for some reason. He started to open the door of the vestibule and as he did so heard one blast of the air whistle signal followed by a second blast just as he was opening the trap. At that time he was riding on the front platform of the second coach while Conductor Newman was in the first coach. He was just starting down the steps when the collision occurred. He did not feel any application of the brakes prior to the collision. He estimated the speed of his train to have been from 10 to 12 miles per hour. He further stated that he did not know that the train was in on the siding until about $\frac{1}{2}$ minute before the collision came. He estimated that not more than two or three seconds elapsed between the last blast of the air whistle signal and the time the collision occurred. He does not recall Conductor Newman making the query "Why is he going in here?"

Operator Reardon, on duty at Atkins, stated that he received order No. 56 for train No. 14, delivering a copy to the fireman as the engine passed him and a copy to the conductor as he went by. About this time he was relieved from duty and boarded train No. 14 intending to take it to his home at Rural Retreat. He noticed that

the train stopped at the west end of the passing siding at Rural Retreat but did not notice that it was taking the siding. Shortly after the train started Conductor Newman came in the car and made the statement "Why in the world is he going in here?" He did not know that Conductor Newman pulled the air whistle signal and has no knowledge of his opening the emergency valve.

Fireman Walton of train No. 14 stated that when he received order No. 56 at Atkins he handed it to Engineman Pyeritz. As the engineman did not hand it back to him to read he asked him what the orders were to which Pyeritz replied that No. 14 would meet No. 37 at Rural Retreat and No. 41 at Crockett and No. 14 would take the siding for 41. Upon arriving at west end of the passing siding at Rural Retreat the train stopped on account of the signal being in the stop position. While the train was standing there he heard the engineman talking to someone on the ground on the right side of the engine but he did not know who he was talking to or what was said. The train started and shortly afterwards he realized that they were pulling in on the siding. He looked out and saw the rear car passing over the switch. He then turned to the engineman to ask him why they were taking the siding there but before he could do so the engineman told him to look back and see if the flagman had gotten off. He looked back and not seeing anyone turned to tell the engineman, when he saw an engine looming up ahead of him on what he thought was the side track. He took a second look and saw that a collision was imminent and jumped from the window just as it occurred; the last time he saw Engineman Pyeritz he was sitting on his seat on the right side of the engine.

He further stated that if the air whistle was sounded he did not hear it.

Trainmaster Walker stated that he interpreted Rule 90-A to mean that any train using a siding which may be used by trains in either direction, must run at such a rate of speed that it can stop within a half train length. It is his opinion that rule 90-C requires conductors and enginemen to register with each other personally at meeting points.

Road Foreman of Engines Clendenon stated that he thinks it is permissible under rule 90-C for the fireman to do the registering for the engineman in cases where it is not practicable for the engineman to leave his post. He does not recall having had brought to his attention a single instance in which the engineman at meeting points have not registered personally with each other. From the appearance of the wreckage after the accident he believes the speed of train 37 to have been 10 or 15 miles an hour and of train No. 14, 18 to 20 miles per hour.

This accident was caused by train No. 14 taking the siding at Rural Retreat to meet No. 37 when by rule it should have held the main track. For this, Engineman Pyeritz is responsible.

Under the circumstances it is impossible to account for the action of Engineman Pyeritz in taking the siding. The evidence shows that it has long been the practice to require No. 14 to take the siding when meeting No. 41. It is believed that Engineman Pyeritz was laboring under the impression that he was to meet No. 41 at Rural Retreat and as was customary, took the siding for that purpose.

Conductor Newman and Brakeman Martin also share in the responsibility for this accident in that they did not stop the train immediately when they discovered that the train had improperly taken the siding. Conductor Newman knew that the train was taking the siding when he passed over the switch yet he did not use the emergency valve until the train had proceeded 1600 feet and just as the collision occurred. His statement that he signaled the engineman to stop by means of the communicating signal is substantiated only by Brakeman Martin and even in this there is conflict in their statements. On the other hand Fireman Waldon or Operator Beardon did not hear the signal. His statement as to the opening of the conductor's emergency valve is also without corroboration. Diligent inquiry made among the employees who afterward handled the equipment of No. 14 at the scene of the accident failed to disclose any one who had seen the emergency valve open.

It appears that Trainman Martin did not take the trouble to ascertain the cause of the stop west of the west switch and according to his statement did not know that the train was on the siding until about half a minute before the crash occurred and even then took no action toward stopping the train. Had he been alert and alive to his responsibilities he would have noticed that the train was on the siding as soon as it passed the switch and should have taken steps to stop the train and ascertain the cause.

Rule 90-A of the Operating Department is in part as follows:

"On a siding to be used by trains of both directions, trains must run expecting to meet opposing trains."

Notwithstanding the erroneous impression held by Engineman Pyeritz, had this rule been observed this accident would probably have been prevented.

The position in which Engineman Pyeritz's body was found indicates that before the collision occurred he had crossed over to the fireman's side of the engine for some purpose. Whether it was to exchange numbers with the opposing train or to escape from the collision cannot be determined.

Rule 90-c provides:

"At meeting or passing points made by train order, conductors and engineers of respective trains will register with each other; at meeting points made by rule, conductors and engineers of passenger trains will register with each other, and conductors and engineers of freight and work trains will register with each other."

A strict interpretation of this rule requires that enginemen register with each other personally and it seems generally to be so understood and observed. Although not specifically required by rule, it seems to have become the general practice whenever necessary, for the engineman to leave his post, while the engine is in motion and cross to the fireman's side in order to register with the opposing train. This is a dangerous practice and steps should be taken to correct it at once. Another method of registering should be substituted for the one provided for in rule 90-c or else the rule should specifically require that the engine must be stopped when a compliance with the rule would require the engineman to leave his post.

All of the employees involved in this accident are men of long experience and have good records.

At the time of the accident the engine crew of No. 14 had been on duty 2 hours 45 minutes with 19 hours 40 minutes off duty prior to going on duty. The train crew had been on duty 9 hours 48 minutes in the aggregate in the previous 24 hours.

The engine crew of No. 37 had been on duty 5 hours 58 minutes and the train crew 5 hours 8 minutes both having previously been off duty more than 13 hours.