INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE INVESTIGATION OF ACCIDENTS WHICH OCCURRED ON THE VIRGINIAN RAILWAY IN LITTLE MOSSY TUNNEL, NEAR LIVELY, W VA , ON FEBRUARY 8, AND NEAR CARLISLE, W VA , ON FEBRUARY 17, 1924

April 24, 1924

To the Commission

On February 8 and 17, 1924, there were two collisions on the Virginian Railway, one being a rear-end collision in Little Mossy Tunnel, near Lively, W Va , and the other a head-end collision near Carlisle, W Va Neither of these accidents resulted in fatalities

Accident near Lively

On February 8 a freight train collided with a work train in Little Mossy Tunnel, resulting in the injury of two employees of a contractor.

Location and method of operation

This accident occurred on that part of the Fourth Sub-Division of the New River Division extending between Elmore and Deepwater, W Va , a distance of 60 6 miles, in the vicinity of the point of accident this is a single-track line over which trains are operated by time-table and train orders, no block-signal system being in use Little Mossy Tunnel is 339 feet in length, the accident occurred in about the center of this tunnel. Approaching the point of accident from the west there are several sharp curves and short tangents, then a curve of 4° to the left 675 feet in length, the eastern end of this curve extending into the tunnel for a distance of 37 feet, followed by a tangent extending for a considerable distance east of the tunnel The grade is descending for eastbound trains, varying from 0 84 to 1 10 per cent. The speed limit for freight trains is 15 miles an hour on curves, and the number of curves is such that this speed limit applies generally Owing to an embankment on the north side of the track, a short distance west of the western portal of the tunnel, the view is somewhat restricted The weather was clear at the time of the accident, which occurred at about 1 55 p m

Description

Work extra 300, headed east, consisted of engine 300, one scaffold car, one flat car, and one scaffold car, in the order named, and was in charge of Conductor Burgess and Engineman Galloway At the western portal of Little Mossy Tunnel, at which point the crew reported for duty, the conductor received by telephone a copy of train order No 5, Form 19, reading as follows:

> "Eng 300 work extra 8.45 am until 5.45 pm between Lively and Silver Gap Eastward trains stop at MP 413 just west of Little Mossy Tunnel and not proceed until given signal by work extra 300. This order is annulled at 5.45 pm "

This train proceeded and was brought to a stop with the rear car about the center of the tunnel for the purpose of enlarging the tunnel, after which the engine was uncoupled and proceeded to a point outside the eastern portal At this point there is a siding which was used for clearing the main line to permit of the passage of trains in both directions While the cars of work extra 300 were standing in the tunnel, the rear scaffold car was struck by extra 515

Eastbound freight train extra 515 consisted of 12 loaded coal cars and a caboose, hauled by engine 515, and was in charge of Conductor Evans and Engineman Summers This train left Page, its initial terminal, at 12 15 p.m., with a copy of train order No. 5, previously quoted, left Oak Hill Junction, the last open office and 4.8 miles from the point of accident, at 1.40 p m , entered Little Mossy Tunnel without stopping as required by train order No. 5, and while traveling at a speed variously estimated between 5 and 15 miles an hour collided with the rear end of work extra 300

Summary of evidence

Conductor Burgess, of work extra 300, stated that he had been engaged in work train service at Little Mossy Tunnel for about a month, and that on the day of the accident he received the usual work order While work was in progress in the tunnel a flagman was stationed at the eastern portal with instructions to hold all westbound trains to clear the siding just east of the tunnel, then sound the engine whistle of the train being flagged, after which arrangements would be made to clear the tunnel. No flagman was stationed at the western portal of the tunnel in view of the provisions of train order No. 5, which required all eastbound trains to stop at mile post 413, located 700 feet west of the tunnel

However, Conductor Burgess stated he remained in the vicinity of the western portal to expedite eastbound movements On hearing extra 515 approaching he ran out of a blacksmith shop, located about 30 or 40 feet from the western portal, and gave stop signals when the train was about 6 or 8 car-lengths from the tunnel, at which time he thought the speed was 12 or 15 miles an hour, but although he was on the engineman's side and the engineman appeared to be looking ahead, his signals were not answered or heeded, and the accident occurred shortly afterwards Conductor Burgess further stated that after the accident, Engineman Summers told him that he was lost and thought the tunnel was 3 or 4 miles farther east

Brakeman Cole who was also at the western portal of the tunnel substantially corroborated the statements of Conductor Burgess He thought the speed of extra 515 at the time it entered the tunnel was about 10 miles per hour.

Engineman Summers, of extra 515, stated that he received a copy of train order No 5 at Page but that he passed mile-post 413 without stopping as required by that order, approaching that point he had his train under control but he did not see the mile-post on account of it being on the fireman's side of the engine and at that time the fireman was in the tender breaking up a lump of coal and didn't see the mile-post either The speed was about 10 or 12 miles an hour, and he made a brake pipe reduction of about 12 pounds, releasing shortly afterwards, the speed then being about 5 miles per hour He sounded a road crossing whistle signal, but he did not see any member of the work train crew and the first knowledge he had of anything wrong was when the fireman shouted shortly before his engine entered the tunnel, he then applied the air brakes in emergency and the train entered the tunnel at a speed of about 2 or 3 miles an hours. The air brakes were tested before starting on this trip and worked properly en route He stated that had he been able to locate mile-post 413 he would have begun to reduce speed about 50 car-lengths west of this point preparatory to making the stop as required by train order No. 5 He had had no experience in handling heavy trains on mountain grades prior to entering the service of this railroad.

Fireman Barton, of extra 515, stated he saw and understood the contents of train order No. 5 and that he was familiar with the location of mile-post 413, but the stoker had stopped up with a large chunk of coal and he had gotten down to break this up when some distance west of the tunnel and did not look out. He estimated the speed to have been about 8 or 10 miles an hour on the curve just west of this

point, and he said the emergency application was made at the east end of the cut just west of the tunnel

Conductor Evans, of extra 515 stated it did not occur to him that Engineman Summers was not sufficiently acquainted with the road to locate mile-post 413, and he first realized the train had passed that point when the air brakes were applied in emergency, at which time the entire train was east of the mile-post He said the air brakes were applied about 15 car-lengths west of mile-post 413, and until they were released he thought this was for the purpose of making the required stop He fully understood the contents of train order No 5, but he did not think it necessary to come to a full stop at mile-post 413 if a proceed signal was received from the work train before so doing, and while he understood he is equally responsible with the engineman for the proper execution of all train orders addressed to his train, he had no way of knowing whether the engineman had received a signal to proceed beyond mile-post 413 without coming to a stop Under these circumstances he thought it proper for the train to proceed without stopping, notwithstanding the requirements of the order On short trains of this character it is customary for all brakemen to ride in the caboose

Head Brakeman Thompson, of extra 515, stated he was riding in the caboose at the time of the accident, he admitted that his proper place was on the engine and had he been there he would have been in position to warn the engineman when the train approached mile-post 413 On previous occasions and under similar orders, trains have passed this mile-post without stopping on receiving a proceed signal from the work train, and Brakeman Thompson considered this practice safe even though the train order specifically required that all eastbound trains stop at mile-post 413

Engineman Summers first entered the service of this railroad as an engineman on January 13, 1924, prior to which he had had 7 years experience in engine service, 5 years as a fireman and 2 years as an engineman Fireman Barton was employed as a fireman on November 30, 1933, he had had no previous experience in engine service The other members of the crew of extra 515 were experienced men

Accident near Carlisle

On February 17 a freight engine engaged in switching a cut of loaded coal cars, collided with a passenger train, near Carlisle, resulting in the injury of two passengers and one employee

Location and method of operation

This accident occurred on that part of the Fourth Sub-Division of the New River Division extending between Oak Hill and Carlisle, W. Va., a distance of 2.3 miles, a single-track line over which trains are operated by time-table Rule 64 of time-table No. 9, effective February 17, 1924, requires that all extra trains must receive the permission of the conductor in charge of the mine run train before using the track between Carlisle and Lochgelly, within which territory this accident occurred One passenger train crew and one mine run crew operate between these points The accident occurred in a cut at a point about 975 feet east of the switch leading to Carlisle yard. Approaching the point of accident from the west, starting at the derail in the OakWood mine track where the freight engine coupled to and began the switching movement, the track is practically tangent for a distance of 659 feet, extending 309 feet east of a switch which leads to the Chesapeake & Ohio interchange track; this tangent is followed by a compound curve to the left of from 4° to 10°, on which the accident occurred 667 feet from its western end. The grade is 2 5 per cent descending for eastbound trains to the switch, from which point it is 2 5 per cent ascending to and beyond the point of accident It was dark and raining at the time of the accident, which occurred at about 6 35 p m.

Description

Westbound passenger train No 417 consisted of one coach and one combination car, both of wooden construction, hauled by engine 304, and was in charge of Conductor Callison and Engineman Murdock This train left Oak Hill, 2.3 miles from Carlisle, at 6 30 p.m , 30 minutes late, and was flagged and brought to a stop on the main line just east of Carlisle While standing on the descending grade at a point about 975 feet east of the switch leading to Carlisle yard it was struck by freight engine 501 of the mine run train

Freight engine 501, headed east, in charge of Conductor Campbell and Engineman Rousseau, was engaged in switching a cut of 21 loaded coal cars at the time of the accident On the trip from Oak Hill to Carlisle, just before the accident occurred, it was decided to use the main line on the time of train No. 417 to move the loaded cars, and the flagman got off on the descending grade east of the switch at this time for the purpose of holding the passenger train while this was being done. Engine 501 coupled to the head end of the loaded cars near the derail in the Oakwood Mine track, proceeded out upon the main line, and while

moving eastward on the ascending grade preparatory to backing in on the Chesapeake & Ohio interchange track in Carlisle yard, at a speed variously estimated to have been between 9 and 20 miles an hour, collided with train No 417

The impact drove the passenger train backwards a distance of approximately 65 feet, the engine truck and one pair of driving wheels of engine 304 being derailed The head ends of both engines were damaged

Summary of evidence

Engineman Murdock, of train No. 417, stated that at a point just east of Carlisle he was stopped by Flagman Lavender, of extra 501, who boarded the engine and informed him of the intended switching movement, and also told him that he could move down a little farther, which he did, and stopped, the flagman told him to wait there until the mine run engine called in the flag or until he received a proceed signal Flagman Lavender then got off the engine and walked ahead out of his sight around the curve Shortly afterwards he saw an engine rounding the curve through the cut, and as it approached he released the air brakes and placed the engine in reverse, but before he could get the train started backward the collision occurred.

Fireman Steen, of train No. 417, stated he saw engine 501 when it was about two car lengths away and it was not using steam at that time; after the accident Engineman Rousseau, of extra 501, inquired where Flagman Lavender was and he informed him that he had passed his flagman He thought the accident occurred about five minutes after the flagman got off from his engine

Conductor Callison, of train No 417, stated that there was nothing unusual about the movement being made when the accident occurred as it was customary for the passenger train to be flagged at this point while switching operations were being made At the first stop on the descending grade just east of Carlisle he got off and started toward the head end. His train then started down the hill again, and a second stop was made a short distance from where it was flagged, the accident occurring shortly afterwards

Flagman Sanger, of train No 417, stated that the accident occurred about 2 or 3 minutes after the second stop was made, and that after the accident he saw Flagman Lavender, of extra 501, standing about 75 or 80 feet ahead of the train.

Conductor Campbell, of extra 501, stated that when they started to pull the loaded cars from the Oakwood mine track it was intended to cut off the 7 rear cars and leave them into clear on the Oakwood Mine track, the engine was coupled to the cut of 21 cars, moved down to clear the derail, but stopped too far down to cut off the last 7 cars and it was then decided to haul the entire cut of 21 cars out on the main line and back them into the yard The flagman had dropped off east of Carlisle to protect this movement Conductor Campbell was in the caboose at the time of the accident and stated that the rear end of the cut of cars stopped 4 or 5 car-lengths east of the switch after the accident.

Flagman Lavender, of extra 501, stated that he flagged the passenger train east of Carlisle and after the first stop he told the engineman to proceed a few car-lengths farther, which was done, and remain there until he either gave a proceed signal or was called in He then went ahead and waited for the whistle signal calling him in. When extra 501 approached, the speed appeared to be a little too high in view of the distance to the passenger train, and he gave a slow signal with his lantern from the fireman's side of the track However, as no answer was received to this signal, and there was no apparent reduction in the speed, he then gave a stop signal, but the train passed him on the ascending grade at a speed of not less than 15 miles an hour, at which time he was 12 or 15 car-lengths from the head end of the passenger train. He said the freight engine was working steam when he first saw it and at the time it passed him After the accident he went to the point of accident and at that time he asked Fireman Stump if he saw his flag signals but the fireman said he did not as he was busy working on the engine.

Brakeman Titlow, of extra 501, stated that after it was decided to back all of the loaded cars into the yard as the clearance point had been run by too far to leave the 7 rear cars on the Oakwood Mine track, he proceeded to the engine and informed Engineman Rousseau of the movement which was to be made The movement being made was one with which Engineman Rousseau was familiar and the usual protection was given to cover it, although he thought the passenger train should have been standing farther back

Brakeman Humphrey stated that as the cut of cars was pulled out of the load track he rode on the second car from the rear, from which position he could not see the engine on account of the curve Signals to the engineman were given by means of the whistle of engine 431 which was stand-

ing on the empty track He dropped off as the car passed the switch, and the rear end of the cut of cars was 5 or 6 car-lengths beyond the switch when it stopped

Engineman Rousseau, of extra 501 stated that after pulling by the derail too far to leave the rear cars on Oakwood Mine track, Brakeman Titlow informed him there would be 15 or 16 cars to move, also that the passenger train had been flagged and a flagman stationed on the hill a sufficient distance so that the run could be made without striking that train, and when the rear car of the cut cleared the switch, another engine, also assigned to the mine run train and stationed in the vicinity of the switch, would blow him down when it was time to stop. Coming down the hill from Oakwood Mine track steam was not used, the cars drifting down the grade, and the speed attained before reaching the switch, which marked the beginning of the ascending grade, was 9 or 10 miles an hour, in this vicinity he made a 12-pound brake pipe reduction, holding the brakes applied for about 3 minutes, and the train drifted up the hill at a speed of about 9 miles an hour On reaching a point about 1½ car-lengths west of the point of accident he heard a shout from someone on the ground on the fireman's side of the engine, at which time the speed was about 7 or 8 miles an hour, and he applied the air brakes in emergency but it was then too late to avert the accident Engineman Rousseau further stated that the throttle was not opened from the time he left Oakwood Mine track until the accident occurred, that both he and his fireman knew the flagman was stationed somewhere between their train and the passenger train, that the headlight on his engine was burning brightly and the one on the passenger engine was lighted, that he was looking out of the front cab window on his side of the engine, at which time it was raining, but he did not see the reflection of the headlight of the passenger engine on the south side of the cut or on the rail, and that the train line was fully charged while ascending the grade just prior to the accident, the engine carrying 90 pounds brake pipe, and 110 pounds main reservoir pressure

Fireman Stump, of extra 501, stated that just before the collision occurred he heard someone shout from his side of the cab, and he crossed to the engineman's side and told Engineman Rousseau to stop He further stated that he saw the reflection of the headlight of the passenger train on the rail just before telling Engineman Rousseau to stop, and at this time the freight engine was 8 or 10 car-lengths from the passenger train and moving at a speed of about 8 or 12 miles an hour. Also, that Engineman Rousseau applied the air brakes just before the accident but he did not know

whether or not it was an emergency application, he was not certain whether steam was worked just before the collision

Engineman Rousseau entered the service of this railroad as an engineman on November 15, 1923, prior to which he had had 15 years experience in engine service Fireman Stump was employed the day prior to the accident.

Conclusions.

The accident in Little Mossy Tunnel was due to the failure of Engineman Summers to bring his train to a stop at mile-post 413 as required by train order No 5

Engineman Summers' testimony indicated that he was unfamiliar with the physical characteristics of this railroad, and did not know the exact location of mile-post 413, also that he was inexperienced in the handling of heavy trains on mountain grades In a previous report issued by the Commission January 15, 1924, involving two accidents on this railroad, one at Lively, W. Va., on November 26, 1923, and one at Elmore, W. Va., on December 5, 1923, the following statement was made regarding engine service employees who were not properly qualified:

> "While this condition resulted from the fact that the engine service employees on this railway are on strike, this is no reason why the railway company should jeopardize the safety of the other employees and also of the traveling public by the use in responsible positions of persons whose lack of proper training and experience is apt at any time to result in the occurrence of accidents * * * It is clearly apparent that none of these employees was qualified for the position which he was occupying, and it is incumbent on the officials of this railway to take immediate steps towards seeing that the lives of the traveling public are not placed in danger through the use of unqualified employees in responsible positions "

Had Brakeman Thompson been in his proper position on the engine he could have informed Engineman Summers that they were approaching the mile-post and tunnel mentioned in the order in time to have enabled the engineman to stop as required by the order

It is also noted that some of the experienced employees, involved in the present accident, were of the opinion that it was not necessary to come to a full stop at mile-

post 413, provided a proceed signal is received from the work crew before so doing, although train order No. 5 specifically required that this be done Work had been in progress in Little Mossy tunnel for a considerable length of time, under similar arrangements covering protection for the work crew Proper supervision would have disclosed the erroneous impression existing in regard to proper compliance with the provisions of train orders similar to train order No. 5 Had this been done, when the engineman did not make the required stop at mile-post 413 other members of the crew probably would have taken action to bring the train to a stop in time to have averted the accident

The accident at Carlisle was due to the failure of Engineman Rousseau to exercise proper judgment in making a switching movement on the main line

This accident involved a switching movement in which the main line was used on the time of a passenger train a flagman being out with instructions to hold the passenger train Under these circumstances it was Engineman Rousseau's duty to operate his engine in such manner that he could stop if flagged or before striking the passenger train As the entire cut of cars was on a 2 5 per cent ascending grade he should have been able to stop in a very short distance While the evidence is not entirely clear as to whether steam was being used and at what speed engine 501 was running, had Engineman Rousseau maintained a proper lookout, or instructed his fireman to do so, he would undoubtedly have been able to stop, after seeing the flagman or the standing passenger train, in time to avert the accident.

None of the employees involved in either of the accidents had been on duty in violation of any of the provisions of the hours of service laws

Respectfully submitted,

W. P. BORLAND,

Director