

INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE
INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON
THE TRACKS OF THE CENTRAL UNION DEPOT AND RAILWAY
COMPANY AT CINCINNATI, OHIO, ON AUGUST 28, 1927.

October 20, 1927.

To the Commission:

On August 28, 1927, there was a rear-end collision between a passenger train of the Baltimore & Ohio Railroad and a transfer train of the Cleveland, Cincinnati, Chicago & St. Louis Railway on the tracks of the Central Union Depot and Railway Company at Cincinnati, Ohio, which resulted in the death of two employees and the injury of seven passengers and one employee.

Location and method of operation

The Central Union Depot and Railway Company operates the Union Station, used by the trains of eight divisions of five different railways, and also operates a double-track main line extending westward from the station to Harriet Street, a distance of 1.2 miles. This section of track is used by passenger trains of the Baltimore & Ohio and Louisville & Nashville Railroads, and of the Southern, Chesapeake & Ohio and Cleveland, Cincinnati, Chicago & St. Louis Railways, while that portion of it lying between Wood Street and Harriet Street, a distance of about 3,000 feet, is also used by freight trains of the Cleveland, Cincinnati, Chicago & St. Louis Railway, hereinafter called the Big Four, and also by the Louisville & Nashville Railroad and the Chesapeake & Ohio Railway, the main track of the last-named railway joining the Central Union Depot tracks at a point immediately east of Wood Street. There is no block-signal system in use between Wood and Harriet Streets, nor are train orders used, movements being handled entirely by switch tenders. In the case of movements with the current of traffic the signals given by switch tenders merely indicate that the switches in question are properly lined up for the movement to be made, while in the case of movements against the current of traffic the switch tenders first make the necessary arrangements between themselves before authorizing such movements to be made.

Beginning at Wood Street and proceeding westward the tracks of the Central Union Depot and Railway Company extend to the right on a compound curve 646 feet in length, the curvature varying from $8^{\circ} 04'$ to $12^{\circ} 36'$. This curve ends in

the vicinity of Fifth Street and is followed by 325 feet of tangent, a $3^{\circ} 50'$ curve to the right which is 108 feet in length and then a compound curve to the left 1,167 feet in length with a maximum curvature of $10^{\circ} 10'$. The accident occurred on the last-mentioned curve at a point 180 feet from its leaving end, where the curvature is at its maximum. Beginning just west of Fifth Street and extending beyond the point of accident the two main tracks, together with a parallel passing track located on the inside of the curve, extend through a cut about 15 feet in depth bounded by stone retaining walls. These walls together with the curvature of the track result in the range of vision of engine crews being very materially restricted.

The weather was cloudy at the time of the accident, which occurred at 9.41 p. m.

Description

The Big Four transfer train consisted of 38 cars and a caboose, hauled by engine 6531, and was in charge of Conductor Koester and Engineman Murray. This train moved from the Louisville & Nashville yards in Kentucky across the Ohio River to Cincinnati, a distance of about 6 miles, and arrived at Wood Street at 9.35 p. m. The switch tender authorized the train to proceed and it entered upon the Central Union Depot westbound track, proceeded to Harriet Street and at that point was delayed by another transfer train which was obstructing the crossover switches. While at this point Big Four yard engine 7379 was coupled to the rear of the caboose for the purpose of assisting the train, this engine being in charge of Switch Foreman Wever and Enginemen McAdams. After being delayed at Harriet Street for a period estimated to have been from two to four minutes, the Big Four transfer train started through the crossover switches for the purpose of proceeding on the westbound main track of the Big Four Railway, but after moving ahead a distance of about 900 feet it was brought to a stop to avoid a collision with a yard engine moving against the current of traffic, this yard engine having been sent down on that track for the purpose of coupling to the head end of the Big Four transfer. At about the time the transfer train was brought to a stop its rear end was struck by Baltimore & Ohio train No. 36.

Baltimore & Ohio passenger train No. 36 consisted of two baggage cars, two coaches and two Pullman sleeping cars, all of steel construction, hauled by engine 5151, and was in charge of Conductor Holler and Engineman Skelly. It departed from Union Station at 9.35 p. m., on time, was delayed two minutes at Fifth Street, and then proceeded and collided with the yard engine on the rear of the Big Four transfer while traveling at a speed of 8 or 9 miles per hour

Big Four yard engine 7379 was derailed and came to rest leaning to the right against the stone retaining wall, while the caboose of the transfer train was derailed and damaged to some extent. The front end of Baltimore & Ohio engine 5151 was slightly damaged and the forward pair of engine truck wheels was derailed. The employees killed were the engineman and flagman of yard engine 7379.

Summary of evidence

At the time the Big Four transfer entered on the Central Union Depot tracks it was supposed that it would be able to make the movement to the Big Four tracks without resulting in any delay to train No. 36. As previously stated, however, it was delayed at Harriet Street and then had to make a second stop on account of the switch engine moving against the current of traffic. At the time this second stop was made the conductor and one of the brakemen of the Big Four transfer were riding on the engine and the statements of these employees, as well as the statements of the engineman and fireman, were to the effect that their train had come to a stop when they felt the slack run in from the rear end of the train.

The employees on the rear of the transfer train consisted of Flagman Hackett of the transfer crew, Conductor Wever, Brakeman Gray and Flagman Sperling of the crew working with yard engine 7379, together with the engineman and fireman of that engine. According to the statements of the first four employees mentioned, engine 7379 was coupled to the rear of the transfer train when it stopped at Harriet Street and after starting from that point it had proceeded but a short distance before the speed was reduced and the train was still moving ahead when it was struck by train No. 36. The statements of these four employees did not agree as to who was riding on the inside of the caboose and who was on the caboose platform, and there were also other discrepancies in their statements, but in effect they stated that when the speed was reduced both Conductor Wever and Brakeman Gray spoke to Flagman Sperling about protecting the rear end of the train; that Flagman Sperling got off with a white lantern, obtained a red lantern which was hanging on the front end of engine 7379 and that he then disappeared from view around the rear end of the tender of that engine. At about this time a Louisville & Nashville freight transfer was moving eastward on the adjoining main track, on the inside of the curve. Apparently Conductor Wever got off shortly behind Flagman Sperling and saw the reflection of a headlight on the stone retaining wall on the outside of the curve, which he said he thought might have come from the headlight on the rear of engine 7379. In either event, however, it was only a few seconds after he got off the caboose before he saw train No. 36 three or four car-lengths distant, traveling at a speed he estimated to have been from 25 to 30 miles per

hour. He called a warning to Flagman Hackett of the transfer crew and to Brokeran Gray of the crew of engine 7379 but they did not have an opportunity of getting off before the accident occurred. The body of Flagman Sperling was afterwards found between the tender of engine 7379 and the stone retaining wall on the outside of the curve and apparently no member of the crew of the transfer train or of the crew of engine 7379 was able to explain how he came to be in that position at the time of the accident. The statements of these employees indicated that it was not the practice to flag when passing through this territory unless a train came to a stop, yet they insisted that in this particular case the flagman started back to protect the train while it was still moving ahead at a reduced rate of speed.

Fireman Warren, of yard engine 7379, said his attention was first attracted to the approach of train No. 36 by hearing the exhaust of the engine and on looking back he saw its headlight, apparently from 30 to 60 feet distant, the train was traveling at a speed which he estimated to have been from 18 to 25 miles per hour, judging the speed by the sound of the exhaust. He was not able to give any definite information concerning the efforts of Flagman Sperling to protect the rear of the train.

Engineman Skelly, of Baltimore & Ohio train No. 36, said that shortly before reaching the point of accident a cut of cars passed him on the eastbound main track and that some one on the engine handling that cut of cars gave his fireman a "steady" signal. This fireman, A. W. Liddell, was leaning out of the cab window at the time and said something to Engineman Skelly which he did not understand and consequently he asked the fireman to repeat his words. The fireman then turned to him, held out his hand indicating a "steady" signal and then said "steady, stop." Engineman Skelly said he at once applied the air brakes in emergency and that it was at about this time that the accident occurred. He had not seen anything of a flagman between Wood Street and the point of accident, neither did he see the preceding train until the accident occurred, his range of vision being limited to a distance he estimated to have been from 15 to 25 feet.

Fireman Liddell said that when the "steady" signal was given to him he could not see over the tops of the cars being handled by the engine on the eastbound track, which was the Louisville & Nashville freight transfer, but shortly afterwards he saw yard engine 7379 standing at a point about 50 feet distant and he at once called to Engineman Skelly to stop. Fireman Liddell said he then observed a flagman coming around the rear of the tender of the yard engine violently swinging red and white lanterns, after which this flagman ran between the tender of the yard engine and the stone retaining

wall. Fireman Liddell estimated the speed of his train at the time of the accident to have been about 8 miles per hour and he further stated that under the conditions existing at the time, with smoke in the cut from the Big Four and Louisville & Nashville engines, he was unable to see more than 50 feet beyond his own engine; he also claimed that the headlight on the rear of the yard engine was not burning.

The statements of the conductor, baggageman, and flagman of train No. 36 brought out no additional facts of importance. The conductor thought that the speed at the time of the accident was not over 7 or 8 miles per hour, while the baggageman and flagman estimated it to have been between 5 and 10 miles per hour.

Machinist Smith, of the Baltimore & Ohio Railroad, stated that the tape of the speed recorder of engine 5151 showed that the speed was about 9 miles per hour when the accident occurred.

Engineman Vaughn, of the Louisville & Nashville Railroad, was in charge of the engine handling the cut of cars which passed on the eastbound track. He said his engine was being operated backing up, which brought him on the side adjacent to the Big Four transfer train, and he saw that train standing with a yard engine coupled to its rear end and two or three men on the platform of the caboose. He also saw the glare of an approaching headlight on the rails in the rear of the yard engine, looked back to see if the Big Four transfer train had started to move, noticed that there was no flagman protecting the train and that there was no light displayed other than the headlight on the rear of engine 7379; it was then that he called a warning to the fireman of train No. 36, at which time that train was within 80 or 90 feet of the Big Four transfer train. He thought train No. 36 was moving at a speed of 8 or 9 miles per hour and did not consider that this was an excessive rate of speed.

Superintendent Johnson, of the Central Union Depot and Railway Company, stated that the local operating officials of the various tenant lines are supplied with copies of the Central Union Depot and Railway Company's time-table, which are presumed to have been distributed to the employees concerned, and he said he had always endeavored to have rules 7 and 9 of the time-table strictly enforced. Rule 7 requires all movements to be made prepared to stop at any point between the station and B. & O. Junction, or Harriet Street, within which territory this accident occurred, while rule 9 provides that no train or engine shall be allowed to stand on the main track unless fully protected. Engineman Skelly of the Baltimore & Ohio Railroad said he had never been examined on the Central Union Depot rules, although he was familiar with the conditions in this particular locality; Fire-

man Liddell said he had never been examined on the rules of the Central Union Depot Company and did not have a copy of them, which was also the case with the conductor of train No. 36.

A test was made subsequent to the accident under conditions similar to those existing at the time of its occurrence, with a freight train occupying the eastbound main track representing the Louisville & Nashville freight transfer which was passing when the accident occurred, and with a yard engine similar to engine 7379 standing at the point occupied by the last-mentioned engine. A passenger engine similar to Baltimore & Ohio engine 5151 was then moved westward on the westbound track and it was found that the headlight on the rear of the yard engine could not be observed by the fireman of the passenger engine until the engines were only 178 feet distant from each other, and at this distance it could not be determined on which track the yard engine was standing; the tender of the yard engine was only faintly visible at a distance of 125 feet. Observations made from the position said by Fireman Liddell to have been occupied by him when he first saw the rear end of engine 7379, reduced these distances to 124 feet and 94 feet, respectively; the range of vision of the engineman was 15 feet.

Conclusions

This accident was caused by the failure of the crew of Big Four yard engine 7379 properly to protect their train and by failure of Engineman Skelly of Baltimore & Ohio train No. 36 to comply with the rule requiring him to operate prepared to stop at any point within this particular territory.

The two main tracks in the deep cut in which this accident occurred carry a heavy volume of passenger and freight traffic from five different railroads; the only signals governing these movements are those given by switch tenders and they indicate only that the switches are properly lined for the movement intended to be made, it being required that all movements be made under full control with no superiority of trains either by class or by direction. The result is that this is essentially a slow-speed territory. The rules governing this territory which are involved in this accident are rules 7, 9, and 21. Rules 7 and 9 have been mentioned previously; they relate to the operation of trains under control and to flag protection, while rule 21 requires that a flagman be on the rear end of each train in readiness to protect it.

The members of the crew of yard engine 7379 said their train had not stopped when the accident occurred and estimated the speed of train No. 36 to have been as high as 30 miles per hour. The best evidence, however, indicates that the Big Four transfer train had been brought to a stop and

that the speed of the following train was approximately that which was indicated by the speed recorder on the engine, which was 9 miles per hour. According to the statements of the crew of the yard engine, none of them was riding on the rear of the tender as is plainly contemplated by the provisions of rule 21, and the result was that when the transfer train was brought to a stop much valuable time was lost by the flagman in obtaining his red and white lanterns and in going back to a point where he would be visible to the engine crew of the approaching train, and as a consequence the requirements of flagging rule No. 9 were not strictly observed. Conductor Wever was in position to supervise the protection afforded the transfer train and is as much responsible for the occurrence of the accident as was the flagman.

The movement of the Louisville & Nashville freight transfer on the eastbound track interfered very materially with the view of the fireman of train No. 36 and resulted in his failure to see the rear end of yard engine 7379 until too late to avert the accident. Under the rules, however, all trains regardless of class or direction are required to be prepared to stop at any point and it is obvious that this requirement was not being fully complied with by Engineman Skelly, although on the other hand it is clear that the speed of his train was not nearly as high as was estimated by some of the Big Four employees. The speed shown on the speed-recorder tape of engine 5131 was 9 miles per hour but even this rate of speed was too high to enable the fireman to discover the train ahead, give warning to the engineman and then to permit the engineman to bring the train to a stop in time to avoid an accident.

Attention is called to the fact that the transfer train hauled by engine 6531 was allowed to enter on the Central Union Depot tracks at Wood Street at 9.35 p. m., only three minutes before train No. 36 was due at that point, at the time it was assumed that the movement could be made without delay to train No. 36, but good judgment should have required this transfer movement to be made after train No. 36 had passed.

Rule 7 of the Central Union Depot time-table, previously mentioned, requires all trains to move prepared to stop at any point. Under this same time-table, however, trains are scheduled to move between the station and Harriet Street, within which territory this accident occurred, at a speed of 14 miles per hour. The circumstances surrounding the occurrence of this accident make it obvious that it is impossible for trains to be operated in accordance with the schedule and at the same time observe the requirements of rule 7. The schedule of trains should be so arranged as to enable their crews to comply with the rule under which they are operating

Under the arrangements in effect the local operating officials of the tenant lines are furnished with copies of the Central Union Depot time-tables, the latter company leaving to the officials of the tenant lines the question of seeing that their employees are properly instructed on the time-table. It did not appear that there was any definite and certain arrangement as to the number of time-tables to be furnished and Terminal Superintendent Meyers, of the Baltimore & Ohio Railroad, said that about 15 time-tables were received by his office and that they were not distributed to the crews. The crew of train No. 36 had not been examined on the rules contained in the Central Union Depot time-table and in answer to a question on this point Mr. Meyers stated that in his experience of nine years as terminal superintendent it had not been the practice to examine the employees on these rules. Engineman Skelly had been operating out of the Cincinnati terminal for many years and was thoroughly familiar with the conditions, and it did not appear that the fact he had not been examined on these rules had any bearing on the occurrence of the accident. Such a situation, however, should not exist on any railroad, and the necessary remedial measures should be taken at once.

The various employees involved were experienced men, and at the time of the accident none of them had been on duty in violation of any of the provisions of the hours of service law.

Respectfully submitted,

W. P. BORLAND,

Director.