

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 TERMINAL RAILROAD ASSOCIATION
OF ST. LOUIS AT ST. LOUIS, MO., ON JULY 5, 1929.

October 19, 1929.

To the Commission:

On July 5, 1929, there was a side collision between a St. Louis-San Francisco passenger train and a Chicago, Burlington & Quincy passenger train on the tracks of the Terminal Railroad Association of St. Louis at St. Louis, Mo., which resulted in the injury of 34 passengers and 2 employees off duty.

Location and method of operation

All trains entering St. Louis Union Depot are operated over the tracks of the Terminal Railroad Association of St. Louis. The accident occurred on the East Division, which extends between East St. Louis, Ill., and Theresa Ave., St. Louis, Mo., a distance of about 5 miles, and consists of several running tracks the general direction of which is east and west, and over which trains are operated by block or interlocking signals. Union Depot is located north of these tracks, between 13th and 21st Streets, and a series of lead tracks diverge from the running tracks from both directions and then converge at a point where they join the tracks leading into the train shed. It was in this latter territory that the accident occurred, at the intersection of lead tracks 43 and 44; approaching this point from the west on lead track 43 the track is tangent for a distance of 330 feet from which point there is a $12^{\circ} 30'$ curve to the left to the point of accident, a distance of 450 feet. Approaching from the east on lead track 44 the track is tangent for 333 feet, followed by a 12° curve to the right to the point of accident, a distance of 580 feet. The general practice is for all inbound passenger trains to back into the train shed which necessitates their being pulled on the running tracks and then backed in over the lead tracks.

Train movements over the lead tracks are governed by signals operated from interlocking tower No. 1, located in the triangle formed by the running tracks and the lead tracks. These signals are mounted on signal bridges which span the tracks and the signals directly involved are on signal bridge No. 3 which is located 16 feet south of the intersection of tracks 43 and 44.

The weather was clear at the time of the accident, which occurred at about 7.25 a.m.

Description

Eastbound St. L. S. F. passenger train No. 80 consisted of six coaches, all of wooden construction, hauled by engine 848, and was in charge of Conductor Churley and Engineer Dean. This train passed tower No. 2 at 23rd Street at 7.21 a.m., and continued eastward a distance of about $1\frac{1}{2}$ miles to a point beyond signal bridge 14, located 1,005 feet east of Union Depot, and after receiving a proceed signal at this bridge it started a back-up movement towards the station on lead track 44, passed signal bridges 13 and 10, which were displaying proceed indications, passed signal bridge No. 6, which was displaying a stop indication, and had been brought almost to a stop when the rear car was struck by C.B. & Q. train No. 16.

Westbound C.B. & Q. passenger train No. 16 consisted of three baggage cars, one mail car, one coach, two chair cars and three Pullman sleeping cars, hauled by engine 2949, and was in charge of Conductor Scanlon and Engineer Cort. All cars were of steel construction except one of the baggage cars, the coach and the two chair cars, which were of wooden construction. This train passed North Market Street office at 7.05 a.m., and moved a distance of about 3 miles to a point beyond signal bridge 11, located 1,185 feet west of Union Depot. It then started backing towards the station on lead track 43, passed four signal bridges, including bridge No. 6, all of which were displaying proceed signal indications, and collided with the side of St. L. S. F. train No. 80 while traveling at a speed estimated at about 8 miles per hour.

The rear car of train No. 80 was overturned on its right side and was considerably damaged and the fifth car was partly overturned and slightly damaged. None of the other cars was derailed, although the rear car in train No. 16 was damaged.

Summary of evidence

Conductor Chumley, of train No. 80, stated that he had frequently handled trains in and out of Union Depot, that he handled train No. 80 into the station during the week preceding the accident, and that he was familiar with the route and signals governing its movement. He said that no difficulty was experienced in making several stops between Valley Park, where his train originated, and St. Louis, a distance of 17.9 miles. When his train was stopped east of signal bridge 14 he observed a clear signal displayed, authorizing his train to start the back-up movement towards the station. Shortly after starting this movement he made

a running test of the air-brakes by means of the back-up hose, which proved satisfactory. As soon as the rear of his train passed under signal bridge 10, located 209 feet from bridge 6, he noticed that the signal on bridge 6 governing the movement of his train was in the stop position. He immediately opened the valve on the tail hose to its fullest extent but the brakes did not appear to take proper hold, resulting in his train passing signal bridge 6 and fouling lead track 43, and he said it was still moving slowly at the time of the accident. The brakeman who was riding with him on the rear of the train also saw the stop signal on bridge 6 as soon as it came into view and called his attention to it, but he had already started to apply the brakes. Conductor Chumley also heard the emergency air whistle sounded by the towerman but at that time the brakes had been applied. He estimated that his train was moving at a speed of 8 or 10 miles per hour when the brakes were applied, which he said would stop a train within a distance of about 50 feet under ordinary conditions, but he did not know why his train did not stop in this instance.

Brakeman Haddock of train No. 80, stated that when his train was coming under bridge 10, moving at a speed of about 15 miles per hour, he observed that the signal on bridge 6 was displaying a stop indication, whereupon he called it to the attention of the conductor. The conductor then made a brake-pipe reduction which brought the train to a stop just before the collision occurred. He thought that if the brakes had been applied in emergency as soon as it was discovered that the signal was set against their train it would have stopped in about one-half car-length.

Engineman Dean, of train No. 80, stated that his train was carrying the required pressure of 80 pounds brake pipe and 100 pounds main-reservoir pressure, and that he experienced no difficulty with the brakes en route, while on arrival at St. Louis the train was brought to a stop by the air being applied from the rear end. Before starting the reverse movement he received a hand signal from the rear of the train, as well as a communicating whistle signal, and after his train had moved a distance of about three car-lengths the air was applied from the rear which caused the brakes to take good hold and which almost brought the train to a stop. The train continued towards the station and was traveling at a speed of about 10 miles per hour when the brakes were again applied, which appeared to be an emergency application, and he immediately placed the brake-valve handle in the lap position, having previously closed the throttle. He thought the train stopped within about 70 feet, although he was not paying particular attention to the distance as

he was watching the air gauge. The statements of Fireman McRoberts, of train No. 80, practically corroborated those of Engineman Dean as to the operation of the train prior to the accident.

Conductor Scanlon, of train No. 16, stated that the brakes functioned properly when a running test was made after his train started backing towards the station and that he and the brakeman were riding on the rear of the train watching the signals as their train approached them and they all displayed clear indications, including the signal on bridge No. 6. The train was moving at a speed of about 8 miles per hour when the brakeman shouted a warning, and upon looking around he observed train No. 80 about 10 feet away. He immediately applied the brakes in emergency, bringing his train to a stop within a distance of 20 or 30 feet.

Brakeman Diestelhorst, of train No. 16, stated that all signals governing the route over which his train was moving as it approached the station were in the clear or proceed position. He first observed train No. 80 when it was about 20 feet from his own train and at about the same time the brakes were applied and his own train stopped within 12 or 15 feet. He thought train No. 30 was still moving at the time of the accident.

Engineman Cort, of train No. 16, stated that a running test was made when the train started the back-up movement and the brakes appeared to operate as intended. His train was moving at a speed of about 12 miles per hour when the brakes were suddenly applied from the rear, bringing the train to a stop within a distance of about 10 feet. Due to another inbound train moving on an adjacent track, his view towards the rear of his own train was obscured. There were no further facts of importance brought out by the statements of Fireman Bramblett, of train No. 16.

Signal Repairman Walker stated that he was approximately 35 or 40 feet south of signal bridge No. 6 when the trains involved approached that point. He looked at the signals on the bridge and noticed that all of them were displaying red indications except the one governing the route on track 43, which was displaying a green indication. When he realized that train No. 80 was not going to stop before it passed the bridge, he shouted to the conductor of that train and pointed towards the signal, but the conductor did not look at him and the train kept on coming and was still moving at the time of the accident.

Train Director Reed, on duty at Tower No. 1, stated that the signals were set giving train No. 16 a clear route through the plant and into the train shed and at the same time train No. 80 was given a clear route up to signal bridge No. 6. Both trains approached bridge No. 6 at the same time and were moving at a speed of about 10 or 12 miles per hour. When it appeared that train No. 80 was disregarding the signal displayed for it he sounded the emergency air-whistle danger signals, located on bridges 8 and 10, which required both trains to stop, but these signals were not heeded.

An air-brake test was made on the first five cars of train No. 80 subsequent to the accident, and it was developed that they were in good condition and were operating efficiently. The brakes on the rear car could not be tested as the brake cylinder was broken as a result of the accident. The back-up hose was also tested and found to be operating effectively and with no obstruction in it. The triple valve on the rear car was removed and subjected to a rack test and the only defect found was a slight leak in the slide valve, and it functioned properly in both service and emergency application tests.

Conclusions

This accident was caused by the failure of Conductor Chumley, of train No. 80, properly to obey a signal indication.

The rules provide that trains or engines must move quite up to but not pass a signal indicating stop. According to the evidence both trains arrived in the vicinity of the point of accident at about the same time and the route was lined for train No. 16 to back into the station over lead track 43 and for train No. 80 to back in on lead track 44 as far as signal bridge No. 6, at which point it would have to wait for train No. 16 to get out of the way. Conductor Chumley stated that he was on the alert and observed the signal on bridge No. 6 in the stop position as soon as it came into view, or as soon as the rear of the train emerged from under bridge No. 10, which is located more than 200 feet from bridge No. 6, and that he opened the valve on the back-up hose immediately, but that for some reason the brakes failed to take proper hold, resulting in the train passing the signal and fouling lead track 43. No difficulty was experienced with the air brakes on train No. 80 en route to St. Louis, however, and shortly after the back-up movement was started an effective running test of the brakes was made by the conductor from the rear of the train, while the air-brake test made on five of the cars in train No. 80 after the accident had occurred showed that they functioned properly. On account of damages

sustained in the accident the brakes on the sixth car could not be tested but its triple valve and the back-up hose were tested and found to be in proper working order. In view of all the evidence it is apparent that Conductor Churley either improperly handled the brake valve on the back-up hose or failed to begin braking soon enough to bring his train to a stop before it passed signal bridge No. 6.

The employees involved were experienced men and at the time of the accident they had not been on duty in violation of any of the provisions of the hours of service law.

Respectfully submitted,

W. P. BORLAND

Director.