

INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE
INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE
NEW YORK, NEW HAVEN & HARTFORD RAILROAD AT NEW
HAVEN, CONN , ON JULY 3, 1931.

July 27, 1931.

To the Commission

On July 3, 1931, there was a head-end collision between two passenger trains on the New York, New Haven & Hartford Railroad at New Haven Conn., which resulted in the death of 1 passenger and the injury of 92 passengers and 22 employees and persons carried under contract.

Location and method of operation

This accident occurred on that part of the New Haven Division extending between Devon, 11.63 miles west of New Haven, and Air Line Junction, 2.20 miles east of New Haven. At the immediate point of accident this is a four-track line over which trains are operated by time-table, train orders, and an automatic block-signal system. The point of accident was within yard and interlocking limits, 3,680 feet east of the passenger station at New Haven. Approaching this point from the west the tracks curve gradually to the left as they leave the station, followed by 600 feet of tangent, a 4° curve to the right 417 feet in length, and then 2,004 feet of tangent, the accident occurring on the last mentioned tangent at a point approximately 700 feet from its eastern end. Approaching from the east, there are 752 feet of tangent, a 4° curve to the left 873 feet in length, and then the tangent on which the accident occurred. The grade is practically level.

Leaving the passenger station eastbound, there are 10 main station tracks which gradually converge until at the point of accident there are four main tracks, numbered from north to south, 3, 1, 2, and 4. Track 3 is a westbound track, and track 4 is an eastbound track, tracks 1 and 2 are signaled for operation in either direction, although under normal operation track 1 is an eastbound track, and track 2 is a westbound track. The point of accident was on track 2. There are several crossovers in this vicinity, those immediately involved in the accident being crossovers 25 and 35; crossover 25 is a facing-point crossover for eastbound movements on main track 2, while crossover 35 is a trailing-point crossover for such movements.

The accident occurred within the limits of the interlocking plant operated from S.S.78, this being an electrical plant with 48 working levers, and the crossovers and signals involved in this accident are operated from this signal station, which is located 1,417 feet west of the point of accident. It is equipped with a Klaxon horn which is sounded by the operator in case of emergency as a signal to all trains to stop. Both of the crossovers directly involved, crossovers 25 and 35, are between the signal station and the point of accident. The majority of the signals are dwarf signals of the 2-position, semaphore type, although there are a few high signals. The signals directly involved are eastbound dwarf signal 2Ra, located at the eastern end of station track 6, eastbound dwarf signal 8R, located 261 feet east of S.S.78 and 1,156 feet west of the point of accident, westbound high color-light signal 48L, which is a home signal located 271 feet east of the point of accident, and westbound dwarf signal 48Lc, located 104 feet east of the point of accident.

The weather was clear at the time of the accident, which occurred at 7.11 p.m.

Description

Eastbound passenger train first No. 86 consisted of 11 coaches, hauled by engine 1373, and was in charge of Conductor Palmer and Engineman Rice. The cars in this train were of wooden construction with steel reinforced underframes. This train left New Haven at 7.07 p.m., seven minutes late, moving from station track 6 via crossover 17 to main track 4, and thence via crossover 24 to main track 2. Just east of crossover 24 was the facing-point switch of crossover 25, leading from main track 2 to main track 1, and it was the intention to move train first No. 86 through crossover 25 to main track 1 as soon as the westbound train involved in this accident had cleared on track 1. Dwarf signal 8R, located near the leaving end of crossover 24 and governing the further movement of train first No. 86, was in the stop position, but this indication was disregarded and the train proceeded on track 2, passed crossover 25, ran through the trailing-point switch of crossover 35, and collided with train No. 27 while traveling at a speed thought to be somewhat in excess of 10 miles per hour.

Westbound passenger train No. 27 consisted of 1 club car, 3 parlor cars, 2 dining cars, 2 parlor cars and 1 observation car, all of steel construction, hauled by engine 1364, and was in charge of Conductor Brokaw and Engineman Mosher. This train was entering New Haven on main track 2 and it was the intention for it to proceed on that track until it reached crossover 35, which was lined for its

movement through the crossover to main track 1 and thence into the station on track 7. Proceed signal indications for the movement in question were displayed by color light signal 48L and dwarf signal 48Lc, but just after passing these signals and before reaching crossover 35 the train was struck by train first No. 86, apparently after train No. 27 had been brought to a stop.

The front ends of both engines were considerably damaged; the first car in train first No. 86 was badly damaged and then was destroyed by fire which broke out in the wreckage, while the second car was so badly damaged that it was to be destroyed. Minor damage was sustained by other cars in this train, but the cars in train No. 27 were not damaged.

Summary of evidence

Engineman Rice, of train first No. 86, said that after leaving the station on station track 6 he received a stop indication at dwarf signal 3Ra, near the eastern end of the station, and at once brought his train to a stop. When this signal cleared he proceeded eastward through crossover 17 to track 4 and then through crossover 24 to track 2, near the leaving end of which dwarf signal 8R was located. Engineman Rice's statements indicated that he called this dwarf signal as "all right on the jack," or words to that effect, but he was unable to state definitely that he actually observed the indication, nor did he notice that the points of crossover 25 were lined for a through movement on main track 2; in fact, while his statements were somewhat confusing, it appeared that he thought he was on main track 1 until he was a train-length beyond signal 8R, or about the time he saw train No. 27 approaching not more than 200 feet distant and at about the same time observed the next eastbound signal, 51R, in the stop position. The speed of his train then was about 10 miles per hour, and he at once applied the air brakes in emergency, but too late to avert the accident. Engineman Rice had been operating in this territory for many years, and was thoroughly familiar with the practice by which trains are advanced in this congested territory from signal to signal, and knew that he was under the necessity of observing switch points in order to know which route was lined up for his train, and he was also aware that his train practically always is crossed over at crossover 25 from main track 2 to main track 1. He was unable to offer any explanation for his failure to notice the indication displayed by dwarf signal 8R and his statements indicated that he was uncertain as to just what did happen after his train started from dwarf signal 3Ra, near the eastern end of the station. It further appeared from Engineman Rice's statements that he did not hear any one call to him as he passed SS.78, nor did he hear the Klaxon horn being sounded.

Fireman Peterson, of train first No. 86, said he called the stop indication of dwarf signal 2Ra, and that the train remained at this point about two minutes before receiving a proceed indication. It then started ahead and after it had traveled about 50 feet Fireman Peterson got down on the deck of the engine and began working on the fire, and while so engaged he heard the engineman call "Jack," indicating that he had received another proceed indication on a dwarf signal. Fireman Peterson continued working on the fire, although he noticed that the engine seemed to bear to the right instead of to the left, which would have been the case had it departed on main track 1, but he did not pay any attention to the matter, nor did he observe any of the signal indications, and his first knowledge of anything wrong was when he heard the brakes apply in emergency. He at once started for his seat box, but the accident occurred before he could reach it. Fireman Peterson further stated that he did not hear the sound of a horn when passing S.S.78.

The statements of Conductor Palmer and Brakemen Bresnahan and Burton were to the effect that they did not hear the horn or any one calling to them when passing S.S.78, and that the speed of their train was about 10 miles per hour when the accident occurred. The conductor, who was in the first car at the time, thought the accident was preceded by an emergency application of the brakes. After the accident Conductor Palmer saw Engineman Rice, and the engineman said he had a clear signal indication, and that ^{the} next thing he knew he saw train No. 27 bearing down upon him.

Engineman Mosher, of train No. 27, said signal 48L was displaying yellow over red, under the rules, this is designated as an approach signal and means to reduce speed at once and proceed at restricted speed, not exceeding 25 miles per hour, prepared to stop at the next signal. Dwarf signal 48Lc was displaying a proceed indication and the next thing noticed by Engineman Mosher was the engine of train first No. 86 as it came from under a bridge, which is about 350 feet west of the point of accident. Engineman Mosher said he at once sounded the whistle on his engine, brought his train to a stop by means of an emergency application of the brakes, and then got off when he realized that the approaching train was not going to be brought to a stop. Engineman Mosher estimated the speed of his own train to have been about 10 miles per hour when he applied the brakes in emergency, and thought train first No. 86 was traveling at a speed not in excess of 15 or 20 miles per hour when he first saw it coming. The statements of Engineman Mosher were substantially corroborated by those of Fireman Senecal.

Operator Carey, on duty at S.S.78, said that while train first No. 86 was being held at dwarf signal 2Ra, due to

some empty equipment being moved in on track 4, train No 27 rang in on track 2 and the route was lined for the movement of that train via track 1 into the station on station track 7, with signal 8R displaying a stop indication. Train first No. 86 was given a proceed indication at dwarf signal 2Ra with the idea of advancing it as far as dwarf signal 8R, but as the train seemed to increase speed when passing the tower, with the engine working steam, Operator Carey called to the engineman, gave stop signals with his hands, and then sounded the Klaxon horn. The engineman did not seem to notice any of these warnings, however, although he was in his usual position on his seat box and seemed to wave his hand to the operator as he passed. Operator Carey said they then threw the dwarf signal, meaning signal 48Lc, against train No. 27, but found that the circuit was out, being already occupied by train No. 27. It further appeared from Operator Carey's statements that with the route as lined for train No. 27 to make the movement into the station, he could not have moved the lever so as to clear dwarf signal 8R.

Operator Mahon, on duty at S.S.78, said the route was lined for train No. 27 to cross over from main track 2 to main track 1 at crossover 35, but that train first No. 86 was being held at dwarf signal 2Ra. After train No. 27 was about half way through the route they began to advance train first No. 86, but it passed dwarf signal 8R, which was in the stop position, without stopping, and then Operator Mahon threw the signal against train No. 27 in an endeavor to bring that train to a stop. The other statements of Operator Mahon were very similar to those of Operator Carey.

Signal Maintainer Lillquist, who also was on duty at S.S.78, was down in the lower part of the tower when he heard the horn sounded and on running out he saw the head end of train first No. 86 passing by the tower and disregarding dwarf signal 8R, which he could plainly see was displaying a stop indication. He then ran upstairs to ascertain the position of the levers of the interlocking machine, and found crossover 35 reversed, with the signals and switches lined for the movement of train No. 27 from main track 2 to main track 1, and thence into the station on station track 7, and he stated that with this line-up it would have been impossible to clear any opposing signal.

Signal Supervisor Warren said he had inspected S.S.78 about a week prior to the accident and found everything in first-class condition. He also stated that the levers controlling the reverse signals are tested three times daily, that no defects have been found with dwarf signal 8R, and that when examined and tested as soon as the track had been cleared after the accident, no irregularities or defects of any kind could be discovered.

The statements of seven car inspectors who had examined the equipment and conducted an air-brake test of train first No. 86 before its departure from New Haven, were to the effect that there was nothing defective and that all the brakes were in efficient operating condition.

General Superintendent Regan stated that train No. 27 consisted of all-steel equipment; these cars were not damaged and were continued in service after the accident. All of the 11 cars in train No. 86 were wooden coaches with semi-steel underframes. The first car mounted the tank and was damaged for 20 or 30 feet inside. It caught fire almost immediately, but it was not definitely determined whether the fire was due to broken pipes in the lighting system or started from the overhead wires of the electric propulsion system. He stated that all of the persons who were seriously injured were in the first car, only minor injuries being sustained by those in the other cars of train No. 86 and on train No. 27. He further stated that the New Haven owns and operates 1,029 steel cars, and there are also 300 steel Pullmans operating regularly over this road. The New Haven also owns 834 wooden cars, 263 steel-underframe cars, and 300 or 400 cars with reinforced steel underframes. In regular service all main-line and some branch line trains consist entirely of steel equipment, but on occasions where the traffic requires additional service, steel-underframe equipment is used. Among the injured, four persons were reported as having suffered burns.

Conclusions

This accident was caused by the failure of Engineman Rice, of train first No. 86, properly to observe and obey signal indications.

The evidence is clear that the route was lined for the movement of train No. 27 from track 2 to track 1 at crossover 35, thence westbound on track 1, past crossover 25, and into the station on station track 7. It also appeared that the normal movement of train first No. 86 was from some one of the station tracks through various crossovers to track 2 and thence through crossover 25 to track 1 and eastward to the Hartford Division tracks. With the route lined for train No. 27 as outlined above, train first No. 86 could not pass through crossover 35 to track 1 eastbound until train No. 27 had cleared the route westbound, and it was on this account that crossover 25 was in normal position, with dwarf signal 8R displaying a stop indication, and this signal was locked in that position by reason of the fact that crossover 35 had been reversed. Engineman Rice was thoroughly familiar with the territory in which he was operating, and was equally familiar with the route usually taken by this particular train, having operated it

for many years, but for some unexplained reason he was unable to state what indication was displayed by signal 8R, nor did he appear to realize at the time that his train still was moving on track 2, instead of on track 1, until he had run through the trailing-point switch of crossover 35 and saw train No. 27 approaching a short distance away, too late to enable him to bring his train to a stop. Engineman Rice, who was 69 years of age, was employed as a brakeman in 1880, transferred to fireman in 1882, and was promoted to engineer in 1889, resigning in the same year and being re-employed as an engineer in 1903. He had been re-examined on the rules, and on vision, color sense and hearing, in June, 1931, and had been examined physically in September, 1930, without any disqualifying defects being discovered, and there was nothing to indicate that he was not in a proper condition for the performance of his duty on the day of the accident.

This accident again directs attention to the greater safety provided by steel cars as compared with wooden passenger train equipment. All of the persons seriously injured were riding in one of the wooden cars which was practically destroyed, and the fire which quickly broke out added to the suffering and horror caused by the collision.

All of the 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.