INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF T-E BUREAU OF SAFETY IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE NEW YORK, NEW HAVEN & HARTFORD RAILROAD AT PROVIDENCE, R. I., ON OCTOBER 8, 1927.

November 15, 1927

To the Commission:

On October 8, 1927, there was a rear-end collision between a freight train and two yard engines, coupled, on the New York, New Haven & Hartford Railroad at Providence, R. I., the yard engines being driven ahead and into the rear end of another freight train, resulting in the death of one employee and the injury of two employees. This accident was investigated in conjunction with a representative of the Public Utilities Commission of Rhode Island.

Location and Method of Operation

This accident occurred on that part of the Providence Division extending between Readville Transfer, Mass., and Auburn, R. I., a distance of 36.39 miles, in the vicinity of the point of accident this is a double-track line over which trains are operated by time-table, train orders and an automatic block-signal system. The accident occurred within the yard limits of Providence, on track 2, at a point about 600 feet west of Atwell Avenue Station. Eastbound automatic signals 184 0 and 183 2, the signals involved, are located approximately 65 feet and 3,885 feet, respectively, west of the point of accident. These signals which are equipped with approach lighting, are of the enclosed-disk type and display red, yellow, and green for stop, caution, and proceed, respectively.

Approaching the point of accident from the west the track is tangent for 1,820 feet, followed by a 1° 50' curve to the right which extends 560 feet to the point of accident and for a considerable distance beyond that point. The grade for eastbound trains is 0.989 per cent descending to a point about 250 feet east of signal 183 2, from which point it tapers off for a distance of about 1,000 feet, and then it is 0.15 per cent descending for a distance of 3,400 feet to the point of accident.

It was dark and somewhat cloudy at the time of the accident, which occurred at 12.43 a.m.

Description

The trains involved in this accident were freight train NP-4, consisting of 80 cars and a caboose, hauled by engine 3311 and in charge of Conductor Carver and Engineman Gates; yard engines 2454 and 2404, coupled and in charge of Enginemen Witham and Henry, respectively, and freight train NU-2, consisting of 79 cars and a caboose hauled by engine 3346 and in charge of Conductor Silver and Engineman Bragdon.

Eastbound freight train NP-4, en route from New Haven to Providence, departed from Auburn, R. I., 5.04 miles west of Providence, at 11.59 p.m., October 7, received caution and stop indications at signals 183.2 and 184.0, respectively, and then proceeded slowly and was again brought to a stop at Brayton Avenue Tower, 0.54 mile west of Providence, as the home signal at that point was displaying a stop indication.

Eastbound yard engines 2454 and 2404 had completed their period of duty in the yard at Auburn and departed from that point, coupled, at 12.18 a.m., October 8, en route to the engine house at Providence. These engines also received caution and stop indications at signals 183.2 and 184.0 and then proceeded and were again brought to a stop about 250 feet in the rear of train NP-4 and about 63 feet east of signal 184.0. While standing at that point these engines were struck by train NU-2.

Eastbound freight train NU-2, en route from New Haven to New Bedford via Providence, passed Auburn at 12.36 a.m., passed signal 183.2, which was displaying a caution indication, passed signal 184.0, which was displaying a stop indication, and collided with the two yard engines while traveling at a speed variously estimated to have been between 8 and 20 miles per hour.

The yard engines were driven ahead and into the rear of train NP-4, the caboose of that train being demolished and two of the cars being derailed. Yard engine 2454 and its tender were derailed to the left, while yard engine 2404 remained upright, only partly derailed. Engine 3346, of train NU-2, stopped with its head end about 260 feet beyond the point where it first struck the yard engines. Neither the engine nor any of the cars in this train was derailed. The employee killed was the conductor of train NP-4.

Summary of Evidence

The statements of Engineman Gates, Fireman Carter and Head Brakeman Gallant, of train NP-4, were to the effect that signal 183.8 was displaying a caution indication at the time their train passed it and that signal 184.0 was displaying a stop indication, and Engineman Gates stated that the condition of the rails was not such as to cause any difficulty in bringing his train to a stop. Flagman Jordan stated that he saw the headlights on the yard engines as those engines followed his train from Auburn, and that they came to a stop behind his train just east of signal 184.0. Immediately prior to the accident he was sitting at the desk in the caboose and the first knowledge he had of anything wrong was on hearing several short blasts sounded on an engine whistle as a warning of danger but the accident occurred before he and Conductor Carver could ascertain the nature of the trouble.

The statements of Enginemen Witham and Henry and Firemen Holt and Barr, of yard engines 2464 and 2404, were to the effect that the visibility was good and that no difficulty was experienced in observing signal indications. The yard engines were brought to a stop in the rear of train NP-4, just east of signal 184.0, and at this time there was a red lantern and a white lantern, lighted, on the rear end of the tender of yard engine 2464. The first knowledge they had of anything wrong was about two or three minutes after they stopped when they heard several short blasts sounded on the engine whistle of train NU-2 and on looking back they saw the headlight of that train just before the accident occurred.

Engineman Bragdon, of train NU-2, estimated the speed of his train to have been about 25 miles per hour as it approached signal 183.8, which was displaying a caution indication, on reaching a point about 20 or 25 car-lengths west of this signal he made a 15 or 18-pound brake-pipe reduction, from a train-line pressure of 70 pounds, which brought the speed of the train down to a certain extent, the speed beginning to diminish about the time the signal was being passed and being reduced to about 18 or 20 miles per hour. He thought this reduction should have reduced the speed to a greater extent and therefore made an additional brake-pipe reduction, about 10 or 15 pounds, without having released, when in the vicinity of a street located approximately 840 feet east of signal 183.8. Still he thought that the speed did not seem to be reduced as much as should have been the case and on reaching a point a short distance west of Grove Street, located

approximately 1,040 feet west of signal 184.0, he opened the cylinder cocks, moved the brake-valve handle around to the emergency position, at which time the air gauge registered between 30 and 35 pounds, and left the brake valve in that position until the accident occurred, at which time the speed was about 10 miles per hour. He said that signal 184.0 was displaying a stop indication when his train passed it and that he had expected to find it displaying that indication inasmuch as signal 183.2 was displaying a caution indication. Engineman Bragdon stated that the engine wheels did not slide and that while he could not account for the failure of the emergency air-brake application to stop the train it was his opinion that owing to the two previous service applications the desired emergency effect was not obtained. Prior to this time he had experienced no difficulty with the air brakes. Engineman Bragdon further stated that he returned to work about July 8, 1927, after having been off duty since September 14, 1926, approximately 10 months, this absence being occasioned by reason of electrical burns he received in the performance of duty, and it appeared that one of the doctors who treated him for these injuries also gave him a physical examination before he returned to duty. The company's records also showed that Engineman Bragdon was examined as to his vision, color sense and hearing on July 13, 1927, and was given a physical examination on July 18, 1927.

The statements of Conductor Silver, Fireman Norton Head Brakeman Courville and Flagman Fitzsimmons as to the way the train was handled en route, including the air-brake inspections and stops at various points, practically corroborated those of Engineman Bragdon. Their estimates as to the speed of the train when it passed Auburn ranged from 25 to 35 miles per hour, and their estimates of the speed just prior to the accident ranged from 6 to 20 miles per hour, the minimum estimate as to the speed at the time of the accident being made by Fireman Norton and the maximum estimate by the conductor. Conductor Silver was of the opinion that the application of the brakes made in the vicinity of signal 183.2 was not released and that the emergency application was attempted just prior to the accident; his first knowledge of anything wrong was the sudden stopping of the train and at that time it was his impression that a coupler had been pulled out of a car. Fireman Norton said that an application of the brakes was made at signal 183.2, then the speed was reduced and that a second service application was made soon afterwards. The engineman sighted the stop indication of signal 184.0 when it was 8 or 10 car-lengths distant and placed the brake-valve handle in the emergency position. Fireman Norton estimated the speed

of the train at this time to have been between 6 and 10 miles per hour, it seemed to him that the air brakes responded to the emergency application to a certain extent, although there was only a slight exhaust as though the train line was depleted, and he thought his engine would merely couple to the yard engines without damage, not realizing that an accident was imminent until his engine was within five car-lengths of the yard engines. He said that the weather was damp and hazy, but not foggy, and he did not think the rails were in the best condition for braking purposes, Fireman Norton was of the opinion, however, that the air brakes worked properly.

According to a report made to the superintendent by the master mechanic, the brakes on the cars in train NU-2 were tested about 10 hours after the occurrence of the accident and all were found to be in proper working order with the exception of the brakes on the 7th and 61st cars.

Conclusions

This accident was caused by failure of Engineman Bragdon, of train NU-2, properly to control the speed of his train, in obedience to signal indications.

Under the rules of this railroad when a signal is in the caution position an engineman is required to reduce speed at once and proceed at restricted speed not exceeding 25 miles per hour, prepared to stop at the next signal. The evidence is to the effect that the air brakes were in proper working order en route, while a test made after the occurrence of the accident showed that they were working properly on all but 2 of the 79 cars in the train. Under these circumstances it seems probable that the underlying reason for the engineman's failure to stop his train was the fact that he either misjudged the rate of speed or else delayed the taking of effective measures toward bringing his train to a stop until it was too late to avert the accident.

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.