Inv-2153

INTERSTATE COMMERCE COMMISSION

WASHINGTON

REPORT OF THE DIRECTOR

BUREAU OF SAFETY

ACCIDENT ON THE

NEW YORK, CHICAGO & ST. LOUIS RAILROAD

STONY ISLAND, ILL.

MARCH 3, 1937.

INVESTIGATION NO. 2153

SUMMARY
Inv-2153

Railroad:	New York, Chicago & St. Louis	
Date:	March 3, 1937	
Location:	Stony Island, Ill.	
Kind of accident:	Side collision	
Train involved:	Freight	:Belt Ry. of Chicago :Transfer Freight
Train numbers:	C.& O. Train No. 97	:Extra 144
Engine numbers:	542	: 144
Consist:	33 cars	: 61 cars
Speed:	30-35 m.p.h.	: 10 m.p.h.
Weather:	Light rain	
Time:	11.58 p.m.	
Casualties:	1 injured	
Cause:	Failure properly to control speed when approaching crossover, due in part to partly turned angle cock.	

April 24, 1937.

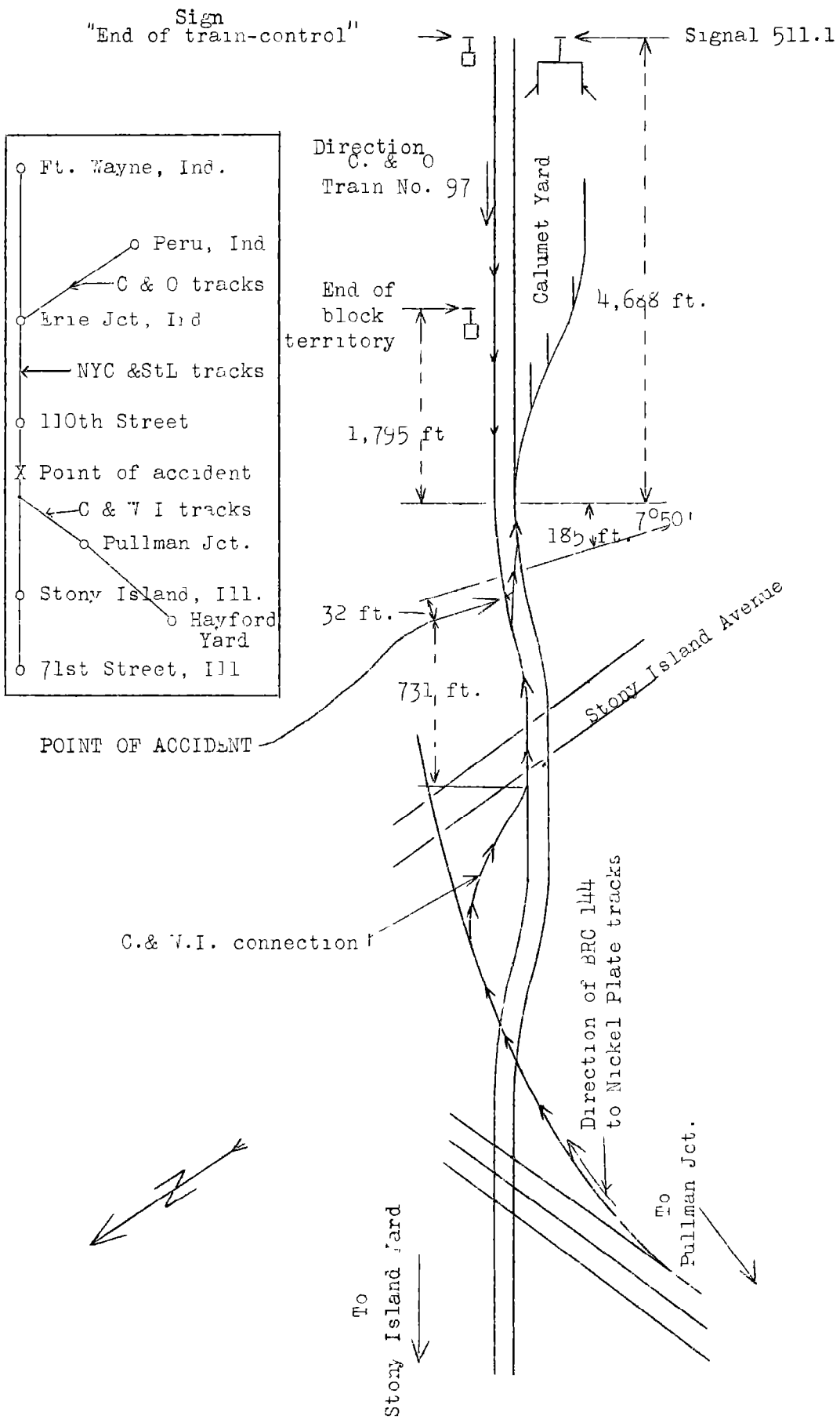
To the Commission:

On March 3, 1937, there was a side collision between a Chesapeake & Ohio Railroad freight train and a Belt Railway of Chicago transfer freight train on the tracks of the New York, Chicago & St. Louis Railroad at Stony Island, Ill., which resulted in the injury of one employee.

Location and method of operation

This accident occurred on the Chicago Division of the New York, Chicago & St. Louis Railroad, hereinafter referred to as the Nickel Plate, which extends between Fort Wayne, Ind., and 71st Street Tower, Chicago, Ill., a distance of 143.4 miles. In the vicinity of the point of accident this is a double-track line within yard limits, over which trains are operated by timetable and train orders. An automatic block-signal system, and also an automatic train-stop of the intermittent-inductive type are in use east of the point of accident, the western end of train-stop territory being at signal 511.1, nearly 1 mile distant, while the western end of automatic signal territory is 2,012 feet east of the point of accident. Due to the construction of an underpass at Stony Island Avenue, near 95th Street, the tracks at the point of accident are on a temporary fill and bridge, south of the permanent location. Just east of Stony Island Avenue there is a trailing-point cross-over and the accident occurred at the fouling point of this cross-over with the west-bound track. Approaching this point from the east, the track is tangent for a distance of 8,688 feet and then there is a 7° 50' curve to the left 185 feet in length, the accident occurring 32 feet beyond the leaving end of the curve. The grade for west-bound trains is ascending with a maximum of 0.30 percent, and it is 0.20 percent at the point of accident.

Trains moving from Hayford yard on the Belt Railway of Chicago, hereinafter referred to as the B.R.C., to Nickel Plate Calumet yard, operate over the tracks of the B.R.C., the Chicago & Western Indiana Railroad, hereinafter called the C.& W.I., and the Nickel Plate. Approaching the point of accident from the west on the C.& W.I., there is a long curve to the right; the track crosses the Nickel Plate at an angle of about 30° and



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then practically parallels the Nickel Plate tracks on the north; just beyond the crossing there is a connection leading from the C.& W. I. tracks to the Nickel Plate west-bound main track, and 591 feet east of the Nickel Plate switch of this connection, is located the west switch of the cross-over involved. Movements through the cross-over are governed by hand signals given by a switch-tender, a yellow flag by day and a yellow light by night indicating proceed for west-bound movements, and a green flag by day and a green light by night indicating proceed for east-bound movements.

West-bound block signal 511.1 is located on the south side of the Nickel Plate main tracks 4,305 feet east of the point of accident. This is a 1-arm, 2-position upper-quadrant signal, displaying caution and stop indications. Opposite this signal, on the north side of the tracks, is a sign board reading "Ending automatic train control".

A light rain was falling at the time of the accident which occurred at 11.58 p.m.

Description

The B.R.C. transfer freight train, east-bound, consisted of 61 cars and a caboose, hauled by engine 144, headed west, and was in charge of Conductor Dunlap and Engineman Rodeck. This train departed from Hayford Yard at 11.03 p.m., entered on the Nickel Plate west-bound track at the C.& W.I. connection, and was moving through the cross-over near Stony Island Avenue at a speed of about 10 miles per hour when it was sideswiped by Chesapeake & Ohio Train No. 97.

Train No. 97, a west-bound third-class freight train of the Chesapeake & Ohio Railway, hereinafter referred to as the C.& O., consisted of 35 cars and a caboose, hauled by engine 542, and was in charge of Conductor Troyer and Engineman Donaldson. This train entered the tracks of the Nickel Plate at Erie Junction, Ind., 8 miles east of Stony Island, at 11.38 p.m., according to the train sheet and collided with the twenty-sixth car of the B.R.C. transfer train at the cross-over near Stony Island Avenue while traveling at a speed estimated to have been about 4 miles per hour.

The left side of C.& O. engine 542 was slightly damaged, but none of the cars in this train was derailed or damaged. The twenty-sixth car in the transfer train was slightly damaged, the rear wheels of the west truck

of the twenty-seventh car were derailed and the twenty-eighth and twenty-ninth cars were overturned. The employee injured was the fireman of train No. 97.

Summary of evidence

Engineman Donaldson of Train No. 97, stated that the brakes on his train were tested by two car inspectors before leaving Peru, its initial station on the C.& O.; no cars were set out or picked up en route and the brakes functioned properly when a stop was made at English Lakes, Ind., 45.6 miles from Erie Junction, where the engine was detached for the purpose of taking coal and water. Approaching Douglas Street, Hammond, Ind., an initial brake-pipe reduction of perhaps 6 pounds was made, followed by a second reduction of 6 pounds, which brought the train to a stop about 11.26 p.m. The brakeman went to the telephone in order to obtain permission to cross the tracks of another railroad and also to enter on the Nickel Plate track, and returned in a very few minutes stating that the operator said to come on down slowly. Engineman Donaldson said they proceeded very slowly from Douglas Street to the Erie depot, a distance of approximately $\frac{1}{4}$ mile, passing over seven street crossings, and were practically stopped in front of the depot when a signal was given and they proceeded and entered the tracks of the Nickel Plate. The signals from that point to the signal located approximately half way between 110th Street and 95th Street were in green position, but signal 511.1 was yellow. He acknowledged the restrictive signal indication at which time the throttle was shut off and the speed was between 30 and 35 miles per hour. According to instructions he was supposed to approach expecting to find the cross-over switches open or occupied and to come to a full stop unless given a clear signal by the switch-tender, and he said that shortly after passing signal 511.1 he made a service application of the brakes and immediately noticed extreme shortness in the train-line exhaust, and being satisfied that he did not have the length of train line cut in that he had had in making previous stops, he moved the brake valve to emergency position, opened the sander valve, applied the straight air and reversed the engine, reducing the speed to about 4 miles per hour at the time of the collision. After whistling out a flag he remarked to the head brakeman that there was something wrong and they started back along the train on the north side, looking at the couplers, angle cocks and air hose, and on the sixth car the brakeman found an angle cock practically half turned. They did not change the position of the angle cock in any manner, and subsequently met

the conductor at this point, calling his attention to the position of the angle cock. The conductor closed the angle cock on the rear end of the fifth car and broke the hose, and very little air came out through the partly -closed angle cock on the sixth car. As soon as the track was clear after the accident, they took this train to the stock yards, making several stops en route, and had no further trouble with the brakes. Fireman Rhineberger corroborated substantially the statements of Engineman Donaldson except that he said the engineman did not apply the brakes in emergency until within eight car lengths of the point of accident.

Head Brakeman Marshall of Train No. 97, verified the engineman's estimate as to the speed of the train through Hammond and approaching the point of accident. After the accident Engineman Donaldson wanted to look at the brake equipment on the cars so he walked along on the north side of the train with the engineman; seeing an angle cock that was turned he asked the engineman if he thought that was what would do it and the engineman stepped up and looked and said he believed so.

Conductor Troyer, of Train No. 97, stated that approaching 110th Street the speed was 35 miles per hour and after the engine passed the signal he felt a slight run-up in the train and the speed was gradually reduced until it came to a stop; he did not feel any application of the brakes under the train, or any exceptional braking power on the caboose, and did not think of looking at the air gauge to see if the brakes were applied. On proceeding toward the head end he met the engineman and brakeman who were down on the ground talking to the injured fireman and they told him there was an angle cock turned on the train. He asked if they had moved it, or handled it, and then asked them to show him where the angle cock was located, and on going back he found the angle cock half open on the head end of the sixth car, A.R.L. 12326. He made a test to see how much air would pass through it, by closing the angle cock on the rear of the fifth car and then breaking the hose, and found that the air would go through, but that it would take about 1 minute for the brakes to apply; after cutting the air in from the head end in order to let it blow through the same opening, it was found it would take a good deal over 1 minute before brakes started to release. He did not believe it was necessary to lift the angle cock up in order to open it, but was not positive about that.

Flagman Edwards, of Train No. 97, did not feel the air brakes being applied on the caboose before the train came to

a stop; at no time did he look at the air gauge, and he did not know that his train had been in a collision until the B.R.C. engineman came over and told them.

Engineman Rodeck, of B.R.C. engine 144, stated that he received the proper signal to enter the Nickel Plate track, and after passing through the cross-over and approaching Calumet Yard he noticed a C.& O. train coming along about 30 miles per hour and figured it was going pretty fast; after getting up close he noticed the C.& O. train was not going to get stopped and could tell by the grind of the wheels that the engineman had applied the brakes in emergency.

Switchtender Carney, in charge of the switches at the cross-over, stated that he gave B.R.C. engine 144 a back-up signal to come into the yard, with a green lantern, and was in the shanty reporting that train when engine 542 approached; he did not notice this latter train until it was about opposite him, and at this time he knew the C.& O. engineman was using the air as he saw red sparks coming from the wheels.

Wreck Foreman Pasewick, of the Nickel Plate, stated that he made an inspection of the angle cocks of A.R.L. 12326, and found that they were of the self-locking type. Car Inspectors Johnson and Wilson, of the C.& O. stated that they made an inspection of Train No. 97 upon its arrival at Peru and also made the inspection prior to its departure from that point; all of the angle cocks were in proper position and the air brakes were working properly.

Superintendent Lee, of the Nickel Plate, stated that during the past year they had had one case at Hammond involving a trespasser stepping on an operating lever, but no cases of turned angle cocks. Superintendent of Terminals Barker of the C.& O., stated that prior to 1925 they had had some difficulty in the way of having lift levers raised, and air hose and angle cocks interfered with, but he had no recollection of receiving such reports from train or enginemen since that time.

Discussion

The brakes on C.& O. Train No. 97 were tested at Peru, and functioned properly when several stops were made en route. Engineman Donaldson acknowledged the restrictive indication displayed by signal 511.1, and

according to his statements after passing this signal he made a service application of the brakes, immediately noticed the extreme shortness of the train-line exhaust, and at once moved the brake valve to emergency position, applied the straight air, opened the sanders and reversed the engine; according to his further statements he and Brakeman Marshall made an inspection after the accident and found an angle cock partly closed on the head end of the sixth car. It also appeared from the examination made by Conductor Troyer that the angle cock was turned sufficiently to allow the pressure on the portion of the train to the rear of the sixth car to be maintained, but that the brakes would not respond to a service reduction and even after an emergency application made by parting the hose, a considerable period would elapse before a sufficient reduction would occur to cause the brakes to apply.

The distance between signal 511.1 and the point of accident is 4,905 feet, and 3,500 feet of this distance is on an ascending grade of 0.30 percent. Not only had Engineman Donaldson received a caution indication at signal 511.1, but after leaving the end of automatic block-signal territory, 2,012 feet from the point of accident, he still was subject to the timetable yard-limit rule, which required all except first-class trains to approach and pass through yard limits under full control. Notwithstanding difficulty which may have been experienced due to a partly-closed angle cock at the head end of the sixth car, it is believed that had Engineman Donaldson applied the brakes shortly after passing the signal location, as stated by him, the effect of such a brake application upon the engine and first 5 cars, at the speed at which the train was said to have been running, would have been sufficient on the ascending grade to bring the 33-car train to a stop before reaching the fouling point of the cross-over. The statement of the fireman indicates that the engineman did not apply the brakes in emergency until within eight car lengths of the point of accident.

Conclusion

This accident was caused by failure properly to control the speed of a train when approaching a cross-over, due in part to a partly-closed angle cock which prevented the engineman from obtaining normal braking power throughout the train when closely approaching the point of accident.

Respectfully submitted,

W. J. PATTERSON,
Director.