
REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED AT THE INTERSECTION OF THE TRACKS OF THE NEW YORK CENTRAL RAILROAD AND THE MICHIGAN CENTRAL RAILROAD AT DETROIT, MICH., ON MAY 8, 1923.

June 19, 1923.

To the Commission:

On May 8, 1923, there was a side collision between a New York Central Railroad engine and a Michigan Central Railroad engine at the intersection of the tracks of these two lines in the yard at Detroit, Mich., which resulted in the death of one employee and the injury of one employee.

Location and method of operation.

This accident occurred on the Detroit Division of the New York Central Railroad, within yard limits at Detroit, in the immediate vicinity of the point of accident there is a single-track line extending between Rouge River and Vinewood Avenue, a distance of approximately 5 miles, which is assigned exclusively to freight traffic of the New York Central Railroad. Trains and engines operating in this vicinity move as directed by telephone under the authority of the general yardmaster, and by the yard time-table of the Michigan Central Railroad and the book of rules of both railroads. The point of accident was at a switch leading to the west from this freight line to a wye, approaching the switch on the freight line from the north, the track is tangent and practically level for a considerable distance, while approaching on the wye there is a curve to the right, with a 1 per cent ascending grade for a distance of about 1,500 feet and then 350 feet of level track extending to the switch.

Michigan Central trains and engines have to cross over to the New York Central freight track and thence through the wye-track switch to reach the stock yards or shops. A target signal is mounted on a pole near the wye-track switch, the indications of which are described as follows in the Michigan Central yard time-table:

"A target signal located at New York Central tracks 300 feet south of Dix Avenue governs movement of trains and engines to and from Michigan Central main tracks across New York Central tracks to and from South Yard or Stock Yards:

Position of Target	Indication.
Vertical	New York Central trains proceed
Horizontal	Trains crossing from Michigan Central main tracks into or from southbound yard, proceed.
Diagonal	Stop to all trains and engines.

Normal position of target - vertical."

This target is pivoted in the center and is operated manually by crews desiring to use the switch, it is maintained by the New York Central Railroad. While the time-table rule above quoted refers to three positions, and permits movements to be made only when the target is either vertical or horizontal, the quadrant on which is the lever, used in operating the signal, provides for only two locked positions, and when the lever is placed in either of these positions the target is in a diagonal position, it being impossible to place the lever at one of the two locked positions and have the target display a proceed indication for either road. By placing the lever between the two locked positions, it is possible to place the target in the horizontal position, and by pushing the lever either upward or downward as far as it will go, disregarding locked positions, it is possible to place the target at about a 45 or 60-degree angle, respectively, from the horizontal.

It was raining and cloudy at the time of the accident, which occurred at about 4.10 p.m.

Description.

Michigan Central engine 8929, attached to 19 cars, in charge of Conductor Laws and Engineman Burgess, was proceeding southward on the wye, returning from the shop yards, where it had been engaged in making up a train, and the engine had just fouled the New York Central track when it was struck on the left side by New York Central engine 5640.

New York Central engine 5640, headed north, was backing southward drawing 13 cars, and was in charge of Conductor McCloskey and Engineman Roberts, en route from Davidson yard to Rouge River and while moving at a speed of about 4 or 5 miles an hour struck Michigan Central engine 8929.

Neither engine was derailed or materially damaged and there was no damage to the track. The cab of Michigan Central engine 8929 was slightly crushed, and the fireman of that engine was caught in the cab in such a manner as to receive fatal injuries

Summary of evidence.

Engineman Burgess, of Michigan Central engine 8929, stated that he brought his train to a stop before fouling the New York Central track, and upon inquiry Fireman Daves informed him that the track was clear from his, the fireman's side, after receiving a proceed signal from the conductor, he started to move his train forward and had just fouled the New York Central track when his engine was struck. He was positive in his statement that the target was properly set for his train to proceed, although according to a diagram he afterwards drew of the position of the target as it stood when he accepted its indication it was at an angle, with the left end a little higher than the right end.

Conductor Laws, of the Michigan Central train, stated that he was about 16 car lengths from the engine when the collision occurred and that neither he nor any of the members of his crew adjusted the position of the target. He also stated that after the accident he observed that the target was at an angle of about 30 degrees. Conductor Laws drew a diagram of the position of the target, indicating that it was nearly horizontal. The board was also observed to be in this nearly-horizontal position by Switchman McClinton of the Michigan Central crew. In the diagrams drawn by these two employees the left end of the target was slightly higher than the right end.

Engineman Roberts, of New York Central engine 5640, stated that after bringing his train to a stop about 1,500 feet north of the point of accident, he observed some section men pushing a car on the track in advance of his engine, he followed slowly at a speed of about 4 miles an hour and said that from the time he first saw the push car

it was constantly in view until after it had past the wye-track switch. He stated that the switch was set for his train and that the target stood at a nearly vertical position. As his train was proceeding southward he asked Fireman Anderson as to the condition of the track ahead and was told that it was clear, but he did not again ask how the situation looked in advance as the train neared the wye track, and he assumed that all was clear. Engineman Roberts drew a diagram of the position of the target as it appeared as his train approached the wye-track switch and his diagram conforms to the position called vertical, which was the correct indication for his train to proceed.

Fireman Anderson, of New York Central engine 5640, corroborated Engineman Robert's statement as to the section car being in advance of his train approaching the intersection of the tracks and said that while following this car he observed Michigan Central engine 8969 on the wye but did not know whether it was moving. When the push car was near the wye-track switch he turned to put on the injector and did not again observe the track ahead until engine 5640 collided with the Michigan Central engine. He stated that when he last observed the indication of the target, his engine was about two or three car lengths from the intersection, the switch was set for his engine, the target indication was at proceed for his train, and the Michigan Central engine had stopped clear of the track, he then turned to put on the injector and the collision occurred. The diagram drawn by him practically agreed with that drawn by Engineman Roberts.

Conductor McCloskey and Brakeman H. H. Miller, of the New York Central train, were both in the caboose at the time of the collision. Conductor McCloskey said he observed the position of the target after the accident, the diagram drawn by him showed the target as being nearly vertical, with the right end above the left.

New York Central Brakeman H. C Miller, with engine 4563 was the last person known to have adjusted the position of the target before the accident and he testified that his train was moving to the Michigan Central track with a delivery and when it had cleared the wye he closed the switch and adjusted the board of the target "straight up and down" for the New York Central main track. Brakeman H. C. Miller also drew a diagram of the position in which he left this target, and it showed the specified position for "stop for all trains", being at a 45-degree angle, with the left end higher than the right end. Michigan Central

Yardmaster Brandt reached the scene of the accident shortly after the accident, the diagram drawn by him also showed the target with the left end above the right, at an angle more nearly indicating "stop for all trains." The statements of other witnesses indicated that at times they were in doubt as to what indication was being displayed or should be displayed.

Conclusions.

This accident is believed to have been caused by the misunderstanding by both engineman of the signal indication displayed by the target.

Statements obtained from members of both New York Central and Michigan Central train crews, as well as from others who were in the immediate vicinity of the point of accident, were so conflicting as to be generally useless as evidence. From these conflicting statements and the evidence submitted it is apparent that a signal so constructed and operated that it leaves so much to the imagination, obviously is unsafe Had this signal been constructed so as to indicate accurately only the three specific indications designated by the time-table, instead of the various indications now possible, the general misunderstanding of the indications of this signal now prevalent among the employees would be eliminated.

The two fireman were in a position to observe the proximity of the engines, and had either of them maintained a proper lookout this accident could have been averted.

At the time of the accident the train and engine crews of the New York Central train had been on duty 1 hour and 10 minutes after having been off duty 15 hours or more; the engine crew of the Michigan Central train had been on duty 1 hour and 40 minutes and the train crew 1 hour and 50 minutes, after being off duty 8 hours.

Respectfully submitted,

W. P. BORLAND

Director.