INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE MICHIGAN CENTRAL RAILROAD AT WEST DETROIT, MICH., ON MARCH 19, 1931.

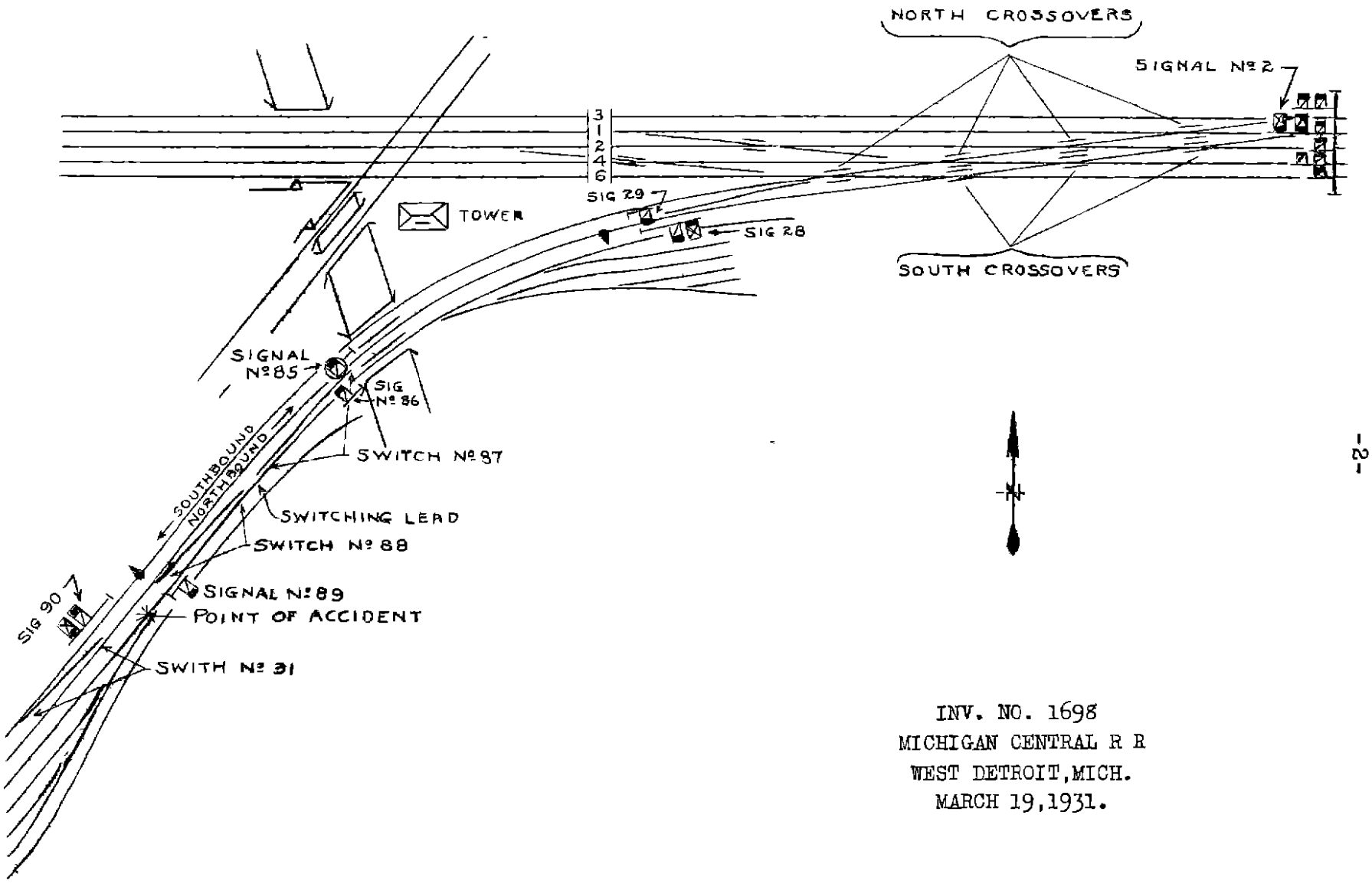
April 22, 1931.

To the Commission:

On March 19, 1931, there was a head-end collision between a transfer train and a passenger train on the Michigan Central Railroad at West Detroit, Mich., which resulted in the injury of 39 passengers and 1 employee.

Location and method of operation

This accident occurred within the territory known as Detroit Yard, at the southern end of interlocking limits. Approaching from the eastern end of the interlocking limits, there is a four-track main line, the tracks being numbered from north to south as follows: 1, westbound passenger, 2, eastbound passenger, 4, westbound freight, and 6, eastbound freight. These tracks were paralleled on the north by a running track, known as track 3. There are two sets of crossovers, herein referred to as the north and south crossovers, respectively, which connect these tracks and extend toward the left or south to the double-track line of the Toledo Division. Train movements on the Toledo Division, beginning in the immediate vicinity of where this accident occurred, are governed by timetable, train orders, an automatic block-signal system, and an automatic train stop device of the intermittent inductive type. The interlocking tower is located in the angle formed by the diverging tracks, at a point approximately 1,200 feet west of the eastern limits of the interlocking plant. At the southern limits of the interlocking plant the tracks of the Toledo Division are paralleled on the east by a series of yard tracks and a switching lead. The accident occurred on this lead track at a point approximately 650 feet south of the tower and about 21 feet outside the western or southern end of interlocking limits, at a switch leading from the lead track to the yard tracks.



INV. NO. 1698
MICHIGAN CENTRAL R R
WEST DETROIT, MICH.
MARCH 19, 1931.

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The interlocking signals involved are dwarf signal 2 and dwarf signal 85. Signal 2, of the three arm, upper quadrant type, the lower arm being a calling on arm, is located at the eastern limits of the interlocking plant and governs movements approaching on track 1. Dwarf signal 85, of the one-unit color-light type, is located between the two main tracks of the Toledo Division at a point 1,350 feet southwest of signal 2, and is an all-route signal governing reverse movements on the northbound main track. The interlocking plant is equipped with approach route locking and route indicator lighting, which enables an operator to note the route actually lined up as soon as a train enters the route. Special time table instructions provide a maximum speed of 10 miles per hour for a train taking a diverging route from one track to another.

The weather was clear at the time of the accident, which occurred at 11 22 p.m.

Description

The transfer train consisted of yard engine 8951 and 27 cars, headed north, and was in charge of Conductor Axelrude and Engineman Rice. This train was standing on a yard track at a point about 404 feet south of dwarf signal 85, fouling the switching lead and with the switch open, and was prepared to move through the interlocking plant as soon as the route could be obtained. It had been standing at that point about 9 or 10 minutes when it was struck by train second No. 309.

Southbound passenger train second No. 309 consisted of one baggage car, one express car, one coach, and four Pullman sleeping cars, all of steel construction, hauled by engine 3313, and was in charge of Conductor Dalfrich and Engineman Knitter. This train departed from Detroit at 11.15 p.m., 55 minutes late, proceeded on track 1 to West Detroit, passed signal 2 displaying a caution indication on the calling-on arm, and was routed over the south crossovers to the northbound Toledo Division track. Instead of continuing on the northbound track to crossover 91, where it was to be diverted back to the southbound track, it passed dwarf signal 85, which was displaying a caution indication, passed through the open crossover leading to the lead track, entered the open yard track switch, and collided with transfer 8951 while traveling at a speed estimated to have been 15 miles per hour, although one estimate was that the train had practically stopped when the accident occurred.

The transfer train was driven back 25 or 30 feet, the engine being slightly damaged and derailed. The engine and first car of train second No. 309 were

slightly damaged. The employee injured was the engineman of the transfer train.

Summary of evidence

Towerman Schemehorn, stationed at West Detroit, stated that at the time train second No. 309 came upon the annunciator circuit he was moving a train of 55 cars over track 6, the eastbound freight main track, through the north set of crossovers to track 3, which made it necessary for train second No. 309 to be routed through the south crossovers and over the northbound track of the Toledo Division for a short distance. Transfer train 8951 had been standing in the south yard about 10 minutes prepared to move out of the yard through the switching lead to the northbound track; Towerman Schemehorn had opened the switches for this movement to be made after the passage of train second No. 309, but no signal had been given. He then lined the route for train second No. 309, through the south set of crossovers, over the northbound track, and through crossover 91 which led back to the southbound track, but overlooked crossover 87, which was open and led to the switching lead. If he had looked at the route indications he could have seen by the light that the route was lined for a movement into the south yard, but he was more or less busy, the telephones were ringing and he expected the 55-car train moving on track 6, which was on short time ahead of two other scheduled trains, to become stalled, and in the confusion he overlooked the position of crossover 87 and also the light indication. He estimated the speed of train second No. 309 to have been 10 or 12 miles per hour when it passed the tower. Towerman Schemehorn stated that he had five years' experience as towerman at West Detroit and Bay City Junction, and was thoroughly familiar with the operation of the interlocking plant at West Detroit, and that it is customary to set the route for passenger trains against the current of traffic in order to keep the traffic moving on the various routes.

Engineman Knitter, of train second No. 309, stated that as he approached West Detroit he received a calling-on signal indication and after being diverted to the northbound track he reduced the speed of his train to 10 miles per hour, he observed dwarf signal 85 in the caution position and expected to cross over to the southbound track after passing that signal, but when he noticed his train leave the main track at crossover 87 and enter the switching lead, he concluded that they were to be diverted back to the northbound track through crossover 88, located just beyond crossover 87, and then back to the southbound track. He then made a 10-pound brake-pipe reduction, but after traveling about 200 feet he saw that the switch points were lined for the yard track, with engine 8951 about two car-lengths distant; he applied the air brakes in emergency and shut

off steam, stating that he thought the train had come practically to a stop when it collided with engine 8951. Engineman Knitter stated that he was thoroughly familiar with the signals and rules governing the operation of trains within interlocking limits, that the calling-on signal indicated that he might expect to take any route, and to find the track occupied, a broken rail, or any obstruction, and he said that with a caution indication on a dwarf signal he should be even more cautious, he was not prepared to stop, however, before colliding with the transfer train. Engineman Knitter thought he was operating his train under control and did not consider 10 miles per hour an excessive speed for the movement he thought was intended to be made.

Fireman Larkins, of train second No. 309, stated that after leaving the station he called the signal indications, which were repeated by the engineman, and the engineman made a slight application of the air brakes just as they entered the lead track. When reaching a point about two or three car-lengths from engine 8951, Fireman Larkins saw that the switch was open, called a warning to the engineman, and the latter applied the air brakes in emergency. Fireman Larkins estimated the speed of their train to have been 10 miles per hour at the time of the accident.

The statements of Conductor Dapprich, Head Brakeman Wheaton and Rear Brakeman Thompson were to the effect that the train traveled about two car-lengths after the air brakes had been applied in emergency. Conductor Dapprich estimated the speed of their train at the time of the accident to have been 12 miles per hour while Rear Brakeman Thompson stated that they were traveling at about 15 miles per hour before the emergency application was made and about 10 miles per hour at the time of the accident. Conductor Dapprich further stated that the brakes had been tested before leaving Detroit and a running test had been made after their departure from that point.

Engineman Rice, of transfer 8951, stated that he was waiting in the south yard for the route to be given him. The brakes were applied on his engine, but when he saw train second No. 309 approaching he called to the other members of his crew and stood up to reverse his engine, but was knocked down by the collision. He stated that the headlight on his engine was burning.

Fireman Hull and Brakemen Rhoades and McKenzie, of transfer 8951, who were also on the engine, stated that when the engineman told them that a passenger train was approaching, the engineman reversed the engine and gave it steam and they were of the opinion that the

train had started to move at the time of the collision, and Brakeman Rhoades and McKenzie stated that it was shoved back about 30 feet by the collision.

Conductor Axelrude, of transfer 8951, was at the tower at the time of the accident and was not able to give any information in regard to the occurrence of the accident.

Maintainer O'Brien, on duty at the tower at the time of the accident, stated that he did not know of the movements being made and the first he knew of anything wrong was when he heard the air brakes applied, and he remarked to the towerman that something must have happened to the air, the towerman replying that he had forgotten crossover 87.

Signal Foreman Taylor stated that he considered Towerman Schemehorn competent to take charge of any tower and that he is as good a towerman as they had on the system; his last oral examination, on March 18, 1931, was perfect.

Conclusions

This accident was caused primarily by the failure of Towerman Schemehorn properly to line the route for the passage of train second No. 309 within interlocking limits.

The evidence indicates that due to a transfer train being moved from track 6 through the north set of crossovers to track 3, Towerman Schemehorn set the route for train second No. 309 through the south set of crossovers so as to make a reverse movement over the northbound track and thence through crossover 91 to the southbound track. Previous to lining the route for train second No. 309, however, he had lined the route, including crossover 87, for transfer 8951 to leave the south yard, and when he set the route for train second No. 309 he overlooked crossover 87, resulting in the passenger train entering that crossover and striking transfer 8951. He also overlooked the light indication which would have informed him of the improper routing for that train, stating that this oversight was due to the fact that he was more or less busy, the telephones were ringing, and he also was concerned with the fact that the transfer train moving over track 6 to track 3 was on short time ahead of two scheduled trains and he was afraid it would become stalled.

The indications displayed by the calling-on arm on home signal 2, and at dwarf signal 85, required that a train be operated at low speed, and Engineman Knitter understood that they governed movements to any route and that such movements should be made expecting

to find the track occupied, a broken rail, or other obstruction in the block, and that the maximum speed allowed for diverging movements is 10 miles per hour. He said he was operating his train at a speed of approximately 10 miles per hour upon passing dwarf signal 85, and when he saw that his train was being diverted from the main track through crossover 87, he made a 10-pound brake-pipe reduction, followed by an emergency application at a point about 200 feet beyond and about two car-lengths from transfer 8951 train having come practically to a stop when the collision occurred. The statements of the other members of his crew, however, indicated that their train was traveling at a speed of 10 or 12 miles per hour at the time of the accident, and the occurrence of the accident itself is evidence that Engineman Knitter was not prepared to stop short of an obstruction.

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.