

In re investigation of accident which occurred at the intersection of the Chicago & North Western Railway and the Chicago, Milwaukee & St. Paul Railway, at Racine Junction, Wis., on April 20, 1918.

May 22, 1918.

On April 20, 1918, there was a side collision between a Chicago, Milwaukee & St. Paul Railway freight train and a Chicago & North Western Railway switching locomotive at Racine Junction, Wis., which resulted in the injury of two employees. After investigation of this accident the Chief of the Bureau of Safety reports as follows:

In the territory in which the accident occurred the Chicago & North Western Railway is a double track line running north and south, trains using the left hand track in the direction of traffic; and the Chicago, Milwaukee & St. Paul Railway is a single track line running east and west. The tracks of the two roads intersect almost at right angles at Racine Junction, the grade at the crossing being practically level for C. & N. W. Ry. trains and slightly descending for eastbound C. M. & St. P. Ry. trains. Train movements over this crossing are controlled by a mechanical interlocking plant operated from a tower located there, signal indications on the C. & N. W. Railway being given in the upper right hand quadrant and those on the C. M. & St. P. Railway in the lower right hand quadrant. The view of the intersecting road from a train approaching the crossing on either railway is very limited, because of buildings adjoining the tracks in that vicinity.

On the C. & N. W. Railway, a back-up derail of the Hayes type is located 201 feet north of the crossing, and a dwarf signal, No. 3, governing back-up movements over this derail, is located 57 feet farther north. From the tower to the signal the wires used in operating signal No. 3 pass through a pipe under the C. M. & St. P. Railway tracks, then on wire-carriers to the station platform, then through a pipe under the platform and to the signal. The signal has a spring attachment designed to move the signal blade to the stop position in case the wires are broken.

Switching locomotive 366, of the C. & N. W. Railway, in charge of Foreman Birkren and Engineman LaLonde, was engaged in the usual switching, and about 5.10 p.m. passed northward on the northbound main track over the crossing at Racine Junction, pulling three cars, and came to a stop just beyond signal No. 3. This movement was made preparatory to backing up and crossing over the southbound main track and thence to the east side of the main line in order to get some cars there, the crossover being located just south of the crossing. After about two minutes several members of the crew observed that signal No. 3 was in the clear position and locomotive 366 started to back up, and when the first of the cars being pushed by it was on the crossing it was struck by C. M. & St. P. extra 2101.

Eastbound extra freight train 2101 consisted of 3 loaded cars and a caboose hauled by locomotive 2101 backing up, and was in charge of Conductor Victor and Engineman Burns. This train left Corliss, Wis., en route to Racine, Wis., at 4.50 p.m., and about 5.09 p.m. came to a stop at the interlocking signal 324 feet west of the crossing at Racine Junction; after a few minutes the signal was cleared and extra 2101 proceeded, striking the first of the three cars pushed by locomotive 366 on the crossing.

As a result of the collision locomotive 2101 was derailed, and the tender was badly damaged; the car struck by locomotive 2101 was destroyed, and another of the cars pushed by locomotive 366 was slightly damaged. The weather at the time of accident was cloudy.

Foreman Birkren, of locomotive 366, stated that his locomotive had been doing the usual switching, and about 4.30 p.m. went to the Mitchell Motor Car Co. plant, on the west side of the main line; at 5.10 p.m. it came out on the northbound track with three cars and pulled north of the crossing and beyond signal No. 3. He stated that when his locomotive started north from Mitchell plant he got off the cars about 15 car lengths south of the crossing, and when he heard the crash of the collision he went forward to the crossing and then to signal No. 3; he found this signal in the 45-degree position and the derail nearby wired down and inoperative.

Switchman Diesness, of locomotive 366, stated that after his locomotive with three cars had pulled north of signal No. 3 and was brought to a stop, he stood on the third car from the engine watching for the signal; after about two minutes he saw that signal No. 3 was in the 45-degree position, or clear, and gave his engine-man a signal to back up. He said that he then walked to the middle car, and when the third car from the engine was moving over the crossing it was struck by the locomotive of extra 2101. He stated that he immediately got down on the ground and shortly afterward went back and saw that signal No. 3 was still in the 45-degree position. Switchman Diesness was positive that signal No. 3 was in the stop position when his locomotive pulled north of it.

Engineman Lalonde, of locomotive 366, stated that upon receiving a signal from the switchman when his locomotive was standing north of signal No. 3, he started backing up and had moved about 10 car lengths when the switchman gave a signal to stop and the fireman called his attention to the train on the C. M. & St. P. Railway; he applied the brakes and had just about brought the train to a stop when the collision occurred. He said that after the accident he found signal No. 3 in the 45-degree position and the derail off the track.

Fireman Luhn, of locomotive 366, stated that after the rear car was clear of signal No. 3 his locomotive came to a stop and stood there waiting for the signal for the back-up movement; he saw the signal in the 45-degree position, and the switchman gave a signal and his locomotive started to back up. He stated that after the collision he noticed that signal No. 3 was still in the 45-degree position and the derail wired down and inoperative. He stated positively that signal No. 3 was in the stop position when his locomotive pulled north of it.

Engineman Burns, of extra 2101, stated that when his train neared Racine Junction he found the interlocking signal against him, brought the train to a stop, and after about two minutes got a clear signal for the crossing and proceeded, his engine backing up and pulling the train. He stated that when he passed the east end of the freight house, which is located in

the northwest angle formed by the crossing, he saw the cars pushed by locomotive 366 starting over the crossing, the speed of his train at that time being 7 or 8 miles an hour; he applied the brakes in emergency but was unable to stop, the tender of his locomotive striking the first car on the crossing about the middle of its length.

Fireman Hall, of extra 2101, stated that as his train approached the crossing the engineman whistled for the signal and, not having secured it, brought the train to a stop. He said that while waiting there locomotive 366 passed northward over the crossing, and after about two minutes the signal was received indicating a clear route over the crossing, and his train started.

Conductor Victor, of extra 2101, stated that after the collision he found the wire operating C. & E. S. signal No. 3 was broken, and that the derail was wired so that it could not be operated.

Operator White, who went on duty at the interlocking tower at 4.00 p.m., stated that at 5.10 p.m. switching locomotive 366 approached on the northbound track, passed over the crossing and came to a stop just north of signal No. 3. He said that at that time extra 2101 was standing west of the crossing and he lined up the crossing for that train to proceed. He stated that when he lined up the crossing for extra 2101 signal No. 3 should have been in the stop position, and that he could not account for it having been in the 45-degree position; he said he did not move the lever when the movement over the crossing was being made. Operator Armon, who was on duty during the preceding trick, had written on the daily transfer report that the wire to signal No. 3 had broken at 12.00 noon; Operator White said he did not remember Operator Armon saying anything to him about it. Operator White further stated that about an hour before the accident occurred the derail near signal No. 3 had stuck, making it necessary for him to disconnect it in order to operate the interlocking plant, and for that reason he had not set the derail behind locomotive 366 after it had moved north of signal No. 3; he did not, however, take steps to see that the signal was secured in the stop position after the derail became inoperative. He said that during the 10 days

just prior to the accident trouble had been experienced with that signal and derail, it having been taken care of by the maintainer.

During the investigation it was found that the back wire of signal No. 3 was broken near the interlocking tower, and the spring evidently was not strong enough to move the signal blade to the stop position after that, the employees on both extra 2101 and locomotive 366 stating that it was in the clear position after the accident.

While the switchman and fireman of locomotive 366 were positive in their statements that signal No. 3 was in the stop position when their locomotive pulled north of it, and that it was clear before their locomotive started back, yet neither one stated that he saw the signal change from stop to clear. From the fact that the signal was found in the clear position after the accident, it seems certain that the switchman and fireman must have been mistaken in their observation of signal No. 3 when they thought it was in the stop position.

The direct cause of this accident was the failure of Operator White to take proper measures to protect movements over the crossing when the derail near signal No. 3 became inoperative and the signal itself was out of order.

Rules 627, 628 and 638, of the Chicago & North Western Railway operating rules, provide as follows:

"627. If a signal fails to work properly, its operation must be discontinued and the signal secured so as to give the normal indication until repaired."

"628. Signalmen must observe, as far as practicable, whether the indications of the signals correspond with the positions of the levers."

"638. If necessary to discontinue the use of any fixed signal, hand signals must be used and the division superintendent and interlocking repairman notified."

Operator White failed to have the crew of locomotive No. 366 wait for hand signals before using the crossing, after the derail became inoperative; he also failed to observe signal No. 3 and notice whether its indication corresponded with the position of the lever in the tower. Furthermore, while he stated that the operator on duty the preceding trick did not say anything to him about the back wire to signal No. 3 being broken, yet that operator had made a notation of it on the daily transfer report, which was available to Operator White and on which he himself had to make entries, and there is no reason why he should not have observed this notation and made certain that signal No. 3 was secured in the normal or stop position.

Operator White had been stationed at the interlocking tower at Racine Junction one year; and at the time of accident he had been on duty 1 hour and 15 minutes.