

IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE
ATCHISON, TOPEKA & SANTA FE RAILWAY AT MCGRAW, KANS ,
ON OCTOBER 11, 1920

January 14, 1921

On October 11, 1920, there was a side collision between a passenger train and a work train on the Atchison, Topeka & Santa Fe Railway at McGraw, Kans , which resulted in the death of 1 employee and the injury of 1 employee. After investigation of this accident the Chief of the Bureau of Safety reports as follows:

The Middle Division of the Western District, on which this accident occurred, is a single-track line over which trains are operated by time-table, train orders transmitted by telephone, and a manual block-signal system. McGraw, a station 29 miles west of Newton, Kans , and within its yard limits, is the junction of the Sand Creek line with the Newton lines, the junction switch being protected by an interlocking plant. The home signal governing westbound movements on the Newton line is a single-arm semaphore, located 300 feet east of the switch; there is no distant signal. Train-order signals are used as block signals, and at McGraw the block signal is located directly opposite the switch. Eastbound movements are governed by a two-arm semaphore located 50 feet west of the switch, the upper arm governing movements for the Newton line and the lower arm controlling movements towards Sand Creek.

Approaching the point of accident from Newton there is a tangent about 4,000 feet long, followed by a 9-degree curve to the left 300 feet long, and 700 feet of tangent to the

point of accident. Approaching from the west the track is straight for approximately 1 mile. The grade is practically level. The weather at the time of the accident was clear.

Westbound passenger train No. 113, in charge of Conductor Wilcox and Engineer McNeil, consisted of engine 1489, 1 baggage car, 1 coach, 2 chair cars, and 1 Pullman sleeping car. This train left Newton, the initial terminal for this crew, at 4:10 p. m., on time, and at about 4:15 p. m., while travelling at a speed estimated to have been about 40 miles an hour, passed the interlocking and block signals at McGraw, both of which were in the stop position, and collided with work extra 1139.

Work extra 1139 was in charge of Conductor Nixon and Engineer Kendall, and at the time of the accident consisted of engine 1139, 1 derrick tender, 1 derrick car, 2 flat cars, 1 caboose, and 1 flat car, in the order named. This train was working between McGraw and Putnam, 3.2 miles west, under authority of train order No. 19, form 31 which read as follows:

"Engine 1139 work seven o'clock 7:00 a. m. to five thirty 5:30 p. m. between McGraw and Putnam not protecting against extras until twelve thirty 12:30 p. m."

Among other orders the crew of work extra 1139 were also in possession of a copy of train order No. 33, form 19, reading as follows:

"Westward extras wait at McGraw until three thirty 3:30 p. m. for work extra 1139."

The work extra had been picking up material between Putnam and McGraw, and was backing upon the Sand Creek line at McGraw.

for the purpose of clearing train No 113 when the accident occurred. The speed of the work train at the time of the accident was estimated to have been about 15 or 20 miles an hour.

Engine 1489, of train No 113, was derailed to the left and partly overturned, the baggage car of that train was also partly derailed. Engine 1139, of the work extra, was turned over on its right side and considerably damaged. The employe killed as Engineer Kendall of extra 1139.

Conductor Nixon, of work extra 1139, was under the impression that train No 113 was not due at McGraw until 4:25 p m, but while enroute from Putnam to McGraw, the roadmaster called his attention to the fact that it was due there at 4:15 p m. Conductor Nixon realized that his train was on short time but thought it would be able to reach McGraw without delaying the passenger train, and he said he felt safe in making the movement on account of the fact that he had previously left Brakeman Stevens at McGraw to protect his train. According to Conductor Nixon's own statement, however, Brakeman Stevens, although in possession of all the orders held by the work extra, had not been given any specific flagging instructions except to "Protect me", while Brakeman Stevens said that his instructions were to protect only against extras, and he understood that he was not to stop first-class trains although nothing was said on this point and the rules require protection against first-class trains within yard limits. Brakeman

Stevens had taken his position at the tower, inasmuch as under train order No 53, previously quoted, he had to protect his train against all westbound extras after 3:30 p m and these trains might approach either from Newton or from Sand Creek. Brakeman Stevens knew that work extra 1139 had left Putnam, which is the first station west of McGraw, he could see it in the distance, and knew that it was nearly on the time of train No 113, but he said he thought Conductor Nixon had received an order giving him more time on train No 113. He was on the steps of the tower when he saw train No 113 approaching, and he then started toward it but had gotten only 3 or 4 car-lengths from the tower when the train passed him. Brakeman Stevens' statement that he did not think he should flag first-class trains was contradicted by another statement made by him that he had intended to stop train No 113.

When approaching McGraw from Newton, the block-signal can be seen from a distance of about 4,400 feet. The home signal is visible beginning at a point about 3,000 feet from it and for a distance of 300 feet, it is then obscured and is not again visible to an approaching engine man until he is within 1,300 feet of it. Engineer McNeil, of train No 113, stated that he missed the first opportunity of observing the signals and called to the fireman, who was working on the fire, but by the time the fireman had gotten upon his seat box and looked, the train had rounded the curve within a few hundred feet of the signals, and Engineer McNeil then saw them in the stop position, at which time he applied the air brakes in

emergency he had seen nothing of a flagman. Under rule 777 all trains are required to approach interlocking plants under control, but Engineman McNeil said his train was not under control, for the reason that he always received orders when a train was to be met at McGraw, that the schedule of his train was so fast that if he reduced speed at all points where such speed reductions are required the train could not even come close to making its scheduled time, and that he did not consider the plant at McGraw to be an interlocking plant on account of the fact that no distant signal indication is provided. The statements of the engine crew indicated that the maximum speed of their train had been between 50 and 60 miles an hour.

The statement of Operator Jett, on duty at McGraw at the time of the accident, indicated that all of the signals were in the stop position when he saw the work extra approaching, that the engineman of the work extra mistled for signals, and that he immediately lined up the route for the work extra to back in upon the Sand Creek Line.

This accident was caused by the failure of Engineman McNeil, of train No 113, properly to observe and obey fixed signal indications, as well as by his failure to have his train under proper control approaching an interlocking plant, by the failure of Conductor Nixon and Engineman Kendall, of extra 1139, to clear the main line for train No 113 as required by the rules, and by the failure of Brakeman Stevens properly to protect his train by flag.

Engineer McNeil's failure properly to observe and obey signal indications resulted from his failure to have his train under control when approaching the interlocking plant, had his train been under proper control as required by rule 777, he would easily have been able to stop his train in time to avert the accident.

Rule 87 reads as follows:

"An inferior train must keep out of the way of opposing superior trains and failing to clear the main track by the time required by rule must be protected as prescribed by rule 39.

Extra trains must clear at time of regular trains 5 minutes unless otherwise provided and will be governed by train orders with respect to opposing extra trains."

The failure of work extra 1139 to be clear of the main track on the time of train No. 113 was, according to the statement of Conductor Nixon, due primarily to his carelessness in not acquainting himself with the time-table schedule of that train. Brakeman Stevens did not have specific instructions to stop first-class trains, and while Conductor Nixon is open to severe censure for his failure to give brakeman Stevens specific flagging instructions, Brakeman Stevens knew that his train had left the preceding station, could see it in the distance, and knew that train No. 113 was due, under these circumstances there is no excuse for his being on the steps of the tower, in no position to do his duty, when train No. 113 approached. It is true that he had to protect against trains arriving either from Newton or from Sand Creek, but he could easily have ascertained from the tower operator what op-

posing trains were approaching and when he saw the work extra approaching the tower, he should have placed himself in position to stop train No 113. Although he stated that he thought Conductor Nixon had received additional time on that train, he himself was in position to have easily ascertained the whereabouts of train No 113 had he been sufficiently interested, and in any event such a belief is no excuse for his failure properly to protect his train.

There is no distant signal installed in connection with the home signal governing westbound movements on the Newton line. An account of the poor view of the home signal had by an engineman, even in clear weather, the operation of trains at this point would be greatly facilitated and greater safety afforded by the installation of a distant signal.

Engineman McNeil had had over 40 years' experience as an engineman and had been discharged in 1915 and again in 1918 for responsibility in connection with collisions, at the time of this accident his record was clear. Brakeman Stevens was employed as a brakeman in March, 1916, while Conductor Nixon was employed as a brakeman in 1911 and promoted to conductor in 1915, the records of both of these employees were clear at time of the accident.

The crew of train No 113 had been on duty less than 1 hour after nearly 6 hours off duty, previous to which they had been on duty $2\frac{1}{2}$ hours after about 12 hours off duty. The crew of work extra 1139 had been on duty about 10 hours previous to which they had had about 9 hours off duty.