

INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE
INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE
ST. LOUIS - SAN FRANCISCO RAILWAY NEAR PORTIA, ARK ,
ON DECEMBER 14, 1927.

January 27, 1928.

To the Commission.

On December 14, 1927, there was a head-end collision between a passenger train and a freight train on the St. Louis-San Francisco Railway near Portia, Ark , which resulted in the death of 1 employee and the injury of 56 passengers, 5 rail clerks and 6 employees.

Location and method of operation

This accident occurred on the Memphis Sub-division of the Southern Division, extending between Thayer, Mo., and Memphis, Tenn., a distance of 144.6 miles, in the vicinity of the point of accident this is a single-track line over which trains are operated by time-table and train orders, no block-signal system being in use. The accident occurred at a point 5,021 feet south of the station at Portia, approaching this point from the north the track is tangent for a distance of approximately 2 miles, this tangent track extending for a distance of about 5 1/2 miles beyond the point of accident. The grade at the point of accident is 0.30 per cent descending for southbound trains.

The weather was foggy at the time of the accident, which occurred at about 5.35 a. m.

Description

Southbound passenger train No. 105 consisted of one mail car, two baggage cars, two coaches, one dining car and four Pullman sleeping cars, in the order named, hauled by engine 1520, and was in charge of Conductor Nalle and Engineman Thorne. At Thayer, 52.4 miles north of Portia, the crew received, among others a copy of train order No 23, Form 31, reading as follows:

"No. 105 and 1520 wait at Black Rock until
5.45 a. m. Portia 5.49 a. m. Home 6.10 a. m.
Sedgwick 6.20 a. m. March 6.30 a.m. "

This train departed from Tnayer at 4.07 a. m., 22 minutes late, passed Williford, the last open office, 23.8 miles north of Portia at 4.55 a. m., 20 minutes late, passed Portia without waiting until the time specified in the wait order, and collided with train No. 136 while traveling at a speed variously estimated to have been between 35 and 60 miles per hour.

Northbound second-class freight train No. 136 consisted of 50 cars and a caboose, hauled by engine 4008, and was in charge of Conductor Sullins and Engineman Box. At Sedgwick, 13.9 miles south of Portia, a copy of train order No. 23, Form 19, previously quoted, was delivered to the crew in charge by the crew of a southbound train. Train No. 136 then proceeded to Hoxie, 5.8 miles south of Portia, departed from that point at 5.24 a. m., according to the train sheet, and was approaching Portia when it collided with train No. 105 while traveling at a speed estimated to have been from 25 to 30 miles per hour.

Both engines were derailed and practically demolished, the boilers were torn from their frames and came to rest on opposite sides of the track. The boiler of engine 1520 was clear of the track while that of engine 4008 rested with its rear end mounted on the wreckage. Both tenders were also derailed, the tender of engine 4008 was demolished and that of engine 1520 was damaged. The first three cars in train No. 105 were derailed, the first car came to rest on its right side parallel with and west of the track, the second car remained upright with its forward end off the roadbed toward the west, while the third car remained on the roadbed. The first two cars were practically destroyed by the accident and by the fire which followed, no damage was sustained by the third car while the fourth car sustained very slight damage. The first four cars in train No. 136 were derailed, the first three being destroyed and the fourth being badly damaged. None of the other equipment involved was derailed or damaged. The employee killed was the engineman of train No. 105.

Summary of evidence

Fireman Martin, of train No. 105, stated that while the train was at Tnayer he saw the engineman read the orders received at that point. The engineman then handed them to him, calling his attention to the slow orders and asking him to help keep them in mind, but no mention was made as to the contents of the other orders. After the train

started Fireman Martin fixed the fire and then read the orders, which were legible and in proper form, and handed them to Roadmaster Moore, who was riding in the engine cab, and the latter in turn handed them back to the engineman. Some time later Fireman Martin observed Engineman Thorne again reading one of the orders. Upon approaching Black Rock Fireman Martin thought of the orders but could not recall their contents so he inquired of the engineman as to how long they were required to wait at Black Rock and Portia and the engineman replied "5.25 at Black Rock and 5.29 at Portia". Fireman Martin said he did not ask to see the orders at that time as he had the utmost confidence in Engineman Thorne and accepted his statement as correct, and his first knowledge that a train was approaching was when he observed a headlight through the heavy fog, the headlight then being about two or three pole-lengths distant. He called the engineman's attention to the approaching train, noticed the engineman apply the brakes in emergency, and jumped from the engine before the accident occurred, he estimated the speed of the train at the time of the accident at 45 or 50 miles per hour. Fireman Martin further stated that the brakes worked properly en route and that they took hold properly at the time the emergency application was made just prior to the accident. He also said he was familiar with the rule requiring enginemen to sound a meeting-point whistle signal when holding restricting orders out that no such signals were sounded.

Roadmaster Moore, who was riding on the engine of train No. 105 at the time of the accident, stated that prior to the time that train departed from Thayer he had been patrolling the track between that point and Williford, a distance of 26.8 miles, keeping the dispatcher informed as to track conditions resulting from high water at various points. Before train No. 105 departed from Thayer he observed the engineman and conductor of that train reading the train orders, and as the train started Roadmaster Moore boarded the engine for the purpose of keeping the engineman posted as to the track conditions in order to save delay. He saw Fireman Martin read the orders after which the fireman handed them to him and he in turn handed them to the engineman, without noting their contents, and remarked to the engineman that they had several slow orders but that he did not think they would be of much consequence providing the river continued to recede, as he had noted it was doing when he passed over the track in this territory at about 2.30 a. m. As the train approached the points covered by slow orders he would inform the engineman as to track conditions he had previously noted, whether there were washouts or merely back water over the track and as a result the train would proceed at a pretty fast rate of speed. The last slow order to be complied with involved a bridge near Black Rock and after passing over this bridge the engineman

opened the throttle and Roadmaster Moore returned to the fireman's side of the cab and sat down. Shortly after passing Portia he heard the fireman say there was something on the track, he thought the fireman said it was a mule but upon looking ahead he could distinguish nothing due to the fog. At about the same time the engineman applied the brakes in emergency and Roadmaster Moore said he got down on the steps of the engine, and as soon as he realized that a train was approaching he jumped off. He judged the trains were about 1,000 feet apart when the engineman applied the brakes and estimated the speed of train No. 105 at that time to have been from 40 to 50 miles per hour, but he thought the speed was materially reduced at the time he jumped off, when the trains were about five car-lengths apart. Roadmaster Moore further stated that no stops had been made between Thayer and the point of accident but that the speed had been reduced several times and in his opinion the brakes were working properly. He also said he heard no conversation between the engineman and the fireman regarding train orders except slow orders, nor did he see Engineman Thorne read any of the train orders after leaving Thayer; he was quite certain, however, that he saw the engineman look at his watch at the time the train passed over the bridge near Black Rock.

Conductor Nalle, of train No. 105, stated that he received six train orders at Thayer, two of which were on Form 31, and that he delivered one set to the engineman, another set to the train porter which he later found placed to a seat in the smoking car, while a third set was handed to the flagman. Conductor Nalle said he read the orders carefully and thought he understood their contents but that for some reason he was under the impression that the first wait required by train order No. 23 was at Hoxie and he paid no further attention to the operation of the train except to check the time at the various stations en route. After leaving Thayer he rode in the rear car with the flagman, observed the time to be 5.26 or 5.27 a.m. when the train passed Black Rock, where it should have waited until 5.45 a. m., and then paid no further attention to the time until after the accident had occurred. Conductor Nalle further stated that train order No. 23 was legible and he could not account for his action in misinterpreting its contents.

Flagman Kulston, of train No. 105, stated that he read and thought he understood the train orders that were delivered to him by Conductor Nalle shortly after leaving Thayer. He understood train order No. 23 required his train to wait at Black Rock until 5.45 a. m., but at the time the train passed that point, at least 15 minutes prior to the time specified on the order, he had overlooked its requirements

and did not recall them again until after the accident had occurred. He estimated the speed of the train at the time the brakes were applied just prior to the accident to have been between 50 and 60 miles per hour. Flagman Hulston said that he rode on the rear platform of the rear car most of the time between Thayer and Black Rock watching the train as it rounded curves as he was concerned as to its safety due to the high water in that vicinity.

Train Porter Trout, of train No. 105, stated that he read the orders delivered to him by Conductor Nalle at Thayer and that he pinned them to a seat in the smoking car where the conductor usually makes his office. He said he soon forgot about the orders as he felt drowsy on account of having had no sleep during the past 24 hours. His reason for not receiving sufficient rest prior to going on duty was the fact that due to his being an extra porter and not receiving steady work with the railway company it was necessary for him to seek other employment and he had been working at an industrial plant from 7.30 a. m. to 1.00 p. m. on the day prior to the accident.

Road Foreman of Equipment Elder was riding on train No. 105, under instructions requiring him to ride passenger trains in the endeavor to improve their performance, and he had been on the engine for a part of the time. He had read the orders received at Thayer, looking over the conductor's shoulder, and understood their contents, but he said he could not keep in his mind the contents of the orders and the time of the wait orders, and that he was not sufficiently acquainted with the territory to know the location of the train at all times.

Engineman Box, of train No. 133, stated that he received train order No. 23 at Sedgwick from the crew of train second No. 135, a southbound train, and noted the time required for train No. 105 to wait at the various stations. At the time his train departed from Sedgwick he had in mind going to Portia to meet train No. 105 and informed the head brakeman to that effect. While approaching Portia he first observed a small light through the fog which appeared then to be from one-fourth to one-half mile distant, but in a second it became much larger and realizing a train was approaching he applied the brakes in emergency, shut off the throttle and opened the sanders, and then jumped off. Engineman Box said the brakes took hold properly and he could see fire flying from the wheels when he jumped, at which time the speed of his train was about 30 miles per hour. He further stated that it was impossible to have seen the headlight of train No. 105 at a greater distance on account of the heavy fog.

The statements of Fireman Shaver and of Brakemen Carter and Boas, of train No. 136, who were riding in the engine cab at the time of the accident, practically corroborated those of Engineman Box while the statements of

Conductor Sullins and Brakeman Davidson, of the same train, ~~who~~ were riding in the ~~caboose~~, adduced no additional facts of importance as their first knowledge of anything unusual was when they noticed a flash of light which appeared to be the reflection of a headlight near the head end of their train at about the time the brakes were applied in emergency, just prior to the accident.

Superintendent Butler stated that it is the custom to make train-order efficiency tests including the handling of train orders by the operator, the delivery of the orders to the conductor and their delivery by the conductor to the engineman. Not less than 20 efficiency tests per month are required from each sub-division. On passenger trains the rules require the engineman to show his orders to the fireman and the conductor to the porter, and a copy is furnished for the flagman, and assistant superintendents are instructed on getting on trains, to ask the firemen and brakemen what orders their train holds before calling for the copies of the orders from the enginemen and conductors, this being done to ascertain whether or not the other members of the crew understand the orders which have been issued. Superintendent Butler further stated that after a roadmaster had been over the track on foot and absolutely knows the conditions, he has the authority personally to direct the engineman in controlling the speed.

An examination of the records of the assistant superintendents assigned to the three sub-divisions composing the Southern Division for the month of November, 1927, disclosed that more than the required number of tests had been made with the result that no failures were reported during that month.

Conclusions

This accident was caused by failure to obey a wait order, for which the entire crew of train No. 105 are responsible.

Under the requirements of train order No. 23, train No. 105 should have waited at Black Rock until 5.45 a.m. and at Portia until 5.49 a.m., yet according to Conductor Nalle it passed Black Rock at 5.26 or 5.27 a.m. and it seems probably it passed Portia not later than 5.33 or 5.34 a.m. The evidence indicated that all of the members of the crew of that train had read the order in question. No reason can be given for the failure of Engineman Thorne to comply with the restrictions in effect at Black Rock and also at Portia; as for the other members of the crew, it appears that Fireman Martin, before reaching Black Rock, thought of the wait order but could not recall its contents and upon making inquiry he was informed by the engineman that their train

was required to wait at Black Rock until 5.25 a.m. and at Portia until 5.29 a.m., Conductor Nalle did not again read the orders after leaving Inyer and was of the impression that the first wait required by the order was at Hoxie, a station south of the point of accident; Flagman Hulston said he had entirely forgotten the requirements of the wait order, and Train Porter Trout stated that he paid little or no attention to the train orders on account of lack of sleep prior to going on duty.

There was evidence to the effect that train No. 105 was considered to be one of the most important trains on the division, and that extra efforts were made to have it on time, as well as to eliminate as much as possible delays to any of the other passenger trains on account of waiting for orders. There was nothing about this feature of the situation, however, which seemed to have any bearing on the occurrence of the accident. It might be said that the engine crew had some not unusual conditions with which to contend, these conditions having to do with high water at various points en route, the conductor and flagman, however, seem to have done nothing but sit down in the rear car of the train and talk about those conditions. But regardless of these facts, it is clear that it was the duty of all of these various employees to know what orders had been received and to see that they were obeyed, and for their failure in this respect, resulting in their train passing two successive stations at least 15 minutes ahead of time, there can be no excuse.

Had an adequate block-signal system been in use on this line this accident probably would not have occurred; an adequate automatic train stop or train control device would have prevented it.

With the exception of Train Porter Trout, who had been in service at irregular intervals for a period of about 90 days, 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.