

## INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE  
INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON  
THE LOUISVILLE AND NASHVILLE RAILROAD AT SHIRLEY,  
ILL , ON JANUARY 2, 1928.

February 15, 1928.

To the Commission:

On January 2, 1928, there was a head-end collision between two passenger trains on the Louisville and Nashville Railroad at Shirley, Ill., which resulted in the death of one employee and the injury of two employees.

Location and method of operation.

This accident occurred on that part of the St. Louis Division extending between St. Louis, Mo., and Howell, Ind., a distance of 163.81 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 approximately 250 feet north of the south passing-track switch at Shirley, approaching this point from the south the track is tangent for a distance of almost 1 mile, followed by a 1° curve to the left 600 feet in length and then tangent track to the point of accident, a distance of 450 feet, and for a considerable distance beyond. The grade is descending for northbound trains for a distance of 3,700 feet, ranging from 0.942 per cent to 0.054 per cent, the accident occurring where the grade is at its minimum. Regular southbound trains are superior to opposing trains of the same class.

The weather was clear and cold at the time of the accident, which occurred at about 5.15 a. m.

Description

Southbound passenger train No. 55 consisted of one baggage car, one coach and two Pullman sleeping cars, all of steel construction, hauled by engine 208, and was in charge of Conductor Smith and Enginemen Crowder. At Mt. Vernon, 4.5 miles north of Shirley, the crew in charge received a copy of train order No. 24, Form 31, providing for a meet with train No. 56 at Shirley. Train No. 55 departed from Mt. Vernon at 4.58 a. m., 2 hours

and 59 minutes late and was brought to a stop on the main track at Shirley, clear of the south passing-track switch, at about 5.13 a.m. It was standing at this point when it was struck by train No. 56.

Northbound passenger train No. 56 consisted of two baggage cars, one coach and four Pullman sleeping cars, hauled by engine 236, and was in charge of Conductor Manning and Engineman Clark. All the cars were of steel construction except the baggage cars, one of which was equipped with a steel underframe and the other with steel center sills. At Carmi, 43.3 miles south of Shirley, the crew received a copy of train order No. 24, on Form 19, previously mentioned. After departing from Carmi a stop was made at McLeansboro, 20.9 miles south of Shirley, train No. 56 departed from that point at 4.49 a.m., 30 minutes late, passed the south switch of the passing track at Shirley and collided with southbound train No. 55 while traveling at a speed variously estimated to have been between 20 and 35 miles per hour.

Both engines were badly damaged but remained upright with all wheels derailed except their trailer trucks. The first car and the forward truck of the second car in train No. 56 were also derailed, the first car being destroyed while the second car was more or less damaged, the first car in train No. 55 was also considerably damaged. None of the other equipment was derailed, or damaged to any extent. The employee killed was the engineman of train No. 56.

#### Summary of evidence

Engineman Crowder, of train No. 55, stated that in compliance with the meet order he brought his train to a stop on the main track at Shirley clear of the south passing-track switch, and dimmed the headlight. Train No. 56 was not then in sight but after an interval of three or four minutes the headlight of that train came into view at the top of the hill and shortly afterwards he heard the engineman of that train sound the station whistle signal and then a meeting-point signal. He noticed that the train was traveling at too high a rate of speed and as a result he decided to reverse the engine for the purpose of backing his own train, if necessary, in order to avert an accident. As the opposing train continued to approach without any noticeable reduction in speed he realized that an accident was inevitable whereupon he released the brakes and started his train in backward motion but had succeeded in moving it a distance of only a few feet before the occurrence of the accident.

Engineman Crowder further stated that due to the heavy frost prevailing at the time the rails were very slippery and he had experienced some difficulty in keeping his engine from slipping, and in making stops en route. He also stated his train had been standing at Shirley a sufficient length of time for some member of his crew to have opened the passing-track switch, although he did not think train No. 56 could have entered the passing track in safety on account of the speed at which it was traveling at the time it reached that point.

The statements of Fireman Wood, of train No. 55, substantiated those of Engineman Crowder except that he said his train had been standing only two or three minutes and he did not believe there had been enough time for any member of the crew to have opened the passing-track switch. Baggage-master Gorman, of train No. 55, stated that as soon as his train came to a stop at Shirley he put on his coat and gloves, preparatory to opening the passing-track switch, but on looking out of the baggage car door he observed the reflection of the headlight of train No. 56 and saw that he would not have time to reach the switch. He thought his own train had been standing only a minute or a minute and a half, prior to the occurrence of the accident. The statements of Conductor Smith, of train No. 55, were to the effect that his train stopped at Shirley at about 5.13 a.m., and that the accident occurred at 5.15 a.m., or possibly a trifle sooner. Conductor Smith also said that there is no rule requiring the crew of the train first to reach a meeting point to open the switch for the opposing train, although it is the usual practice. In this instance, however, he did not think there was time in which to have done so before the arrival of train No. 56. The statements of Flagman Wilson, of train No. 55, added nothing of importance.

Fireman Roberts, of train No. 56, stated that at the time his train reached the summit of the grade on which the accident occurred, about 3,700 feet south of Shirley, he noticed the dimmed headlight of train No. 55 standing at Shirley, but did not mention the fact to the engineman. Just after his train had passed the crest of the grade, at which time it was traveling 40 or 45 miles per hour, the engineman sounded the station and meeting-point whistle signals, then closed the throttle and made a light service application of the brakes. The brakes did not appear to take hold properly, and after the train had moved a distance of three or four car-lengths the

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engineer made a further brake-pipe reduction which effected a reduction in speed. Upon reaching a point four or five car-lengths from the south passing-track switch the engineer placed the brake valve in the emergency position, which locked the wheels, causing them to slide; Fireman Roberts did not think the brakes were released at any time after the first application was made, and he estimated the speed at the time of the accident at 30 or 35 miles per hour. It was also his opinion that the train could not have entered the passing track at Shirley in safety providing the switch had been opened by the crew of train No. 55. Fireman Roberts further stated that no trouble was experienced with the air brakes in making stops and in reducing speed at various points en route prior to reaching the descending grade on which the accident occurred, that after passing Opdyke, about 3 miles south of Shirley, Engineer Clark remarked that their train was required to meet No. 55 at Shirley, their own train to take the siding, and that no running air-brake test was made approaching the meeting point, as was required by the rules. He was of the opinion that the accident was caused by the fact that the engineer misjudged the distance, as well as the speed of his train.

Conductor Manning, of train No. 56, stated that while at Evansville he called Engineer Clark's attention to the climatic conditions and their effect on the rails and warned him not to take any unnecessary risks. The brakes appeared to function properly at various places en route where speed was reduced and where stops were made. At about the time the train reached the summit of the grade south of Shirley he heard the station whistle signal sounded, felt an application of the brakes and then heard a meeting-point whistle signal. The brakes were later released but were again applied just before the occurrence of the accident, the latter application being in emergency. He estimated the speed of the train at the time of the accident at 20 or 25 miles per hour, and was of the opinion that had the passing-track switch been open his train would have entered that track in safety. After the accident he examined the track but could find no indication of sand having been used, he also noticed that the switch lamp at the south passing-track switch was burning and showed that the switch was closed. Conductor Manning attributed the cause of the accident to the frosty condition of the rails, causing the wheels to slide when the brakes were applied.

The statements of Brakeman Land, of train No. 56, practically corroborated those of Conductor Manning, except that he heard no whistle signals sounded when his train approached Shirley. He also stated that subsequent to the accident the five rear cars of train No. 56 were coupled to another train after which the brakes were tested and found to be working properly. Baggage-master Martin thought his train approached Shirley at a speed of at least 25 or 30 miles per hour and he said he did not notice any application of the air brakes.

Assistant Master Mechanic Osborne stated that subsequent to the accident he made a careful inspection of such of the air-brake equipment on engine 236 as remained intact, this inspection being made with the assistance of General Foreman Martin, and found that no part of this equipment was inoperative due to its having been frozen, or for any other reason.

During the course of the investigation of this accident the brake valve, the distributing valve and the feed valve were removed from engine 236 and installed on another engine of the same type, and during the tests which followed it was found that these valves functioned properly.

### Conclusions

This accident was caused by the failure of Engineman Clark, of train No. 56, properly to control the speed of his train approaching a meeting point.

According to the evidence Engineman Clark had not forgotten the contents of train order No. 24, requiring his train to meet train No. 55 at Shirley, as he had called Fireman Robert's attention, when within 3 miles of the meeting point, to the fact that their train would have to take the siding for the purpose of meeting the opposing train; it also appeared that he had sounded the station and meeting-point whistle signals within less than 1 mile of the meeting point, and that he made a service application of the brakes, followed by an emergency application when it became apparent that his train was not going to stop. There being no evidence to indicate that the air brakes were not working properly, it is probable that Engineman Clark's failure to stop before passing the south passing-track switch can be attributed to his failure to begin braking soon enough, particularly in view of the unusually slippery condition of the rails. There was evidence to the effect that this is a more or less difficult point at which to bring a

northbound train to a stop, on account of the grade conditions, in fact, the engineman of the southbound train said that under the weather conditions prevailing on the night of the accident he would have started braking practically at the top of the descending grade, and it is believed that if such action had been taken by Engineman Clark this accident would not have occurred.

During the course of the investigation a question developed concerning the whistling post south of Shirley and whether its absence would prevent an engineman from accurately determining the location of his train. Investigation into this feature, however, indicated that the roadway department had moved many of the whistling posts temporarily in connection with some work which was being done. The whistling post approaching Shirley from the south, however, was in place at the time of the accident, being located 2,640 feet south of the south passing-track switch.

Had an adequate automatic train stop or train control device been in use on this line, this accident would not have occurred.

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.