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INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE
INVESTIGATION OF AN ACCIDENT WHICH OCCURED ON THE
PENNSYLVANIA RAILROAD NEAR TOLEDO JUNCTION, OHIO,
ON OCTOBER 24, 1926.

November 23, 1926.

To the Commission:

On October 24, 1926, there was a rear-end collision between two freight trains on the Pennsylvania Railroad near Toledo Junction, Ohio, which resulted in the death of one employee and the injury of two employees. The investigation of this accident was made in conjunction with representatives of the Public Utilities Commission of Ohio.

Location and Method of operation

This accident occurred on that part of the Fort Wayne Division which extends between W block station, near Mansfield, Ohio, and Clarke, Indiana, a distance of 271.8 miles. In the vicinity of the point of accident this is a three-track line, the tracks being numbered from north to south as follows: 3, 1, and 2. The accident occurred on track 3, the westbound freight track, over which trains are operated by train orders and a manual block-signal system, the point of accident being $1\frac{1}{2}$ miles east of Toledo Junction. Approaching this point from the east the track is practically tangent for about a distance of 2,200 feet, followed by a 1° curve to the left which is about 1,700 feet in length, the accident occurring on this curve near its leaving end. The grade is slightly ascending. On account of the curvature of the track the range of vision of an engineer is restricted to about 500 feet while the fireman, being on the inside of the curve, can see the point of accident a distance of about 1,725 feet, should an eastbound train be passing on track 2, which was the case immediately prior to the accident, the fireman's range of vision would be restricted to about 1,160 feet.

It was raining at the time of the accident, which occurred at 1.05 a.m.

Description

Westbound freight train extra 4306 consisted of 96 cars and a caboose, hauled by engine 4306, and was in

charge of Conductor Stream and Engineman Carter. It entered the block at B&O Junction, 6.4 miles east of Toledo Junction, at 12.17 a.m. and stopped at about 12.45 a.m. on account of the fact that there was another train ahead at Toledo Junction. It had been standing at this point about 20 minutes when its rear end was struck by extra 8897.

Westbound freight train extra 8897 consisted of 15 cars and a caboose, hauled by engine 8897, and was in charge of Conductor Parker and Engineman Frosty. It entered the block at B&O Junction under a permissive signal indication at 12.51 a.m. and collided with the rear of extra 4306 near Toledo Junction while traveling at a speed variously estimated at from 8 to 20 miles an hour.

The caboose and rear car of extra 4306 were derailed to the left and practically demolished, while engine 8897 together with its tender turned over to the left and came to rest with the head end of the engine about 100 feet beyond the point of accident. None of the other equipment in either train was derailed. The employee killed was the conductor of extra 4306.

Summary of evidence

Flagman Dobson, of extra 4306, said that when his train stopped he went back to flag, taking with him red and white lanterns, four torpedoes and two fuses. When about 25 or 30 car-lengths from his caboose he put down two torpedoes, walked a little farther back and then turned and walked in a short distance toward the caboose, and was in the vicinity of the torpedoes when he began to give stop signals to extra 8897, which was then about 15 or 20 car-lengths from where he was standing. At one point in his testimony he said the approaching train was 20 or 30 car-lengths distant when he began giving stop signals and that he did not think the engineman could see these first signals, which were given from the south side of the track, and when the engine was about 10 car-lengths distant he crossed over to the north or engineman's side of the track and continued swinging his lanterns until the engine reached him. He stated that as the engine passed him and exploded the torpedoes, moving at a speed of 35 or 40 miles an hour with the engine working steam, he called to the engine crew in an endeavor to attract their attention, and then turned and started to run with the train on the engineman's side of the track, continuing to run westward until the entire train had passed him. Flagman Dobson further stated that the engineman did not know his stop signals, but said he thought the brakes were applied as the train was passing

him although there was no fire flying from the wheels. He did not begin to flag extra 8897 when it was farther away from him because at first he thought it was a passenger train on track 1, and he said he did not use a fusee because he did not realize it would be necessary until it was too late to light one.

The statements of Engineman Carter, Fireman Sims, and Head Brakeman Barrett, all of whom were on the engine of extra 4306, did not bring out any additional facts of importance except that they indicated the weather conditions were not such as to interfere with their vision, that they did not hear the explosion of any torpedoes and that the impact of the collision was not severe enough to be felt at the head end of the train.

Engineman Frosty, of extra 8897, said he received a permissive signal indication at B&O Junction and proceeded on track 3. An eastbound passenger train passed him on track 2 at about the time his engine passed under an overhead bridge located just east of the curve on which the accident occurred and then the fireman called to him that there was a flagman ahead. The speed of his train at this time was about 20 miles an hour, and he said that as soon as the fireman called to him he stood up, leaned out of the window and saw the markers on the caboose apparently not more than seven car-lengths distant, with the red and white lanterns of the flagman on the ground near the caboose. He at once applied the air brakes in emergency and shut off steam, the brakes did not seem to take hold as quickly as they should and he moved the brake-valve handle back to the lap position, and said he was not sure whether he again placed it in the emergency position before the accident occurred. He thought, however, that he had succeeded in reducing the speed of his train to the extent of about 5 miles per hour. Engineman Frosty further stated that neither he nor the engineman of the eastbound passenger train dimmed their headlights when approaching each other, that the flagman was not giving him any stop signals when he first saw him and that after that time he did not pay any attention to the flagman or to the side of the track on which he was standing. It also appeared from the engineman's statements that he remembered exploding one torpedo at about the point where he saw the flagman.

Fireman Hoffman, of extra 8897, said his engine was about two car-lengths east of the overhead bridge when the engine of the passenger train passed him with its headlight dimmed, and that his engine was about two car-lengths west of the bridge when he saw the flagman of extra 4306, at which time the passenger train had not entirely passed. This flagman apparently was 17 or 18

car-lengths distant, and Fireman Hoffman said he at once called to the engineman, who shut off steam and made a service application of the air brakes. On again looking out of the window the fireman saw the markers on the caboose and once more called to the engineman, but he did not know whether or not the engineman heard him as the engineman at this time was leaning out of the window on his own side of the cab. Fireman Hoffman also said that torpedoes were exploded in the vicinity of where the fireman was standing, at which time the engineman applied the air brakes in emergency. He estimated that the distance between the flagman and the caboose was not more than five car-lengths and thought that the speed of his train had been reduced from 20 miles an hour to about 8 miles an hour by the time the accident occurred.

Conductor Parker, of extra 8897, said the first he knew of anything wrong was when he felt an emergency application of the air brakes and he did not think the train moved a distance of more than two car-lengths before the collision occurred. He immediately left the caboose and started running ahead on the fireman's side and he said that when he first looked toward the head end of the train he saw some one on the ground with red and white lanterns and when he had reached a point about seven car-lengths from the caboose he met this person coming toward him and found him to be the flagman of extra 4306, and he quoted Flagman Dobson as saying that he could not find his conductor in the wreckage. Conductor Parker was asked if he gathered from this statement that Flagman Dobson had already been searching in the wreckage for his conductor, and replied that he did not think the flagman knew what he was doing. Flagman Dobson was questioned closely on this point and he claimed that after extra 8897 passed him without answering his stop signals he turned and ran in toward his own train, that the entire train of extra 8897 passed him before the collision occurred and that after returning as far as the rear end of extra 8897 he decided to cross over from the engineman's side of the track to the fireman's side, which would place him on the inside of the curve, that he crossed over between the second and third cars in front of the caboose of extra 8897 and that it was at that point that he met Conductor Parker who was then on his way to the head end of his train. The statements of Brakeman Wolfe and Flagman Wolff, of extra 8897, did not bring out any additional facts of importance.

Engineman Smith, of passenger train No. 8, which was proceeding eastward on track 2 as extra 8897 approached the point of accident, said he dimmed the headlight on his engine when he saw extra 8897 and that the engineman of the extra did likewise. His own train was moving at

a speed of about 50 miles per hour, and he said that he was unable to estimate the speed of the extra although after reaching Mansfield his fireman made a remark to the effect that "That fellow was wanting to get stopped pretty soon." Engineman Smith did not notice a flagman at the rear of extra 4306 but said the flagman might have been there without his having seen him.

Fireman Boyle, of train No. 8, said that before his train passed the caboose of extra 4306 he got down on the deck of the engine to put in a fire and while he was still so engaged he heard the exhaust of extra 8897 as it passed on track 3, and he said that when his own train reached Mansfield he remarked to Engineman Smith that "That man would have to do a good job of braking to get stopped."

Conclusions

This accident was caused by the failure of Flagman Dobson of extra 4306 properly to protect his train by flag and by the failure of Engineman Frosty of extra 8897 to operate his train under proper control while running in an occupied block under a permissive signal indication.

Flagman Dobson had ample time to have gone back to the beginning of the curve on which his train was standing and had he done so his stop signals would have been visible for a considerable distance. According to his statements, however, he did not go back that far, and while there is a conflict in the testimony as to how far back he actually went, yet the statements of the engine crew of the following train, and particularly the statements of the conductor of that train, indicate that he did not go back even as far as he said was the case. Had he given his train the protection required by the rules, this accident might not have occurred.

Engineman Frosty had received a permissive indication which in the manual block-signal rules in effect on track 3 authorized him to proceed with caution prepared to stop short of a train or obstruction. Had Engineman Frosty been operating his train in accordance with this requirement this accident would not have occurred in spite of the negligence of the flagman of extra 4306.

Engineman Frosty made a statement to the effect that under the permissive signal indication received by him at B&O tower he was required to run with caution, while at another point he said such an indication required him to run at a speed not exceeding $17\frac{1}{2}$ miles per hour.

Engineman Frosty apparently confused the requirements of the manual block system in effect on track 3 with the automatic block system in effect on tracks 1 and 2. When receiving a caution indication under the automatic block-signal system a train is required to run at a speed not exceeding one-half of its authorized speed, but in the case of freight trains running on freight main tracks, where the speed limit is 35 miles per hour, the manual block rules require a train to run prepared to stop. The statements of Fireman Hoffman indicated that he had a somewhat similar understanding of the rules. It is obviously essential that employees have a correct understanding of all rules affecting the operation of their trains and if any of the employees of this division have any such understanding of the rules as was evidenced by Engineman Frosty and Fireman Hoffman then it is incumbent on the officials to take such steps as will correct these erroneous ideas.

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

The majority 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.