INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE PENNSYLVANIA RAILROAD NEAR STEUBENVILLE, OHIO, ON OCTOBER 31, 1924.

November 10, 1924.

To the Commission:

On October 31, 1924, there was a derailment of a freight train on the Pennsylvania Railroad near Steubenville, Ohio, resulting in the death of two employees and the injury of one employee.

Location and method of operation

This accident occurred on that part of the Wheeling Division extending between Bellaire and Yellow Creek, Ohio, a distance of 43.4 miles. In the vicinity of the point of accident this is a double-track line over which trains are operated by time-table, train orders, and a manual block-signal system. The accident occurred at a point 4,950 feet west of KS block station; approaching this point from the east there are 3,960 feet of tangent, followed by a curve of 1° 57' extending to the point of accident, a distance of 1,980 feet. The grade is slightly descending, level, and then from 0.2 to 0.25 per cent descending for a distance of 4,355 feet. The track is laid with 100-pound rails, 33 feet in length, with an average of 19 ties to the rail-length, tie-plated and single spiked, and ballasted with about 15 inches of cinders. The gauge and elevation were well maintained. It was cloudy at the time of the accident, which occurred at about 4.33 p.m.

Description

The train involved, extra 9911, is a turn-around run operating between Mingo Jct., and Empire, Ohio, a distance of 14.7 miles, it was on the return trip to Mingo Junction, westbound, at the time of the accident. Extra 9911 consisted of 11 cars and a caboose, hauled by engine 9911, which was being operated backing up, and was in charge of Conductor Craig and Engineman Bush. It passed KS block station at 4.32 p.m., and was derailed nearly a mile west of that point while traveling at a speed estimated by the crew to have been from 25 to 30 miles an hour.

The engine came to rest across the westbound track about 190 feet beyond the first mark of derailment, with the tender just west of the engine; the first six cars were also derailed and considerably damaged. The employees killed were the fireman and a brakeman.

Summary of evidence

According to the train sheet, extra 9911 passed RO block station, 5.8 miles from KS block station, at 4.22 p.m., and traveled the distance between the two block stations in 10 minutes, or at an average speed of 34.8 miles an hour. Engineman Bush said the speed had been nearly 40 miles an hour at some points, that the train was traveling fast when passing KS block station under a clear signal indication, and that he shut off steam at a point approximately 50 car-lengths from where the accident occurred, but did not make an application of the brakes. He thought however that the speed decreased after he shut off steam and did not think it was 30 miles an hour at the time of the accident. His first knowledge of anything wrong was when the rear end of the tender was derailed, and he said he did not know whether or not he made any application of the air brakes. He had noticed no unusual riding qualities of the tender and said that the general condition of the engine was good. Engineman Bush also said he understood the speed limit for engines of this class when operated backing up is 25 miles an hour.

Conductor Craig ~~said~~ Said Engineman Bush usually worked steam on tangent track and shut off steam on curves, and he agreed that the speed east of KS block station was about 40 miles an hour, possibly more, but thought it was not nearly so fast when west of the block station, and he estimated it to have been about 25 miles an hour at the time of the accident, which occurred so far as he knew without any application of the air brakes having been made. Conductor Craig knew the speed of the train should have been restricted to 25 miles an hour and said there was no question about this rate of speed having been exceeded en route. He also made the statement that he did not think it possible to have done as much damage at a speed of 25 or 30 miles an hour as was done in this case.

The statements concerning the speed of the train made by Brakeman McAlister, who was riding in the caboose cupola, were indefinite on the whole although he indicated he did not think the speed was much more than 25 miles an hour at the time of the accident. Flagman Lewis, who was engaged in writing, had not paid much attention to the speed, but he said he did not think it exceeded 25 miles

an hour at any point en route and that it was not as great at the time of the accident as when passing the tower.

C.F.Nye, a former employee, stated that he ran his automobile practically opposite the train from RO block station to the point of accident and that the speedometer on his car registered between 25 and 30 miles an hour, it is to be noted however, that this figure is considerably less than the speed at which the engineman admitted his train was traveling between RO and KS block stations. A coal company employee who witnessed the accident estimated that the speed was about 50 miles an hour.

Examination of the track showed that the first mark of derailment was a flange mark on the running surface of the right rail, beginning 4 feet 9 inches beyond the points of a trailing-point switch and extending diagonally across the rail for a distance of 13 feet 11 inches. For the following distance of 5 feet 4 inches there were no marks of any kind and then for a distance of 15 feet there were marks on the outside of the rail, beyond which point the track was torn up for a distance of 153 feet. The first mark on the inside of the left rail began about opposite the first marks on the outside of the right rail. There was no indication of any obstruction of any kind having been on the rails to cause the accident, while examination of the trailing-point switch showed it to be maintained in good condition.

Engine 9911 is of the 2-8-0 type and was received from the shops on September 18, 1924, after having received class 3 repairs. On September 24 it was in the shops again on account of a broken main rod, and was returned from the shops on October 8, continuing in service from that date; the mileage during this latter period was about 1,100 miles. Careful examination of this engine failed to disclose the presence of any defective condition of engine or tender and the only thing noted which it is thought could have any bearing on the accident was the absence of swash plates in the tender cistern for the purpose of preventing the lateral surge of water.

Conclusions

This accident was caused by excessive speed.

Under the time-table rules the speed of engines of the type here involved when being operated backing up is restricted to 25 miles an hour. The statements of the conductor and engineman are to the effect that the speed had been about 40 miles an hour at various points

en route, although they did not think it exceeded 25 or 30 miles an hour at the time of the accident. It seems apparent however that the train was being operated at an excessive rate of speed and that this excessive speed, coupled with the absence of swash plates in the tender cistern, caused the water in the tender to surge to such an extent as to result in the derailment of the tender truck wheels and the subsequent derailment of the engine and cars.

The employees involved, with the exception of the fireman were experienced men; at the time of the accident they had been on duty 10 hours, after from 12 to 15 hours off duty.

Respectfully submitted,

W. P. BORLAND,

Director.