INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE ILLINOIS CENTRAL RAILROAD AT CENTRALIA, ILL., ON NOVEMBER 7, 1928.

January 3, 1929.

To the Commission:

On November 7, 1928, there was a derailment of a passenger train on the Illinois Central Railroad at Centralia, Ill, which resulted in the death of two employees and the injury of three passengers, three employees and one Pullman porter. This accident was investigated in conjunction with a representative of the Illinois Commerce Commission.

Location and method of operation

This accident occurred on the Centralia District of the St. Louis Division extending between Centralia and Mounds, Ill., a distance of 103.8 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 an automatic block-signal system. The accident occurred within yard limits, at a lifting-type-derail located 746 feet south of a crossing at grade with the tracks of the Chicago, Burlington and Quincy Railroad; approaching this point from the south on the Illinois Central Railroad the track is tangent for a distance of more than 2 miles while the grade is undulating, being 0.20 per cent descending at the point of accident.

The signals involved are signals 1 and 2544, located 59 and 5,726 feet, respectively, south of the point of accident. Signal 1 is a one-arm home interlocking signal of the two-position lower-quadrant type, and signal 2544 is a two-arm signal, also of the two-position lower-quadrant type, the bottom arm giving a distant indication for signal 1, which normally is in the stop position. Train movements on the C.B.& Q. tracks are governed by mechanically-operated semaphore signals which are controlled from the tower. The interlocking plant is so arranged that when a route has been lined for a movement over the crossing the signals can not be restored to normal position and the route changed for a diverging movement without operating a one-minute time release, or until the train entering the plant has passed through it.

A light rain was falling at the time of the accident, which occurred at about 3.34 a m.

Description

Northbound passenger train No. 3 consisted of one combination baggage and club car, three Pullman sleeping cars, one dining car, four Pullman sleeping cars and one Pullman observation car, all of steel construction, hauled by engine 1192, and was in charge of Conductor Love and Engineman Erskine. This train departed from Carbondale, 55.7 miles from Centralia at 3.31 a.m., four minutes late, passed Ashley, the last open office, 17.9 miles from Centralia, at 3.23 a.m , one minute late and was derailed upon encountering the derail south of the C.B.& Q. crossing while traveling at a speed estimated to have been between 30 and 50 miles per hour.

The engine, tender, first five cars and the forward truck of the sixth car were derailed, the engine coming to rest on its left side almost at right angles with the track, 440 feet beyond the point of derailment. All of the derailed cars remained upright, with the first three diagonally across the track and the other two remaining practically parallel with the track. The engine was considerably damaged and the first four cars sustained more or less damage. The employees killed were the engineman and fireman.

Summary of evidence

Conductor Love stated that one car was set out at Carbondale and after the train was recoupled an air-brake test was made. Shortly after leaving that point a running test of the brakes was made, which proved satisfactory, and while en route he felt three service applications of the brakes which appeared to give the desired effect, the last application being made about 1½ miles south of the point of accident. He heard a station whistle-signal sounded for two stations en route, but did not hear any signals sounded approaching Centralia although it was possible he did not hear them on account of being in conversation with a passenger in the first car. No application of the brakes was felt by him when approaching the C.B.& Q. crossing and his first intimation of anything wrong was when he felt a lurch followed immediately by the derailment of the car in which he was riding. About 8 or 10 minutes after the occurrence of the accident he observed the home signal displaying a stop indication. He estimated the speed at the time the train passed the roundhouse, approximately 1 mile from the point of accident, at between 30 and 40 miles per hour and noticed no change in speed prior to the accident. Conductor Love also stated that he held a conversation with the engineman while at Carbondale and the engineman appeared to be in normal condition at that time.

The statements of Baggageman Wright and Flagman Thompson substantiated in substance those of Conductor Love as to train performance between Carbondale and the point of accident. Baggageman Wright said that when the train reached a point about 3/4 mile south of the distant signal he heard a highway crossing signal sounded but heard no other signals sounded after that time. At about the same time he noticed an application of the brakes, which were released after speed had been reduced slightly, he thought this application was made to test the brakes preparatory to reaching the C.B.& Q. crossing. He estimated the speed at the time the train passed the roundhouse at 50 miles per hour but could not say whether speed had been reduced prior to the accident. After the accident he noticed that the home signal was displaying a red indication. Flagman Thompson, who was riding in the rear car, stated that the last whistle signal he heard was when the train was approaching Ashley, and he estimated the speed at 45 or 50 miles per hour as the train passed the roundhouse at Centralia, he was not certain whether the brakes were applied after passing that point. Flagman Thompson further stated that during clear weather both the distant and home signals can be seen from an approaching northbound train for a distance of about 2 miles. On the day of the accident he did not observe their indications as the train approached them but after the accident he noticed the homesignal displaying a red indication and while going back to flag he saw the distant signal displaying a yellow indication, both signals giving a bright light.

Towerman Hofstetter, on duty at the interlocking tower located a short distance north of the C.B & Q. crossing, stated that on the morning of the accident he gave a clear route to northbound I.C. train No. 4, which passed at about 3.35 a.m. At 3.26 a.m. a C.B.& Q. 100-car freight train entered the interlocking plant and it was just as the caboose of that train was passing over the crossing that train No. 8 encountered the open derail south of the crossing. He said that he heard the operator at North Yard, Carbondale, report train No. 8 by that point, which the records indicate was at 3.34 a.m., and when the C.B & Q. train arrived he thought there was ample time for it to pass over the crossing prior to the arrival of train No. 8, although at the time he cleared the signals for the movement of the C.B.& Q. train he observed a headlight in the distance on the I.C. tracks. He also said that it is the practice to give preference to passenger trains at the crossing but as it usually requires at least 10 minutes for train No. 8 to reach the crossing from the time its headlight first comes into view he felt certain there was sufficient time for the C.B.& Q. train to use the crossing before the arrival of train No. 8. He was of the opinion that the latter train arrived ahead of its schedule as he noted the time to be 3.32 a.m. when it finally came to rest after the accident, and when comparing time with the dispatcher several hours afterwards his watch was found to be correct.

Car Inspector Hansen stated that he was located in the north end of "B" yard, about 1¾ miles south of the point of accident, when train No. 8 approached this point and he heard a highway crossing whistle signal sounded by that train. He heard no unusual noise as the train passed, which was at 3.34 a.m., and did not know at what rate of speed it was traveling as he was located some distance from the main track, and cars on the yard tracks obstructed the view.

Traveling Engineer Wolcy stated that he arrived at the scene of the accident at 4.30 a.m., and upon examination found the engine throttle closed, the reverse lever on center and the brake valve in the service position. He also noticed a pipe broken loose from the right steam fountain, but as the engine was lying on its left side he could not examine the left fountain although it appeared that steam had escaped from that side. He further stated that under normal conditions an engine crew of a northbound engine can distinguish the distant signal of the interlocking plant for a distance of 8 miles and the home signal for a distance of 1½ miles. It also appeared from his statements that when approaching from the south there is a short interval when the light on the home signal is practically in line with that of an automatic block signal located a short distance north of the crossing, which interferes to some extent with the view of the home signal since the automatic signal light is of greater intensity.

Engineman Dardis, who handled train No. 4 through the interlocking plant at about 2.40 a.m. on the date of the accident, stated that it is somewhat difficult to distinguish the home signal at the C.B.& Q. crossing on account of the automatic signal north of the crossing, in addition to two city street lights in that vicinity, but there is nothing to prevent the observance of the distant signal except at times when smoke from the roundhouse interfers with the view. On the morning of the accident, however, the wind was blowing from the southeast, which cleared the view, and he had no difficulty in observing its indication. He reached the scene of the accident about 30 minutes after its occurrence and found the home signal in the stop position.

Signal Supervisor Goddard stated that the interlocking plant receives monthly inspections while an examination of the plant subsequent to the accident disclosed no irregularities. Some defect or interference with the mechanism of the plant could cause the signals to show false indications but in such event they would automatically display restrictive indications. He also said that the track circuit controlling the annunciator in the tower extends to a point approximately 4,800 feet south of the distant signal or about 3 miles from the crossing.

On November 26 an inspection and test of the interlocking apparatus was made by the Commission's inspectors, but nothing was developed to indicate that it functioned otherwise than as intended. It also appeared that the air brakes on the train functioned properly. An examination of the engine disclosed that several valves which entered the steam fountains in the cab were broken and the theory was advanced that one of them became broken while the train was approaching the interlocking plant, permitting steam to escape in such volume as to incapacitate the engine crew, resulting in their failure to bring the train to a stop in accordance with the signal indications. Roundhouse Foreman Besant, who reached the scene of the accident about five minutes after its occurrence, said he found a broken steam pipe near the right fountain, there were no marks to indicate that it had been struck by anything, and, on the other hand, the tarnished condition of the brass indicated to him that it had been broken off prior to the occurrence of the accident. An inspection of the broken parts by the Commission's inspectors, however, showed no discoloration of the metal which would have shown that there had been an old crack in existence. Traveling Engineer Woley said Engineman Erskine, who was nearly 60 years of age, had had some stomach trouble and that his doctor at Centralia had sent him to Chicago for further treatment. On his return Mr. Woley told him to remain off duty for a week or ten days. When he returned to duty Mr. Woley rode with him, and over a portion of the run he sent the engineman back to ride in the train while he himself operated the engine. A few days later Mr. Woley again rode with Engineman Erskine, and also operated the engine, but at this latter time the engineman was feeling all right. These events took place within six weeks prior to the occurrence of the accident. Mr. Woley expressed the opinion that at the time of the accident Engineman Erskine must have had a heart attack, or in some other way have become physically disabled, and that this condition was not noticed by his fireman, Supervisor of Signals Goddard agreed with this opinion.

Conclusions

This accident was caused by failure properly to obey signal indications.

The evidence indicated that home interlocking signal 1 was in the stop position, with distant signal 2544 in the caution position, and that these signals were displaying these indications because of the fact that the route through the interlocking plant was lined for the movement of a C.B.& Q. freight train, the caboose of which was just passing over the crossing when train No. 8 was derailed. It did not definitely appear that the usual whistle signals were sounded by the engineman of train No. 8 when approaching the interlocking plant, while the statements of the train crew indicated rather strongly that the accident occurred without any application of the brakes

having been made, with the exception of a light service application made some distance away. There was evidence to the effect that the engine crew might have been disabled as the result of the breaking of a steam pipe in the cab, but it was not determined that there was such a broken pipe prior to the occurrence of the accident. Under all of these circumstances, and in view of the fact that Engineman Erskine had been ill at a comparatively recent date, it is felt that no positive statement can be made as to why the indications of the signals were not observed and obeyed.

The Centralia district, on which this accident occurred, is on the main line of the Illinois Central Railroad extending between Chicago and New Orleans and other southern points. On this district there are 31 scheduled trains of all classes in addition to such extras as traffic conditions may require, 27 of the 31 scheduled trains are operated daily. The movements of these trains are protected by an automatic block-signal system, with interlocking plants at a few points. Extending northward from Branch Junction, 2.3 miles north of Centralia, to Champaign, a distance of 121.8 miles, there is an automatic train control installation in service; this automatic train control system is designed to prevent accidents such as that here under investigation. In view of this accident it is believed the carrier should seriously consider whether the automatic train control system now in use should not be extended southward from Branch Junction.

Engineman Erskine entered the service as a fireman in 1891 and was promoted to engineman in 1896, while fireman Lang entered the service as a fireman in 1918 and was promoted to engineman in 1920. The other employees involved were experienced men, and at the time of the accident none of the employees had been on duty in violation of any of the provisions of the hours of service law.

Respectfully submitted,

W. P. BORLAND,

Director.