

February 16, 1912.

MEMORANDUM TO COMMISSIONER McCHORD
relative to accident on the Illinois Central Railroad,
January 22, 1912.

Draft submitted by the Chief Inspector of Safety Appliances
as a basis for the report of the Commission.

On January 22, 1912, the Illinois Central Railroad reported by telegraph a rear-end collision occurring early that morning at Minnundy, Ill., between south-bound trains Nos. 3 and 25. Inspectors Jones and Starbird were instructed to make an investigation. Later on in the day, I was advised that a public investigation was to be held at Champaign, Ill., and was invited to have a representative present. Previous to this I had made arrangements to join in the investigation. This investigation was conducted by a Board of Inquiry made up of four Illinois Central Railroad officials, Mr. J. B. Berry, Chief Engineer, Chicago, Rock Island & Pacific Railway, Prof. W. M. F. Goss, Dean College of Engineering, University of Illinois, and Mr. G. L. Pittenger of Centralia, Ill. At this investigation questions were also asked by representatives of the Illinois Railroad and Warehouse Commission and the inspectors of the Interstate Commerce Commission. This investigation developed the following facts:

Train No. 25 left Chicago, Ill., at 5:50 P. M., January 21, for New Orleans, La., and at the time of the accident was

in charge of Engineman Strode and Conductor Brainard. This train consisted of one mail car, one baggage car, one compartment car, two coaches and C. R. I. & P. business car No. 1902; all of steel construction with the exception of the business car, and hauled by engine No. 2012. According to the train sheet, this train passed Edgewood, Ill., at 12:10 A. M., being 36 minutes late at the time, and at 12:25 A. M., stopped at Kinmundy to take water. While train No. 25 was standing at Kinmundy it was struck by train No. 3.

Train No. 3 left Chicago, Ill., at 7:00 P. M., January 21, for New Orleans, La., and at the time of the accident was in charge of Engineman Stuart and Conductor Newell. This train consisted of one baggage car, one parlor car, one dining car, four sleeping cars and an observation car, hauled by engine No. 1079. This train passed Edgewood, according to the train sheet, at 12:20 A. M., and in 10 minutes traveled 14.31 miles to Kinmundy, at which point it collided with train No. 25.

This collision caused the death of four of the occupants of the business car on the rear end of train No. 25, and injuries to the engineman and fireman of train No. 3. The other members of the party in the business car escaped with minor bruises. None of the cars in either train were derailed with the exception of the business car, the greater part of which was demolished by engine No. 1079, which went through it nearly half its length.

This division of the Illinois Central Railroad, extending from Champaign, Ill., to Centralia, Ill., a distance of

124 miles, is a double track line and there is no block signal system of any kind in operation, trains being operated by train orders. Approaching Kimmundy from the north there are 19 miles of straight and practically level track, and signals can be clearly seen at a distance of two or three miles. The pen stock from which south-bound trains take water is located just north of the station.

Engineman Strode of train No. 25, stated that his train passed Edgewood at 12:12 A. M. and reached Kimmundy at 12:29 A. M. While the fireman was on top of the tender attending to the water, the engineman descended to the ground to look over his engine. While he was doing this and before he had finished looking over one side of the engine, the collision occurred.

Fireman Gilbert of train No. 25 stated that the collision occurred while taking water. He stated that he understood that there was an order requiring all trains to take water at Kimmundy and that it had only been issued a few days previously.

Conductor Brainard of train No. 25 stated that his train passed Edgewood at 12:12 A. M. and arrived at Kimmundy at 12:31 A. M. When the stop was being made Conductor Brainard opened the door of the baggage car in which he had been riding and saw the flagman get off. After the stop had been made, he saw the headlight of the engine on train No. 3 and jumped to the ground. At Effingham, a station 29.74 miles north of Kimmundy, it had been necessary for train No. 25 to flag train No. 3 and to delay it for several minutes while loading mail. The crew of train No. 25 therefore knew that train No. 3 was following them, and on this account Conductor Brainard states that after

leaving Effingham he told the flagman that the train would stop at Kinsmundy for the purpose of taking water and that he would have to look out for train No. 3. Conductor Brainard further stated that caution fuses had to be used on nearly every trip on account of the proximity of the two trains, and that when he told the flagman to look out for train No. 3 at Kinsmundy this precaution conveyed to the latter the necessity of throwing off a fuse. Conductor Brainard estimated that not over one minute elapsed between the time of the stopping of his train and the time of the collision.

Baggageman Perry of train No. 25 stated that when stopping at Kinsmundy he looked out of the door on the east side of the baggage car while the Conductor looked out on the west side. The conductor told him that the flagman had gone back on the west side and then jumped to the ground. The baggageman then went over to the west door and saw the conductor start back. After he had gone a few feet, however, the conductor said that train No. 3 was going to strike their train. The baggageman at once jumped to the ground, just after which the collision occurred. In his opinion not over a minute or two had elapsed between the time of the stopping of the train and the time of the collision.

Flagman Broecker agreed that the statements of Conductor Brainard were correct in every particular. He added that when the stop was being made at Kinsmundy he was in the rear end of the last coach next to the business car, and that he jumped to the ground on the west side before the train had come to a

stop. He then saw the headlight of train No. 3, which appeared to be about three-quarters of a mile distant, and at once ran back as fast as he could, swinging his lanterns. His signals were answered by the engineman. Flagman Broecker further stated that his train passed Edgewood at 12:13 A. M. When he compared watches with Conductor Brainard before leaving Chicago, his watch was about 40 seconds faster than that of the conductor. He did not know that a stop was to be made at Kinmundy until told by the conductor. Train No. 25 made schedule time between Effingham and Kinmundy, and on account of the fact that trains are supposed to be spaced ten minutes apart by operators, Flagman Broecker did not know train No. 3 was so close to train No. 25, and therefore thought that there was no necessity of throwing off a fusee. He further stated that he examined the markers of his train at Effingham and found them to be burning in a satisfactory manner.

Engineman Stuart of train No. 3, stated that he was delayed at Effingham by train No. 25, not leaving there until 11:59 P. M., 14 minutes late. His train passed Edgewood at about 12:18 or 12:19 A. M., and collided with train No. 25 at 12:32. The watch of Engineman Stuart was in good condition, kept correct time, and had been compared with that of the conductor at the beginning of the trip. Engineman Stuart stated that he was not flagged until after he had seen the rear end of train No. 25 and had applied his brakes, at which time he was only a few hundred feet from the rear of the train. The speed of his train just prior to this time was about 50 miles per hour. The only light seen by him on the rear of train No. -

25 was the east marker. At the time he supposed it was a signal governing back-up movements on the north-bound track. When he could see what it really was, it was impossible to avoid the collision. When close to No. 25 he saw an unusual amount of steam escaping from the rear end of the business car, and thought that this had obscured his view of the markers. Engineman Stuart estimated that if he had had an additional hundred yards, he would have been able to stop his train in time to avoid the collision. He also stated that if a fusee had been thrown off he would undoubtedly have seen it in time to stop, and that he considered the fusee to be the best signal possible when trains are operated as on this division of the Illinois Central Railroad. He stated that he had not seen the bulletin order requiring that all trains stop at Kinmundy for water, that he had not heard his conductor say anything to him about it, and that he had not intended stopping there. He knew of the order requiring all trains to run at a speed of ten miles per hour through Kinmundy. Engineman Stuart further stated that the air brakes of his train were working in a satisfactory manner and that he had made both station and running tests. After leaving Effingham he supposed that train No. 25 would make as good time as his train would make.

Fireman Vert, of train No. 3, corroborated the statement of Engineman Stuart that only one red light was showing on the rear of train No. 25, and that the brakes were set before the flagman was seen. He also testified that he did not see any bulletin at Champaign requiring trains to take water at Kinmundy.

Conductor Newell stated that at Effingham he told - -

Engineman Stuart when giving him a clearance that they could not leave until 11:59, ten minutes after No. 25, and that they should take water at Kinmundy as usual. After striking train No. 25 Conductor Newell did not look at his watch until he reached the ground, at which time it was 12:36 A. M. From this he estimated that the accident happened about 12:34 A. M. When the train did not slow down as if intending to stop at Kinmundy, he supposed that the engineman was going to take water at Centrsia, as is often done.

Operator Schneiderjohn, located at Edgewood, stated that train No. 25 passed his station at 12:19 A. M. and that train No. 3 passed at 12:20 A. M. He stated that this was the time as shown by his watch, which might have been a minute or two slow. He did not report train No. 25 to the dispatcher at the time it passed his station as the dispatchers were then changing tricks. When train No. 3 passed he reported trains Nos. 25 and 3 together.

Operator Desley, located at Kinmundy, stated that train No. 25 arrived at 12:25 A. M. and that train No. 3 collided with it at 12:30 or 12:31 A. M. His statements of the time were based upon the station clock.

Engineman Baker, of a north-bound extra freight train which was standing at Kinmundy at the time of the arrival of train No. 25, stated that his train arrived there at 12:20 A. M., that the brakemen had nearly finished looking over the train, that he had taken water and looked his engine over, and was about ready to start out, at which time train No. 25 reached the station. He estimated that there was a difference of six or seven minutes

between the time of his arrival and the time of the arrival of train No. 25.

As previously stated, no block signals are in use on this division of the Illinois Central Railroad. In all, there are 23 stations at which train orders can be received and delivered. Of this number only two are continuously operated; 5 others are operated at night only, while the remaining 16 are day offices. The movement of trains is unrestricted except at open telegraph offices. At these points trains going in the same direction are required by time card rule to be spaced ten minutes apart. This system of operation affords protection in the immediate vicinity of open telegraph offices, but on account of the long distances existing at night between open offices, a fast train is able to catch up with a train moving at a slower rate of speed. On this division at the present time 7 passenger trains are operated daily in each direction, aside from the freight trains, both scheduled and extra. During the year 1911, the average daily movement of traffic was nearly 23 trains in each direction, or nearly one train per hour. Traffic of this density would seem to warrant the installation of some adequate form of block signal system. In this connection it may be stated that the installation of 17.26 miles of automatic block signals at different points on this division has been authorized, and the signals will soon be in operation.

On the second night after the accident, for the benefit of the various investigating bodies, a special train was made up at Champaign for the purpose of following train No. 25 and observing the exact physical conditions prevailing. This

train proceeded to Edgewood, and there waited until train No. 25 had passed. Five minutes afterwards the special train left Edgewood and followed train No. 25 to Kinmundy. It was found that the color of the markers on the rear end of train No. 25 could be seen at a distance of about 3 miles, while the markers could be distinguished from each other at a distance of two miles. The weather conditions were similar to those prevailing upon the night of the accident, and a little steam was escaping from the last car of train No. 25. There is no way, however, of definitely determining how much steam was escaping from the last car of train No. 25 on the night of the accident.

As will be seen from the statements of the various employees involved, there is some question as to the time of the accident and the time each train passed Edgewood. The operator at Edgewood states that train No. 25 passed his station at 12:13 A. M. and that train No. 3 passed at 12:20 A. M., as shown by his watch, which he says may have been a minute or two slow. The conductor, engineman and flagman of No. 25 all agree that they passed Edgewood at 12:12 A. M., as shown by their watches, which were carefully compared before starting out on the trip. For this reason we think train No. 25 passed Edgewood at 12:12 A. M., and undoubtedly made schedule time, as stated by the train crew, arriving at Kinmundy at 12:29 A. M. Train No. 3, being hauled by a much larger and more powerful locomotive, could proceed at a faster rate of speed. This train passed Edgewood at 12:19 A. M., and collided with No. 25 at Kinmundy at 12:32 or 12:33 A. M.

Both Conductor Brainard and Flagman Broecker knew

that train No. 3 was closely following their train and that it must be flagged when stopping to take water. Leaving Effingham, Conductor Brainard should not have gone forward to ride in the baggage car after collecting tickets, but should have remained in one of the rear coaches in order to see that his train was properly protected. Flagman Broecker had fuses, both yellow and red, and should have thrown one off his train when approaching Kimmundy.

Engineman Stuart knew that his train was only 10 minutes behind train No. 25 when leaving Effingham, and knew that he was making better time. He also knew that there was an interlocking plant at Kimmundy, the signals of which might be against him (at the time of the accident the distant signal was at caution), and that by bulletin order he was required to reduce the speed of his train to ten miles per hour while passing through the town. Engineman Stuart also knew that it was one of the few telegraph offices kept open all night at which trains were required to be spaced ten minutes apart. All of these circumstances should have made him extremely cautious in approaching this station. Had his train approached this station under control, this accident could undoubtedly have been avoided.

This accident was caused by the failure of Flagman Broecker to properly protect his train. Conductor Brainard is equally responsible for not knowing that his train was properly protected. A contributing cause was the failure of Engineman Stuart to control the speed of his train so as not to exceed a speed of 10 miles per hour while passing through Kimmundy and to comply with the bulletin order requiring the taking of water

at Kinmundy. An additional contributing cause was the failure of Operator Schneiderjohn to hold train No. 3 at Edgewood until 10 minutes after the passing of train No. 25.

As a preventive of accidents of this character an adequate block signal system should be installed. That the officials of the Illinois Central Railroad realize the protection afforded by block signals is evidenced by the testimony of Vice-President Park in connection with recent rate cases, in which Mr. Park stated that perhaps above all others, the greatest factor for safety is the automatic block signal. By way of illustration he stated that during the previous year there had been 73 accidents on the line of the Illinois Central Railroad and that only five of them occurred within block signal limits, four of these being due to defects in equipment. Of the 68 collisions occurring outside of block signal limits, there were 19 head-on collisions, 25 rear-end collisions, 19 side collisions and 5 crossing collisions. Mr. Park testified that all of these accidents would have been prevented had automatic block signals been in use.

Respectfully submitted,

Chief Inspector of
Safety Appliances.