INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE CHICAGO, BURLINGTON & QUINCY RAILROAD NEAR BUDA, ILL., ON JUNE 30, 1924

JULY 31, 1924

TO THE COMMISSION

On June 30, 1924, there was a rear-end collision between a passenger train and a mail train on the Chicago, Burlington & Quincy Railroad near Buda, Ill, which resulted in the death of 6 passengers, 1 employee, and 1 Pullman porter, and the injury of 13 passengers, 1 mail clerk, 1 employee, and 1 Pullman porter. The investigation of this accident was made in conjunction with representatives of the Commerce Commission of Illinois

LOCATION AND METHOD OF OPERATION

This accident occurred upon that part of the Auroia Division extending between Aurora and Galesburg, Ill., a distance of 1246 miles which in the vicinity of the point of accident is a doubletrack line over which trains are operated by time-table, train orders, and an automatic block-signal system. The accident occurred at a point 4 058 feet east of the station. Approaching this point from the west there is a curve of 1° 40' to the left 1.776 feet in length, 2,385 feet of tangent, and a compound curve to the right 3,489 feet in length, the accident occurring on the last-mentioned curve at a point 2,251 feet from its western end where the curvature is The grade from the west is ascending for more than 1 mile until a point near the station is reached, it is then descending to the point of accident, varying from 0.09 to 0.87 per cent, being 0.52 per cent at the point or accident. There was a freight train standing on the passing track on the inside of the curve which restricted to a few car lengths the range of vision of the engineman cf an eastbound train

The automatic block signals are of the two-aim, two-position, lower-quadrant type, night color indications are red, yellow, and green, for stop, caution, and proceed, respectively. Signals are installed on both tracks to provide for movements in either direction, absolute block being provided for movements against the current of traffic and permissive signals for movements with the current of

traffic In connection with block signals governing movements through station layouts calling-on signals are installed for the purpose of permitting a train to enter the station layout without a stop at the automatic signal, when it is necessary to use a diverging route or to enter a side track. These calling-on signals are semiautomatic where conditions permit, the semiautomatic feature applying only to the point where the diverging route begins, in all other cases they are entirely manual in their operation Signal S-1167, on the mast of which there is also mounted a calling-on signal, is located 312 feet west of the station at Buda, on a bracket pole to the right of the eastbound main track, the eastbound signal immediately preceding it is 5,073 feet west of signal S-1167, has no calling-on signal mounted on its mast, and is on a signal bridge. The most restrictive indication of each of these two automatic signals is stop and proceed Special time-table instruction No 23, relating to the use of calling-on signals, reads, in part, as follows

At stations where calling-on aims are located (except Princeton) a clear signal to an approaching train is an indication to proceed to crossover or siding and be governed by instructions of operator

The weather was clear and it was about sumise at the time of the accident, which occurred at 4 39 or 4 40 a m

DESCRIPTION

Eastbound passenger train No 2 consisted of one baggage car, one coach, one chair car, one coach, nine sleeping cars, and one observation sleeping car, hauled by engine 2849, and was in charge of Conductor Ogden and Engineman Sullivan The first four cars were of all-steel construction and the twelfth was of wooden construction, while the balance had steel underframes and steel siding Train No 2 left Galesburg at 3 19 a m, 24 minutes late, and passed Neponset. 6 41 miles from Buda, at 4 26 a m, 41 minutes late On account of poor quality of coal, Engineman Sullivan decided to stop at Buda for a fresh supply, not knowing that the coal-chute men were not on duty The train passed the station at Buda at 434 a m, at that hour 40 minutes late and 4 minutes after train No 8 was due to pass that point, and stopped at the coal chute, which is 5,245 feet beyond the station, according to the testimony, at about 4 37 a m While standing at this point train No 2 was struck by train No 8

Eastbound mail train No 8 consisted of two mail cars, one baggage car, one mail car, two baggage cars, and two refrigerator cars, in the order named, hauled by engine 2852, and was in charge of Conductor Boyers and Engineman Huber. The first, second, and fourth cars were of all-steel construction, while the balance were of steel underframe construction. Train No 8 left Galesburg at 344 a.m.,

four minutes late, passed Neponset at 4 30 a m, received a caution indication at the signal located about 1 mile west of Buda and a stop indication at signal S-116 7. As train No 8 approached, the calling-on signal was cleared by the operator and the train passed the signal at a low rate of speed, passed the station without stopping, passed the flagman of train No 2 without the engineman having seen him, and collided with the rear end of train No 2 while running at a speed estimated by the employees to have been about 20 miles an hour

Engine 2852 telescoped the observation sleeping car a distance of about 20 feet and derailed the car immediately ahead of it, which in turn telescoped the wooden sleeping car, which was third from the rear end of train No 2, about two-thirds of its length. Engine 2852 was not derailed nor badly damaged, and only slight damage was sustained by two cars in train No 8. The employee killed was the fineman of train No 8.

STIMMARY OF EVIDENCE

Engineman Sullivan, of train No 2, said he passed the station at Buda under clear-signal indications and began braking when within about one-fourth mile of the coal chute He said he sounded the whistle signal for the flagman to protect the train when about four or five car lengths from the point where he came to a stop, and also whistled for the coal-chute man After stopping, the fireman was unable to reach the rope used in pulling down the coal-chute apror and Engineman Sullivan whistled again for the coal-chute man, and a brakeman on extra 4974, which was standing on the passing track, then told him there was no one on duty at that time of the day hook was then passed to the fireman to be used in reaching for the rope, and he was so engaged when the collision occurred man Sullivan said it was 4 37 a m when his engine stopped at the coal chute and 439 a m when the collision occurred, at which time the brakes on the cars in his train had been released, leaving only the engine brake applied

Fireman Stephenson said the engineman whistled out a flag before the train stopped, but he did not recall any other whistle signal. He was unable to state how long his train had been standing before the collision occurred, but thought that it had not been there more than three or four minutes

Conductor Ogden said that in the vicinity of Kewanee or Galva, the second and third stations, respectively, west of Buda, he had spoken to Flagman Allaid about train No 8 closing up on them As his train approached Buda he was in the rear end of the smoking car, the second car in the train, and opened the vestibule door on the left side, watching the train as it rounded the curve west of

the station, at that time he saw all signals in clear position and also noted that Flagman Allaid was looking out of the rear vestibule of the last car The train passed the station as nearly as he could tell at 435 a m, moving at a speed of 35 miles an hour Conductor Ogden did not know Engineman Sullivan was going to stop at the coal chute and said the stop was unexpected and that he did not hear the engineman whistle out a flag, although he thought that the signal might have been sounded without his hearing it When his train came to a stop Conductor Ogden looked at his watch and noted that it was 437 a m, he got off and started toward the engine to ascertain the reason for the stop, saw the fireman reaching for the coal-chute apron, and then started to walk back toward the rear of the train to make sure it was protected against train No 8, intending to climb upon a box car in order to see clearly, but the accident occurred before he had done so He thought about two and one-half or three minutes elapsed between the time the train stopped and the time of the collision, which was hardly sufficient time, in his opinion, for the flagman to have gone back tar enough to have prevented the accident With regard to the possibility of the flagman diopping a fusee before the train came to a full stop, Conductor Ogden said the stop was so unexpected that the members of the train crew were taken unawares, although he said it was the practice to drop off fusees when losing time and encroaching on the time of another train, and that the flagman should have been on the alert the minute the brakes were applied

Brakeman Holmguist, who was riding in the same car with Conductor Ogden, also got off after the train stopped and started toward the head end He did not hear the engineman whistle out a flag, but did hear him whistle for the coal-chute man. The engine of extra 4974 was standing back several car lengths from the coalchute, enabling him to look across the inside of the curve, and Brakeman Holmquist said he finally turned around and was able to see the top of the engine hauling train No 8, over the freight cars in extra 4974, this being when train No 8 was about eight car lengths from the rear of train No 2, and he then saw the real end of the observation car going up in the air as the collision occurred, he did not notice the glare of a fusee near the rear of his train Brakeman Holmquist did not look at his watch when he left his train, but said it was 440 a m when the collision occurred He then ran forward and flagged westbound mail train No 7, which was approaching

Flagman Allaid said Conductor Ogden had talked with him about being on the time of train No 8, and when passing Buda he realized they were on the time of that train, but did not know his train was going to stop at the coal-chute and did not throw off a

fusee before it came to a stop. After it stopped he took his flagging equipment, raised the trap door on the observation platform, got off on the engineman's side and started back to protect his train, taking with him red and white lanterns, two torpedoes, and fusees

After walking back about two or three car lengths he heard a train approaching with the engine working a light throttle, lighted a fusee, stepped over between the two main tracks and continued walking westward until he saw the headlight of train No 8, about 3 passenger-car lengths from him and 10 or 12 passenger-car lengths from the rear of his own train, he then gave stop signals, which were not answered, stepped over to the engineman's side, threw down the fusee, and got out of the way, the train passing him at a speed of 20 or 30 miles an hour, at which time the brakes were not applied, and apparently continuing at that rate of speed until the collision occurred He did not use any torpedoes because he did not have time in which to do so and estimated that he had reached a point about 9 passengercar lengths from his train when train No 8 passed him and that had he run back he would have reached a point 15 or 16 car lengths from the rear of his train. After train No 8 stopped he was about half a car length back of the rear car of that train Flagman Allaid further stated that he went back at an average walk, not hurrying at any time, although he said he would have run if he had known train No 8 was right behind his own train He thought his train stopped at 438 a m and was struck at about 440 a m Flagman Allard's statements indicated that he thought the stop was rather sudden, and at the same time in answer to a question as to whether he did not feel justified in taking any measures to protect his train when it reduced speed he said he did not think it necessary under the conditions Flagman Allaid further stated that he did not hear Engineman Sullivan sound the whistle for him to go back to protect his train or any other whistle signals either before or after stopping, and in answer to a question as to what difference it would have made in his actions he said it would have assured him that they were going to remain there for a while and he would have gotten back more quickly His testimony then was as follows

- Q Would that have caused you to go back quicker?-A Yes, sir
- Q You apparently were waiting for that?-A Yes, sn
- Q Did not figure it was necessary to get off until full stop was made and until engineer whistled out flag?—A Yes, sir

Engineman Huber, of train No 8, said the air brakes on his train had been tested at Burlington and that he also made a running test after leaving that terminal, the brakes were in good working order at that time and worked properly at all times thereafter. After leaving Galesburg he made a stop for signal S-127 8, a few miles west of Neponset, he received a caution indication approaching the home

signal at Neponset and shut off steam, reducing the speed in readiness to stop at the home signal The home signal was in the clear position, however, when his train reached it and he proceeded until he received a caution indication approaching Buda, at which time he again shut off steam and applied the air brakes in readiness to stop at the home signal, S-1167, which was displaying a stop indication When within five or six car lengths of the signal, however, the calling-on signal was cleared and was so called by the fireman, he released the air brakes and drifted by the station at a speed of 8 or 10 miles an hour, expecting to receive instructions relating either to the crossover or the head-in switch. No such instructions were received, however, and he proceeded with caution or at least thought he was doing so, using only a drifting throttle, expecting that train No 2 was ahead of him The speed increased somewhat on the grade, but he still felt that his train was under control. As his train was on a curve he stood up in an endeavor to look over the cars of the freight tiain on the passing track for the purpose of seeing the indication of the automatic signal east of the coal-chute He was unable to do so, however, but on then looking ahead he saw the rear end of train No 2 about 80 feet distant The speed of his train was about 15 or 18 miles an hour and he at once applied the air brakes in emergency and thought the speed had been reduced to some extent before the collision occurred, he did not remember whether or not he shut off Engineman Huber said he did not see anything of a flagman or fusee, nor had the fireman said anything to him about seeing a He thought the accident occurred at 440 or 441 a m, but said he was excited at the time and might have been mistaken to the extent of a minute or so 1t also appeared from his statement that his vision was not obscured by the fact that the sun was just using Engineman Huber further stated that he would have made the stop at signal S-1167 if the calling-on signal had not been cleared, but he did not think that if he had made the stop it would have altered the circumstances His understanding of his duties after receiving the calling-on signal and leaching the crossover and head-in switches was that he could proceed cautiously to the next automatic signal, that although the rule does not say anything about proceeding to the next signal, it is the practice to do so when no instructions are received from the operator, and he said his understanding of proceeding with caution was that he should be prepared to stop within his range of vision Engineman Huber said he did not see the operator at Buda, the station being located on the fireman's side of the track, that he did not see the fireman exchange any signals with the operator, and that the fireman said nothing to him about the operator

Conductor Boyers, of train No 8, testified to the stop at signal S-127 8, to the caution signal at Neponset, and to the caution and stop At the latter point the speed was reduced to indications at Buda 8 or 9 miles an hour, and about the time he thought the engineman was going to stop the calling-on signal was cleared and he saw that the crossover switches just east of the station were lined for the main Conductor Boyers was watching to see if the operator had any instructions for them and said that instead of instructions the operator, from his position in the bay window of the station, gave him a proceed signal Inasmuch as he had seen the freight train on the passing track, he knew his own train would therefore have to proceed on the main track, which it did, traveling the first half mile or so at a speed of about 12 or 14 miles an hour, after which the speed began to increase although the engine then was working but little Conductor Boyers said he was standing close to one of the doors on the engineman's side of the sixth car in the train but could not see anything ahead on account of the freight train on the inside of the curve and also on account of smoke and the fact that the sun was shining in his face. Shortly afterwards, while he was standing back from the door, he felt an emergency application of the air brakes, which had reduced the speed to only a slight extent when the accident occurred, at which time the train was moving at a speed he estimated at 18 miles an hour, possibly a little more, and he did not think his train moved more than 150 feet after the brakes were Conductor Boyers got off his train on the left side and shortly afterwards saw a burning fusee against the right rail immediately in back of the rear car in his train This fusee was not burning brightly at that time and he did not notice whether it was standing upright or lying down Conductor Boyers said he had not talked with Engineman Huber since leaving Builington at 2 37 a m., at that time he had compared watches with the engineman, and he said the latter seemed to be in normal physical condition

Head Brakeman Milroy, of train No 8, was also riding in the sixth car of the train and corroborated the statements of the conductor as to the signal indications displayed approaching Buda and as to the speed of the train being reduced accordingly. He did not see the calling-on signal when it was cleared, but heard the conductor and flagman say it was all right. Brakeman Milroy thought the train proceeded with caution after passing the station, at a speed of 5 or 10 miles an hour, and that the application of the air brakes came at or immediately prior to the collision, which occurred while the train was moving at a speed of about 20 miles an hour. After passing the station he did not again look out of the door on the engineman's side until after the collision occurred and at that time he saw a burning fusce immediately in the rear of his train, afterwards

finding that it was on the eleventh the from the rear car. He then clossed over and got off on the fireman's side and saw the flagman of train No 2 coming in from the rear of train No 8. This flagman had a red flag in his hand, but Brakeman Milroy was not certain concerning his other flagging equipment. Brakeman Milroy expressed the opinion that the engineman would have been able to see a red flag better than a fusee.

Flagman Cramer, of train No 8, was also riding in the sixth car on account of the fact that the two rear cars were refrigerator cars His statements as to signal indications and slow speed when passing Buda practically agreed with those of the conductor and head brakeman He also said that he saw the operator seated at his desk in the station and that the operator raised his hand as they passed After passing the station he was standing near a door on the engine man's side, but did not see anything of a flagman or fusee until after the accident occurred, and he said he could not recall any application of the air brakes having been made. The fusee was about half a car length back of his train and to the best of his recollection was between the rails As Flagman Cramer started back to flag he met the flagman of train No 2 coming in, but did not have any conversation with him and did not notice what flagging equipment he had with him Flagman Cramer expressed the opinion that it would have been difficult for the engineman to have seen a lighted fusee on account of looking toward the rising sun, but at the same time said that if he had been flagging he would have used night sionals

Engineman Metz, of extra 4974, said his train had stopped on the passing track with the engine about 15 car lengths west of the coal-chute and that he was working on the right side of his engine when train No 2 came to a stop He did not know whether or not the engineman of train No 2 whistled out a flag and thought the train had been standing about four or five minutes when the col-Fireman Carlson did not hear the engineman of lision occurred train No 2 whistle out a flag nor did he hear him sound any other whistle signals Head Brakeman Hoiser was in the coal-chute shed when train No 2 arrived and assisted the fireman in his endeavor to pull down the coal-chute apron He was positive that the engineman did not whistle out a flag, but said he did sound the whistle four or five times for the coal-chute man In his opinion, train No 2 was running slowly approaching the coal-chute and its flagman would have had an opportunity of getting off if the engineman had signaled him to do so His estimate as to the time train No 2 had been standing before the collision occurred agreed with that of Engineman Metz Flagman Smith had been inspecting his train, had reached the head end, and was in the engine room of the

coal-chute when train No 2 arrived. He said the engineman whistled for the coal-chute man but did not remember whether or not he whistled out a flag. None of these employees heard anything to indicate the approach of train No 8 except Flagman Smith, who said he had heard train No 8 whistle just before the engine of train No 2 was pushed ahead a distance of about one car length. Conductor Rowe was in the caboose of extra 4974 and said train No 2 passed him at a good rate of speed, while train No 8 passed about five or six minutes afterwards, moving at a speed of 8 or 10 miles an hour. He had not heard the engineman of train No 2 whistle out a flag and did not know there had been an accident until several minutes after its occurrence.

Operator Keimeen, on duty at Buda from midnight until 8 a m, said train No 2 received clear signal indications at this point, that the train passed his station at 434 a m, and that he did not know it was going to stop at the coal-chute. The signals were in the stop position when train No 8 approached, moving at such a rate of speed as would have enabled it to stop before passing them, but when the train had come nearly to a stop and was within three car lengths of the signals he cleared the calling-on signal so that the train could drift by without stopping, the train passing the station at 438 a m Operator Kermeen said the only instructions he gave the crew consisted of holding up two fingers to the fireman as an indication that train No 2 was ahead of them, in acknowledgment of which the fireman nodded his head and Operator Kermeen said he gave the same kind of a signal to the members of the train crew Operator Kermeen said he cleared the signal entirely on his own responsibility, and that on previous occasions he had been instructed by the dispatcher to clear this signal when it was not intended that the train so receiving the signal crossover or head-in, but when questioned as to the circumstances he said it was when the signals were out of order and was done to avoid bringing trains to a full stop, he maintained, however, that according to his understanding of the rules he had the right to clear the signal without instructions, although he could not recall that any one in authority had told him to do so Operator Kermeen had been examined on the rules in April, 1923, he said this question was raised at the examination, and that his understanding of the rule at that time was that the train receiving the signal could proceed to the crossover or head-in switch or to the next block signal under control and that he was supposed to give instructions to the ciew, and in this particular case he expected that after clearing the signal for train No 8, and also giving them a signal indicating that train No 2 was ahead of them, they would continue to the next block signal, but that they would have

no more authority than if they had stopped at the stop-and-proceed signal and had then proceeded

Train Rules Examiner Shults said the use of the calling-on signal was for the purpose of enabling the operator, upon receipt of instructions from the dispatcher, to advance a train past the stop-and-proceed signal to the office when conditions made it desirable to do so to avoid delay, the crew of the train then to be governed by instruction from the operator as to entering the head-in or crossover switches, and that the operator is forbidden to use the signal unless instructed to do so by the dispatcher—Mr Shults also said the signal did not relieve the engineman of the duty of observing Rules 509–A, or 509–B, these rules read as follows

509 When a train is stopped by a stop signal it must stay until authorized to proceed, or in case of failure of means of communication it may proceed when preceded by a flagman to the next signal displaying a proceed indication

When a train is stopped by a stop-and-proceed signal it may proceed—

- (A) On single track, at once at slow speed, expecting to find a train in the block, broken rail, obstruction, or switch not properly set
- (B) On two or more tracks at once at slow speed, expecting to find a fram in the block, broken fail, obstruction, or switch not properly set

When the signal does not clear, and it is possible to communicate with the dispatcher, a train order should be issued reading

"No opposing train in the block, proceed, complying with Rule 509-A (on single track), Rule 509-B (on two or more tracks)"

CONCLUSIONS

This accident was caused by the failure of Engineman Huber, of train No 8, properly to obey signal indications, and by the failure of Flagman Allaid, of train No 2, properly to protect his train by flag

Engineman Huber received a caution-signal indication approaching Buda and apparently approached the home signal, S-1167, prepared to stop. This is a stop-and-proceed signal, but masmuch as the calling-on signal was cleared Engineman Huber was relieved of the duty of stopping and was allowed to proceed under control According to his statement, no instructions were received from the operator, and as the crossover switches were lined for the main tracks and a freight train was occupying the passing track, his train proceeded on the main track and should have been kept under control, prepared to stop within his range of vision, until it arrived at the next block signal Instead of giving that close attention to the track ahead which was required, particularly in view of the fact that his vision was materially obscured by the freight train on the passing track, Engineman Huber stood up in an endeavor to see over the tops of the freight cars in order to observe the indication of the next automatic signal Apparently it was while he was so engaged that he passed the flagman and fusee without seeing either, his first intimation of the train ahead being when he saw the rear end of train No 2 about 80 feet distant While he was working only a drifting throttle, the evidence indicates that the speed of his train had increased due to the descending grade, and it is clear that Engineman Huber did not take necessary action to keep his train under proper central It does not appear that there was any misunderstanding on his part of what he was required to do in the circumstances, and had he properly performed his duties this accident would have been averted Engineman Huber is 50 years of age, he was employed as a fireman in 1892 and was promoted to engineman in 1904, practically all of his 20 years' experience as an engineman having been in the territory in which this accident occurred It also appeared that during the past 10 years he had been examined on the rules on five different occasions

Rule 99 of this railroad requires that when a train stops the flagman shall go back immediately a sufficient distance and put down two torpedoes, displaying fusees when necessary, when a train is moving under circumstances in which it may be overtaken by a following train the flagman is required to take such action as may be necessary to insure full protection, throwing off lighted fusees by night or by day when the view is obscured Conductor Ogden had talked with Flagman Allaid, of train No 2, about their train being on the time of train No 8, and when his train reached Buda Flagman Allaid knew that train No 8 was then due, yet he did not throw off a fusee before his train came to a stop, did not hurry about getting off, and apparently thought he should have been signaled to do so by the engineman It further appears that after starting back to flag he walked at a moderate rate of speed and did not run even when he heard train No 8 approaching, although he was fully aware that the view was very much obscured. While the evidence is clear that not more than four minutes clapsed between the time at which train No 2 stopped and the time of the collision, it is also apparent that Flagman Allard made only a half-hearted effort to provide proper protection Even assuming that the stop was a sudden and unexpected one and also assuming that he had no opportunity of throwing off a fusee, there is apparently no reason why Flagman Allaid under the circumstances should not have been ready to get off the instant his train came to a stop, and he should have made every effort to get back as far as possible in the time at his disposal he done so and had he made a reasonable effort to attract the attention of the engineman of train No 8 instead of merely throwing his fusee on the ground and getting out of the way, it is probable he would have been able to prevent the occurrence of the accident

Flagman Allaid had been employed practically continuously since 1918 and had been in passenger service since September, 1923

The testimony is conflicting as to whether or not Engineman Sullivan, of train No 2, whistled out a flag either before or after his train came to a stop, but from the evidence it is doubtful whether he took such action. The rules provide a whistle signal for this purpose, and Rule 943, relating to the duties of engineman, also provides, in part, that they are responsible for—

the exact observance of all signals and other precautions established for the safety of trains

Engineman Sullivan knew his train was losing time and that at Buda it was on the time of train No 8. The stop at that point was unusual, and Engineman Sullivan should have been prompted to take all possible precautions for the safety of his train. In view of the manner in which Flagman Allaid performed his duties, there is no assurance that the sounding of the proper whistle signal by Engineman Sullivan would have prevented the occurrence of the accident, but if such a signal had been sounded Flagman Allaid might have more diligently performed his duty

The evidence in this investigation discloses that the operator at Buda cleared the calling-on signal without instructions to do so and when the approaching train was not to be diverted to another track. This signal, therefore, was used solely to avoid a stop required by the block signal of a train which was not to be diverted from the normal current of traffic. The calling-on signal was not intended to be used for this purpose. While it does not appear that the clearing of the calling-on signal had any direct bearing upon this accident, it is possible the delay to train No. 8 which would have been caused by coming to a complete stop would have resulted in the flagman of the preceding train reaching a point where he would have been seen by Engineman Huber in time to have averted this accident. The officials of this railroad should take steps to see that the use of these calling-on signals is restricted to the purposes for which they were installed.

All the employees involved were experienced men, and 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