Inv-2130

INTERSTATE COMMERCE COMMISSION

WASHINGTON

REPORT OF THE DIRECTOR

BUREAU OF SAFETY

ACCIDENT ON THE

NEW YORK CHICAGO & SAINT LOUIS RAILROAD

BLOOMINGTON, ILL.

DECEMBER 31, 1936

INVESTIGATION NO. 2130

SUMMARY

Inv-2130

Railroad:	New York Chicago & St. Louis
Date:	December 31, 1936
Location:	Bloomington, Ill.
Kind of accident:	Side collision
Train involved:	Freight cars and light engine
Train number:	63
Engine number:	621
Consist:	34 cars and caboose
Speed:	About 4 miles per hour
Track:	1 percent descending grade; tangent
Weather:	Dark and cloudy
Casualties:	1 killed, 1 injured
Cause:	Cars ran away due to portion of train being left on descending grade without brakes being applied.

To the Commission:

On December 31, 1936, there was a side collision between a light engine and the runaway cars of its train, on the New York Chicago & St. Louis Railroad, at Bloomington, Ill., which resulted in the death of one employee and the injury of one employee.

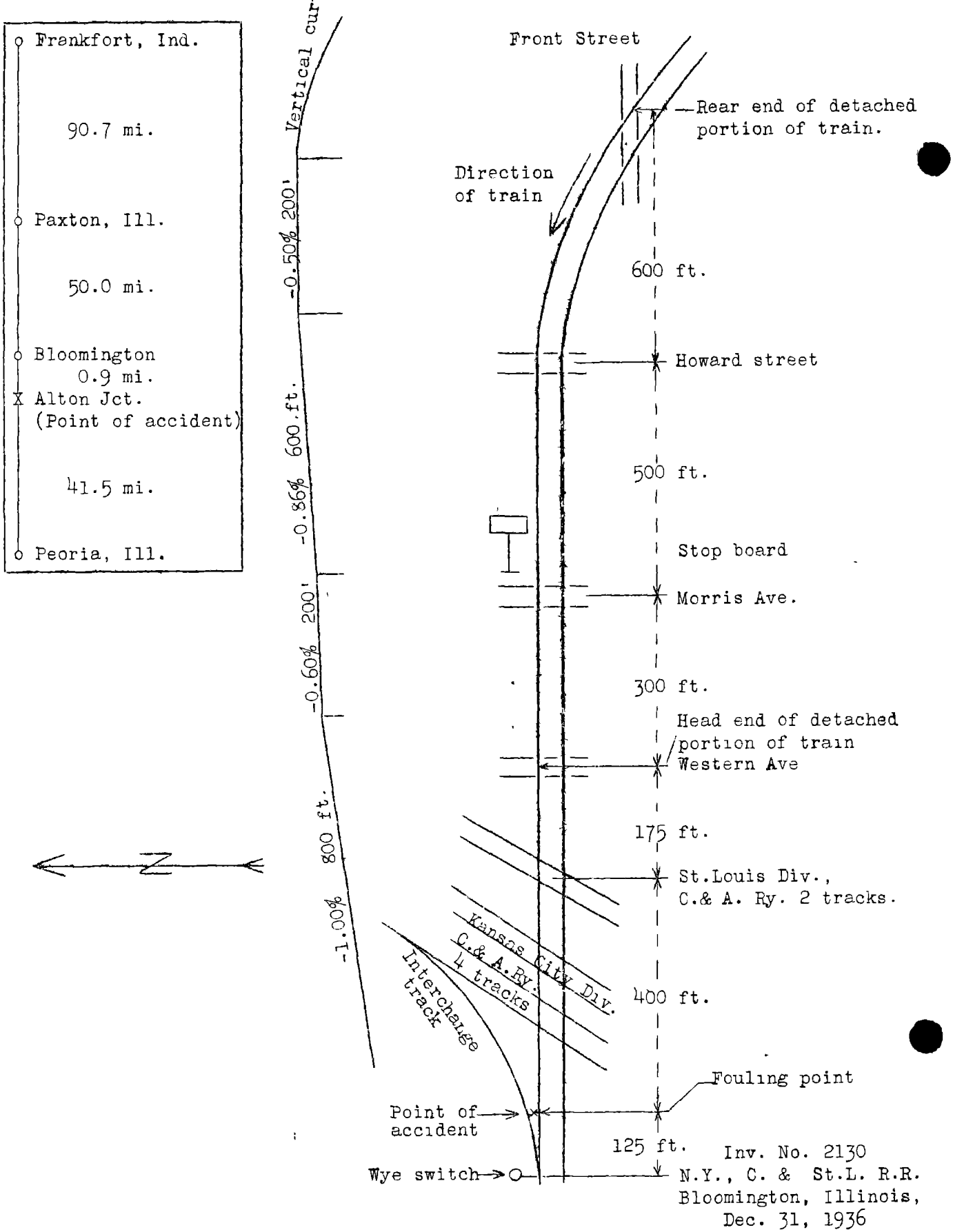
Location and method of operation

This accident occurred on the Peoria Division of the Lake Erie & Western District which extends from Peoria, Ill., to Frankfort, Ind., a distance of 181.3 miles. In the vicinity of the point of accident this is a single track line over which trains are operated by time table, train orders and a manual block system.

The tracks of the New York, Chicago & St. Louis Railroad, hereinafter referred to as the N.Y.C.& St.L., cross those of the Chicago & Alton Railway, hereinafter called the C.& A., at Alton Junction, approximately one mile west of Bloomington passenger station; 279 feet west of the center of the most westerly C.& A. track of this crossing, a trailing point switch, used as an interchange between the two railroads, leads off the N.Y.C.& St.L. west-bound track to the north. The collision occurred at the fouling point between this interchange track and the N.Y.C.& St.L. main track. Approaching this point from the east there is a compound curve to the left, 800 feet long, having a maximum curvature of 5 degrees, 57 minutes, followed by a tangent approximately 1500 feet long; the collision occurred at a point 1475 feet west of the receiving end of this tangent. The gradient is 1.00 percent descending for west-bound trains for a distance of 850 feet immediately preceding the point of accident.

The railroad crossing is not protected by interlocking and a time table rule requires all trains to come to a full stop before moving over it, regardless of the position of the governing signal. A stop board is located at a point approximately 500 feet east of the crossing, and 1,000 feet east of the point of accident. Four city street crossings intersect the N.Y.C.& St.L. tracks east of the railroad crossing, within a distance of 1,500 feet.

The weather was cloudy at the time of the accident which occurred at 4:35 a.m.


Frankfort, Ind.
90.7 mi.
Paxton, Ill.
50.0 mi.
Bloomington
0.9 mi.
Alton Jct.
(Point of accident)
41.5 mi.
Peoria, Ill.
Vertical curve
-0.50% 200'
600 ft.
-0.86%
-0.60% 200'
800 ft.
-1.00%
N
Front Street
Rear end of detached portion of train.
Direction of train
600 ft.
Howard street
500 ft.
Stop board
Morris Ave.
300 ft.
Head end of detached portion of train
Western Ave
175 ft.
St.Louis Div., C.& A. Ry. 2 tracks.
Kansas City Div. C.& A.Ry. 4 tracks
Interchange track
400 ft.
Fouling point
Point of accident
125 ft.
Wye switch
Inv. No. 2130
N.Y., C. & St.L. R.R.
Bloomington, Illinois,
Dec. 31, 1936

Description

West-bound freight train No. 63, consisting of 23 loaded cars, 41 empty cars and a caboose, hauled by engine 621 and in charge of Conductor Phebus and Engineman Griffith, departed from Frankfort, Ind., at 9:50 p.m., December 30, 2 hours and 20 minutes late, passed Paxton, Ill., the last open telegraph office, at 2:43 a.m., according to the train sheet 2 hours and 17 minutes late, and proceeded to Bloomington, Ill., where a train was met and cars were set out. The train left Bloomington with 11 loaded cars, 23 empty cars and a caboose, 990 tons, at about 4:25 a.m. and continued to Alton Junction, 0.9 mile farther west, where it stopped with the head end east of the C.& A. Ry. crossing. A cut was made behind the first car, and the engine, with this car proceeded over the crossing to a point beyond the interchange switch, after which the car was placed upon the interchange track; as the engine was about to return to the main track it was struck on the left side of the cab by the head car of the rear portion of its own train, which was running away.

The engine was not derailed but was raked on its left side the entire length; both trucks of the head car and the lead truck of the second car of the runaway portion of the train were derailed to the right but remained upright.

The employee killed was the fireman.

Summary of evidence

Engineman Griffith stated that before leaving Frankfort he was informed by the inspectors that the air brakes had been tested and were all right; between Frankfort and Bloomington he used the automatic train brake several times with satisfactory results. At Bloomington the second to seventh cars, inclusive, were set out and the train left that point about 4:30 a.m. with 34 cars, the head one of which was to be set off at Alton Junction. The maximum speed between Bloomington and Alton Junction was from 12 to 13 miles per hour, and he made a stop about 300 feet east of the C.& A. crossing, using the train brakes to do so and reducing the brake pipe pressure 15 or 16 pounds. In order to get the train beyond as many street crossings as possible, it was pulled ahead so that when the second stop was made, the engine pilot was on the railroad crossing. This stop was made by means of the engine brake only, but just as the drivers were making their last revolution, he made a 10 pound reduction of brake pipe pressure. He had used the engine brake in making this stop in order to give the train brakes time to recharge, and he believed that the train brakes had been sufficiently

recharged when the reduction was made for the second application of the automatic brake. At this time the locomotive pop valve was open and the stoker was working so that he was unable to hear the brake pipe exhaust, but he watched the large air gauge and noted that it took at least 15 seconds to complete the reduction. At the same time he was endeavoring to start the injector, and when he had accomplished this, he looked back and received a proceed signal from Head Brakeman Carlson. He moved the engine and one car west of the interchange switch and then backed the car on to that track, after which he received a signal to go ahead and was in the act of reversing the engine when it was struck on the left side by the cars of the train which had moved upon them unnoticed. He had not seen Brakeman Carlson go between the cars when the last cut was made. He felt that the brakes were applied on the train but gave as his opinion regarding the cause of the runaway, the possibility that no air had been exhausted from the brake pipe on the rear portion of the train, probably due to Brakeman Carlson having closed the angle cock between the first and second cars before the second brake application had been initiated. He has made many similar movements and it is his practice to conform to the rule which requires that the brakes be applied before the train is parted. He considered that the brakes on a good braking train would remain applied about 2 hours if a ten pound brake pipe reduction were made, and said that only about two minutes had elapsed between the time the cut was made and the time the accident occurred. Visibility was good at the time of accident.

Head Brakeman Carlson stated that after they had set out 5 cars at Bloomington he coupled the engine and one car to the balance of the train but when he cut the train line through he did not notice whether the brake applied on the car to which the engine was coupled. They left Bloomington at 4:25 a.m. after being informed by Conductor Phebus that the head car was to be set out on the C.& A. interchange and that they might be able to complete that work before the arrival of a C.& A. passenger train which was due at 4:40 a.m. They proceeded to Alton Junction at a speed of about 8 miles per hour and as they neared the C.& A. crossing he was on the rear end of the first car. Only one stop was made east of the crossing and at that time the head end of the second car was about 150 feet east thereof. Without noting whether the train brakes were set, he immediately closed both angle cocks, parted the train behind the first car, and gave the engineman a signal to proceed and the engine and one car were moved west beyond the interchange switch. After the car was placed on the interchange track he set the hand brake, then uncoupled the engine and gave the engineman a signal to go ahead but before the engine had moved he heard the crash of the collision. Brakeman Carlson was

familiar with the rule requiring that the air brakes be applied to the rear portion whenever a train is parted, and realized that it was his duty to see that the requirements of this rule were complied with, but he had depended upon the engineman to set the brake on the train. Prior to the time of the accident he did not know that there was a descending grade in the vicinity of the point of the accident and he had never heard of a train running away at that point. He was examined on the book of rules in March, 1936, and at that time listened to a talk concerning air brake rules. Weather conditions were cloudy and cold at the time of the accident.

Conductor Phebus stated that upon leaving Frankfort train 63 consisted of 65 cars and that all brakes were operative. Work was done at several points between Frankfort and Bloomington and the brakes operated satisfactorily. When the train left Bloomington at 4:30 a.m. it consisted of 34 cars, 11 of which were loads. The train proceeded at a speed of from 10 to 15 miles per hour to Alton Junction where it stopped and remained standing for a few minutes, then started ahead and had moved a distance of 8 or 10 car lengths when it was stopped by an emergency application of the train brakes. He was unable to say whether the first stop had been made with the train brakes, and until after he learned of the accident, he believed that the second movement of the train was for the purpose of pulling over the crossing before making the set out movement. He did not personally supervise the setting out of the car as he believed that Brakeman Carlson was competent to handle this work. Conductor Phebus was examined on the book of rules in March, 1936, and interpreted rule 305 of the air brake rules to mean that the air brakes are to be set on the standing portion of a detached train if the period of detachment is to be of short duration, but hand brakes are to be applied if the train is to be separated for any considerable time. He said weather conditions were good, with no fog.

Flagman Minglin stated that two stops were made at the junction about 2 or 3 minutes apart and in each case he thought the train brakes were used, but the second of these stops was when the collision occurred. After the second stop he examined the five cars next ahead of the caboose and found the brakes set. The usual practice when setting out cars at this point is to leave the air brakes set on the rear of the train.

Operator Lewis, at Alton Junction, stated that about 4:30 a.m. he saw train No. 63 stopped about 200 feet east of the C.& A. crossing and he immediately put the crossing signal in proceed position. He saw the engine go over the crossing to make the setout and then resumed his office duties. Upon

hearing a train moving shortly afterward he looked and saw train No. 63 passing at a speed of about 3 or 4 miles per hour but did not realize that it was running away, as he thought that sufficient time had elapsed for the engine to return to the train although he had not noticed it do so. A very short time later the collision occurred. As the train passed him he did not notice whether the brakes were set.

Discussion

Rule 305, "Rules for the operation and supervision of air brakes *** etc.," issued by the N.Y.C.& St.L. R.R. Nov. 22, 1935, reads in part as follows:

> "When it is necessary to part a train for any cause, brakes must be left applied on the rear of train.***"

It is noted that this rule is applicable at all times regardless of gradient, but no method is prescribed regarding the manner in which the brake is to be set, nor is responsibility placed on any particular member of the crew for doing so. Brakeman Carlson admitted that he took no note as to whether the brakes were set before separating the train, depending upon the engineman's having used the train brakes in making the stop to accomplish this. Engineman Griffith stated that he made two stops east of the C.& A. crossing, one at or near the stop board by the use of the train brake, and the second stop with the head end of the engine on the C.& A. crossing in which the engine brake only was used until the stop was almost complete, at which time he made a 10-pound reduction of the train brake pipe for the purpose of setting the train brake in accordance with the requirements of rule 305. He stated, however, that since the pop valve of the engine was open and the stoker was working when this final brake pipe reduction was made he was unable to hear the brake pipe exhaust, but by watching the large air gauge he knew that the reduction required at least 15 seconds. His opinion as to the cause of the runaway was that no reduction of brake pipe pressure had occurred on the rear of the train, due to the angle cock having been closed before the application of the train brakes had been effected. The testimony of Engineman Griffith that two stops were made east of the C.& A. crossing is at variance with the testimony of other witnesses and his statement that 15 seconds were required to obtain a 10 pound reduction in brake pipe pressure does not harmonize with his opinion concerning the cause of the runaway.

Dependence upon air brakes to hold detached portions of trains on grades is at best a hazardous method, especially when a full service or emergency application of the brakes is not made.

Rule 101A book of transportation rules reads:

> "When an engine leaves a portion of its train on the main track, the portion left must be protected against the returning engine. At night, or when weather conditions require, torpedoes must be used; in addition, on single track, a red light, and on two or more tracks, a white light must be displayed on the head car."

The requirements of this rule were entirely ignored by the crew of train No. 63, and it is reasonable to believe that had the rule been complied with, the runaway portion of the train would have been observed in time to permit Engine 821 to be moved clear of the fouling point of the switch.

Conclusion

This accident was caused by failure to set brakes on the detached portion of a train left standing on a grade.

Recommendation

A rule requiring the use of hand brakes for the purpose of holding detached portions of trains on grades should be put into effect.

Respectfully submitted,

W. J. PATTERSON,

Director.