

Inv-2390

INTERSTATE COMMERCE COMMISSION  
WASHINGTON

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REPORT OF THE DIRECTOR  
BUREAU OF SAFETY

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ACCIDENT ON THE  
INDIANA HARBOR BELT RAILROAD

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ALCO, INDIANA

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OCTOBER 30, 1939

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INVESTIGATION NO. 2390

SUMMARY

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Inv-2390

Railroad: Indiana Harbor Belt  
Date: October 30, 1930  
Location: Alco, Indiana  
Kind of accident: Head-end collision  
Trains involved: Freight : Freight  
Train numbers: Extra 2934 West : Extra 2784 East  
Engine numbers: 2984 : 2784  
Consist: 111 cars and : 39 cars and  
caboose caboose  
Speed: 1-2 m. p. h. : 10 m. p. h.  
Operation: Timetable and train orders  
Track: Single; tangent; 0.10 percent  
ascending grade for east-bound  
trains  
Weather: Clear  
Time: 6:40 p. m.  
Casualties: 5 injured  
Cause: Failure to obey meet order

January 4, 1940.

To the Commission:

On October 30, 1939, there was a head-end collision between two New York Central Railroad freight trains on the line of the Indiana Harbor Belt Railroad at Alco, Indiana, which resulted in the injury of three employees. This accident was investigated in conjunction with a representative of the Public Service Commission of Indiana.

#### Location and Method of Operation

This accident occurred on the Gary Branch which extends between Gibson and FN telegraph office, Dune Park, Indiana, a distance of 16.93 miles. In the vicinity of the point of accident this is a single-track line over which trains are operated by timetable and train orders; there is no block system in use. The accident occurred on the main track, on bridge 8.05, at a point 667 feet east of the west switch of the siding which parallels the main track on the north and is 4,815 feet in length.

Approaching the point of accident from the west there is a 1°40' curve to the left 4,284 feet long, which is followed by a tangent extending 184 feet to the point of accident and 744 feet beyond. Approaching the point of accident from the east there are, successively, a 1°46' curve to the left 2,330 feet long, a tangent 303 feet long, a 1°48' curve to the left 693 feet long, a tangent 178 feet long, a 2° curve to the left 513 feet long, and the tangent on which the accident occurred. The grade for east-bound trains is 0.10 percent ascending a distance of 1,550 feet to the point of accident and 50 feet beyond to the apex; the grade for west-bound trains is 0.25 percent ascending a distance of 1,400 feet to the apex.

The track is laid on a fill varying in height from 20 feet to 25 feet and extending a distance of 3/4 mile in each direction from the point of accident.

Rules for the Government of the Operating Department read in whole or in part as follows:

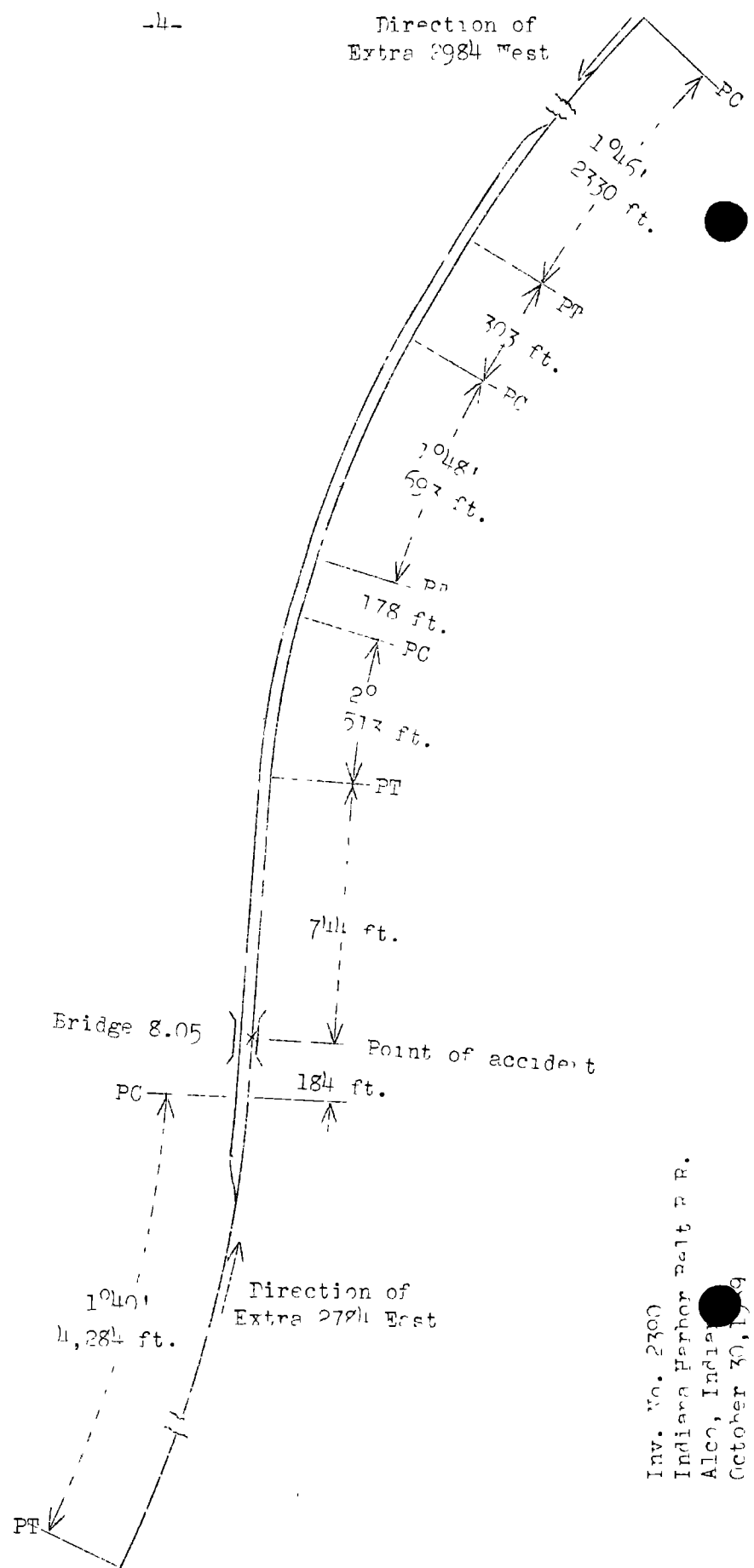
#### Rule S-88:

\* \* \*

At meeting points between extra trains, the train in the inferior time-table direction must take the siding unless otherwise provided.

\* \* \*

o	FN, Dure Park, Ind.	
		9.03 mi.
x	Point of accident	
o	Alco	
		1.2 mi.
o	Garv	
		4.5 mi.
o	Ivanhoe	
		2.2 mi.
o	Gibson, Ind.	



Inv. No. 2300  
 Indiana Harbor Belt F.R.  
 Alco, Ind.  
 October 30, 1929

Rule 211:

\* \* \*

Enginemen must show train orders to firemen and when practicable to forward trainmen. \* \* \*

Rule 211a:

Clearance Form A must be received by conductors and enginemen with train orders and must not be delivered by operators until trains are to be released.

An instruction in the timetable reads as follows:

On single track, westward trains are superior to trains of the same class in the opposite direction, unless otherwise specified.

An instruction on Clearance Form A reads:

Conductors and Enginemen will see that their train number is correctly designated and the order numbers in the above form correspond with the order numbers delivered.

The maximum authorized speed for freight trains is 40 miles per hour.

The weather was clear at the time of the accident, which occurred at 6:40 p. m.

#### Description

Extra 2984, a west-bound freight train, consisted of 111 cars and a caboosc, hauled by engine 2984, and was in charge of Conductor Garman and Engineman Davidson. At FN telegraph office, 9.03 miles east of Alco, the crew received order No. 19, Form 19, reading:

Eng. 2984 run extra FN to Ivanhoe Meet  
extra 2784 east at Alco.

This train departed from FN telegraph office at 6:22 p. m., according to the train sheet, and while moving at a speed of 1 or 2 miles per hour preparing to stop on the main track clear of the west switch of Alco siding, collided with Extra 2784.

Extra 2784, an east-bound freight train, consisted of 59 cars and a caboosc, hauled by engine 2784, and was in charge of Conductor Johnson and Engineman Webber. This train entered the

Gary Branch at Gibson, 7.9 miles west of Alco, at 6:27 p. m., passed Ivanhoe, 5.7 miles west of Alco and the last open train-order office, at 6:31 p. m., according to the train sheet, at which point the operator delivered to the crew a Clearance Form A which stated that he had orders Nos. 19, 20, and 21 for Extra 2734 East. Order No. 19 read the same as previously quoted. This train proceeded and passed the west siding-switch at Alco, where it was required to take siding, and, while moving at a speed estimated at 10 miles per hour, collided with Extra 2984.

Both engines were slightly damaged but were not derailed. The first car of Extra 2984 was slightly damaged, the second was demolished, the third was derailed, knocked off center and badly damaged; the fourth, ninety-second, ninety-third and ninety-fourth cars were slightly damaged and the one-hundred-eleventh car was knocked off center. The fourth car of Extra 2734 was derailed and the coupler on the fifth car was broken. The employees injured were the conductor and the swing brakeman of Extra 2984 and the engineman of Extra 2734.

#### Summary of Evidence

Engineman Webber, of Extra 2984, stated that a terminal air-brake test was made at Blue Island, 17.3 miles west of Alco, and the brakes functioned properly en route. When passing Ivanhoe he received a Clearance Form A and orders for his train; he removed the orders from the loop of cord with which they had been held in the delivery device and, without checking the clearance form, read orders Nos. 20 and 21, the only orders he saw at this time, which he passed to the front brakeman and the fireman, who read them. He was not certain whether the clearance form was with the orders when he passed them to the other employees on the engine. Approaching Alco at a speed of about 40 miles per hour, on being informed by the fireman that smoke was visible in the vicinity of the west switch of the siding, he made a brake-pipe reduction of about 10 pounds. Soon afterward the fireman saw the opposing train and called for an emergency application of the brakes, which was made immediately but too late to avert the collision. The speed at the time of the impact was about 10 miles per hour. After the accident, Engineman Webber had the clearance form and orders Nos. 20 and 21 in his possession, and when informed that order No. 19 was found on the deck of his engine he was unable to account for the oversight; he stated that he might have dropped it when he removed the orders from the cord and unrolled them. He was not aware of the opposing train until the fireman warned him of its presence. On account of track curvature his view of the opposing train was limited to about 10 car lengths and the fireman's view was limited to about 30 car lengths. He said that in the

vicinity of the point of accident it was somewhat smoky. He was familiar with the rule which requires that clearance forms be checked with orders delivered and said that the accident resulted from his failure to check the orders with the clearance card.

Fireman McIntyre, of Extra 2784, stated that he saw Engineman Webber receive orders at Ivanhoe, which the engineman read and handed to the brakeman. The brakeman read and handed to Fireman McIntyre copies of orders Nos. 20 and 21, which the latter read and returned to the brakeman, who in turn handed them to the engineman. He did not see the clearance form until after the accident, at which time he noted that orders Nos. 19, 20, and 21 were indicated for delivery. Soon afterward he looked around on the right side of the engine and found order No. 19 on the deck. He did not ask to see the clearance form when it was not with the orders received from the brakeman, although he was familiar with the rule requiring that the clearance form be checked with the orders.

Front Brakeman Bacon, of Extra 2784, stated that orders were received at Ivanhoe, and the engineman handed him copies of two orders, which he identified later as orders Nos. 20 and 21. He was familiar with the rule which requires that clearance forms and orders be checked but he did not ask for the clearance form when the engineman failed to hand it to him with the orders. "It takes a lot of nerve for a brakeman to pry a clearance card from the engineer," he said.

Conductor Johnson, of Extra 2784, stated that at Ivanhoe he received a Clearance Form A, which indicated that orders Nos. 19, 20, and 21 were for his train. He read and understood the provisions of these three orders and then became engaged with duties in the caboose. Feeling an application of the air brakes he checked the location of his train and assumed that the engineman was stopping to enter the siding at Alco, when two severe shocks and an abrupt stop caused Conductor Johnson to believe something was wrong. He went to the front end and found that his train had collided with Extra 2984. Checking his engineman's clearance form, he found that the order numbers, 19, 20, and 21, were legibly entered upon it, but the engineman said that he had received only orders Nos. 20 and 21 at Ivanhoe. The engineman offered no explanation as to why he had passed Ivanhoe with only two orders when three were indicated on the clearance form. Engineman Webber appeared normal at all times. Conductor Johnson said that the visibility was good although it was dark and it was sprinkling at the time of the accident, which occurred at 6:40 p. m.

The statement of Flagman Gushwa, of Extra 2784, corroborated the statement of Conductor Johnson in all essential details.

Engineman Davidson, of Extra 2984, stated that he received order No. 19 at FN telegraph office and understood its provisions. He was able to see the headlight of Extra 2784 soon after it passed Gary, 1.2 miles distant, and watched it approach; however, he could not estimate the speed of that train. He was approaching the west switch of Alco siding, preparing to stop within the next 50 feet, and when it became evident that Extra 2784 would not stop west of the switch he applied the brake and got off. He said that the weather was clear and the visibility was good. The accident occurred about 6:40 p. m.

The statements of Fireman Rodwich, Front Brakeman Wolfe, Swing Brakeman Holmes, and Flagman Smith, of Extra 2984 added nothing of importance.

Conductor Garman, of Extra 2984, stated that at FN telegraph office he received a copy of order No. 19, which established a meeting point with Extra 2784 at Alco, and understood Extra 2784 was to take siding at that point.

Operator Gordano, at Ivanhoe, stated that he received three orders for Extra 2784 East, and at 6:35 p. m. he prepared a Clearance Form A, upon which he indicated that orders Nos. 19, 20, and 21 were for delivery. He placed and folded the orders and clearance form, a set each for the engine crew and the train crew, in such manner that the clearance form was inside the fold with order No. 19 next to it and securely fastened them to a loop of cord, which he placed in the high-speed delivery device. He saw the engineman of Extra 2784 take the orders and was certain that the orders and clearance were folded and secured in such manner as to make it impossible for the engineman to receive one without receiving all of them.

According to data furnished by the railroad, during the 30-day period preceding the day of the accident there were 298 east-bound and 269 west-bound freight trains operated on the line involved, the average daily movement being 18.9 trains; there are no passenger trains operated on this line.

#### Observations of the Commission's Inspectors

The Commission's inspectors observed that the view of the point of accident from the engineman's side of an east-bound engine was restricted on account of track curvature to about 600 feet; the view from the fireman's side was about 5/4 mile. The view of the point of accident from the engineman's side of



a west-bound engine was limited to about 1,300 feet, and from the fireman's side to about 3/4 mile.

#### Discussion

According to the evidence, the crew of Extra 2984 received order No. 19, which was issued in the prescribed form. They understood that a meeting point with Extra 2784 was established at Alco, and that Extra 2784 was required to take siding. Extra 2984 was stopping on the main track east of the west siding-switch when the accident occurred.

The operator at Ivanhoe delivered orders Nos. 19, 20, and 21, and Clearance Form A, placed and folded in such manner that the clearance form was inside the fold with order No. 19 next to it, to Extra 2784 East; there was one set for the engineman and another for the conductor. The operator secured the two sets of orders and clearance forms within loops of cord, which he placed in the delivery device, from which one full set was removed by the engine crew and one by the train crew. The engineman read orders Nos. 20 and 21, the only orders he thought he received at Ivanhoe but did not check the clearance form. The engineman handed the fireman and the front brakeman copies of orders Nos. 20 and 21, but not the clearance form. The employees on engine 2784 understood the rule which requires each to compare the clearance form with the orders delivered, but none of them did so and in consequence the existence of order No. 19, which provided that the two trains involved meet at Alco, was unknown to them. After the accident the fireman found order No. 19 on the deck of the engine; orders Nos. 20 and 21 and the clearance form were in the engineman's possession. The numbers of orders 19, 20, and 21 were properly and legibly entered on the engineman's clearance form. The conductor and the flagman of Extra 2784 were aware of the provisions of order No. 19 and, being at the rear of the train, they assumed that the reduction of speed approaching Alco was preliminary to stopping at the proper siding-switch.

The engineman of Extra 2784 stated that his view of the point of accident was limited to a distance of 10 car lengths and the fireman's view of the point of accident was a distance of about 30 car lengths. The Commission's inspectors observed that the view of the point of accident could be had from the fireman's side of an east-bound engine a distance of about 3/4 mile.

Although the members of the crew on the engine of Extra 2784 failed to read order No. 19, and were unaware of the proximity of Extra 2984, it is probable that if some form of block system had been in use on this line this accident might have been averted.

Conclusion

This accident was caused by failure to obey a meet order.

Recommendation

It is recommended that officials of this railroad give consideration to the need for additional protection for train movements on this line, such as would be furnished by the block system.

Respectfully submitted,

S. N. MILLS

Director.