

## INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE  
INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE  
CLEVELAND, CINCINNATI, CHICAGO & ST. LOUIS RAILWAY,  
NEW YORK CENTRAL LINES, AT KANKAKEE, ILL., ON  
SEPTEMBER 30, 1931

November 4, 1931.

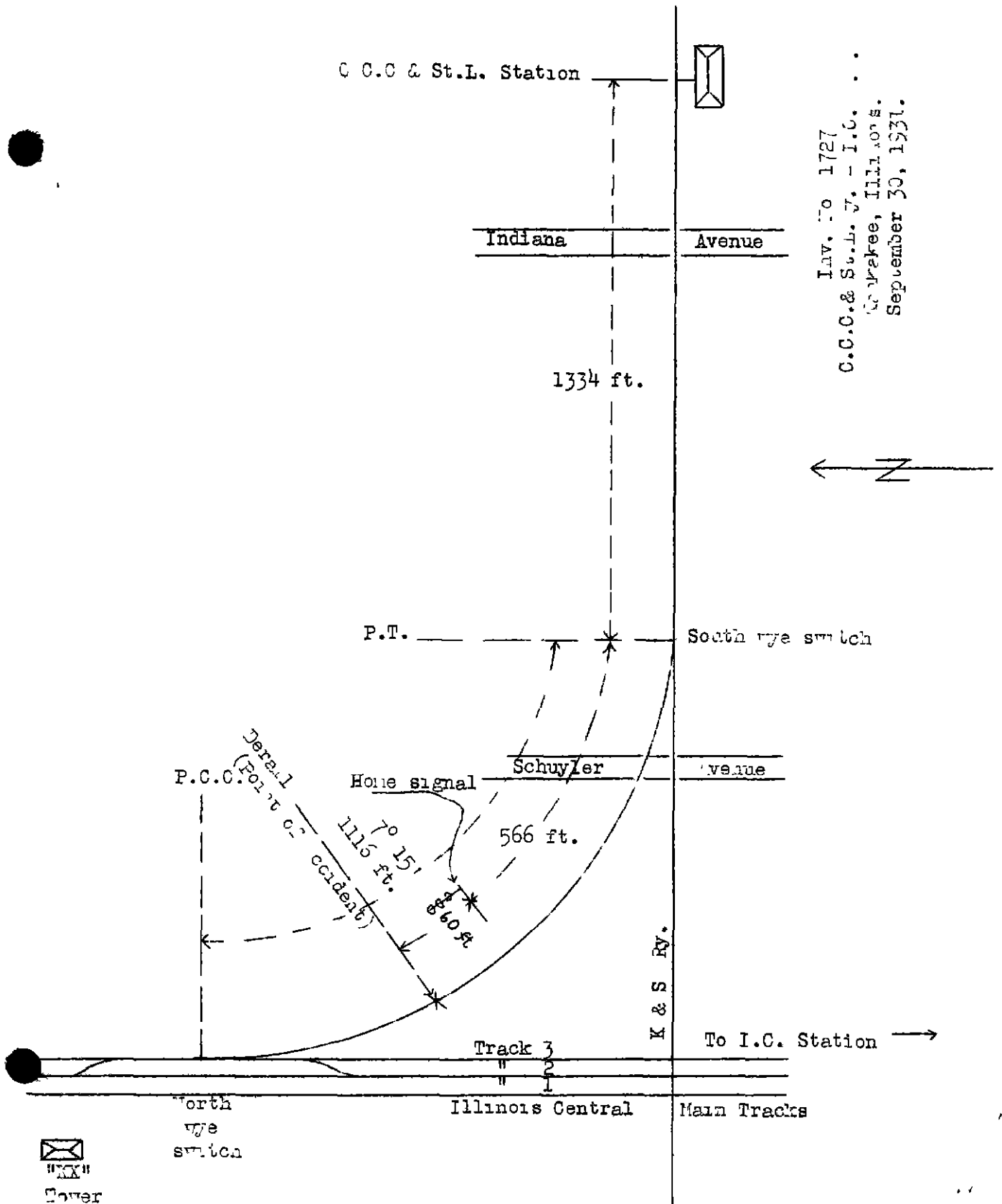
To the Commission:

On September 30, 1931, there was a derailment of a passenger train on the Cleveland, Cincinnati, Chicago & St. Louis Railway, New York Central Lines, at Kankakee, 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 Western Sub-Division of the Chicago-White Water Division, extending between Indianapolis, Ind., and Kankakee, Ill., a distance of 139.2 miles; in the immediate vicinity of the point of accident this is a single-track line, within yard and interlocking limits, over which trains are operated by time-table, train orders, special instructions, and the home signal of an interlocking plant. Kankakee is the western terminus of the Cleveland, Cincinnati, Chicago & St. Louis Railway, hereinafter referred to as the Big Four Railway, through trains beyond this point being diverted through what is known as the Big Four wye track to the tracks of the Illinois Central Railroad, over which they are operated into Chicago. The compass direction from the Big Four passenger station to the wye switch is due west, from which point the wye track curves sharply to the right to its junction with the Illinois Central Railroad, which runs north and south, the time-table direction of the train involved in this accident is westbound on the Big Four tracks and northbound on the Illinois Central tracks; for the purpose of this report the latter direction will be used in this report.

This accident occurred at a derail located 1,960 feet north of the Big Four passenger station, on the Big Four wye; approaching this derail from the south, beginning at the passenger station, there are 1,334 feet of tangent track followed by a compound curve to the right 1,116 feet in length, with a maximum curvature of  $8^{\circ}$ . The derail is located on this curve approximately 626 feet from the south switch, the curvature at that point being  $7^{\circ} 15'$ .



The grade for northbound trains is 0.31 per cent descending from the station to the point of accident. The track is laid with 105-pound rails, 39 feet in length, with an average of 24 ties to the rail-length, fully tie-plated, ballasted with washed gravel to a depth of from 6 to 8 inches, and is well maintained.

The use of the wye track north of the derail is governed by a home signal of the interlocking plant of the Illinois Central Railroad, operated from KX tower. This signal, which is of the 3-unit, color-light type, can first be seen from the cab of a northbound engine, over the top of a small garage and through the branches of some trees adjacent thereto, from a distance of about 506 feet, and an unobstructed view may be had from a distance of about 450 feet.

The weather was clear at the time of the accident, which occurred at 6.13 a. m.

#### Description

Big Four passenger train No. 35, operated over the Illinois Central Railroad from the junction at Kankakee to Chicago as northbound Illinois Central train No. 28, consisted of 1 mail car, 1 coach, and 6 Pullman sleeping cars, all of steel construction, hauled by Big Four engine 6525, and was in charge of Conductor Kennedy and Engineman Cahill; this was a Big Four train crew with an Illinois Central engine crew, the latter having taken charge of the engine at Kankakee. This train left the Big Four passenger station at Kankakee at 6.10 a.m., on time, entered the Big Four wye leading to the junction with the Illinois Central tracks, and was derailed at the derail while traveling at a speed estimated to have been between 8 and 10 miles per hour.

The engine and tender were derailed to the left and came to rest on their left sides, with the forward end of the engine 105 feet north of the point of the derail. The forward truck of the first car was derailed to the left on the fill, the rear truck remaining on the track. The engine was considerably damaged and the first car slightly damaged. The employee killed was the fireman and the employee injured was the engineman.

#### Summary of evidence

Engineman Cahill, of train No. 35, stated that he relieved the incoming engineman at the Big Four passenger

station at about 6.05 a.m., inspected and oiled the engine, made a terminal test of the air brakes, left at 6.10 a.m., on time, and made running test of the air while moving at a speed of approximately 15 miles per hour. During the time this latter test was being made, the engine passed the point in the track where the first view of the home signal could be had, and at that point he saw a yellow indication on the top unit of the home signal and called this indication to the fireman, who repeated it to him. After passing the trees and reaching a point where a clear view of the signal could have been had, his attention was diverted by the making of the running test and looking back along the train and he was not sure whether he again looked at the signal indication, being satisfied after seeing the yellow indication that the route was lined up for his train and could not be changed. At that time he did not think he could be mistaken about the signal indication but later he said that he might have been. His first intimation of danger was when he noticed that the derail was open, at which time the engine was within a few feet of it, working steam, and he immediately applied the air brakes in emergency.

Brakeman Brown stated that he opened the rear trap door on the right side of the day coach when the running air-brake test was being made, and observed the home signal over the top of the small garage; the middle unit showed a yellow indication and the top and bottom units displayed red indications. He did not observe the signals again. Brakeman Brown saw Engineman Cahill look back toward the rear of the train after the running air-brake test and raise his hand, and the brakeman then gave him an OK signal. He could not estimate the speed of the train at the time of the accident, but he did not believe that it exceeded 12 miles per hour at any point.

The statements of Conductor Kennedy and Baggage man McNutt, brought out nothing additional of importance. The conductor thought the speed of the train was about 10 miles per hour at the time of the accident, and the baggage man, who looked at his watch, stated that the accident occurred at 6.13 a.m.

Engineman Livingston, incoming engineman who was relieved by Engineman Cahill at the Kankakee passenger station, stated that the mechanical parts of the engine were all right and that the air brakes functioned properly at all times between Indianapolis and Kankakee, and that at 6 a.m., when the train arrived at Kankakee, it was broad daylight and the visibility was good.

Big Four Yard Conductor Tewksbury, off duty at the time, stated that he was at the passenger station in an automobile, leaving there about five minutes before train No. 35 pulled out. He drove his car to a service station for gas and then continued on across the Big Four tracks at Schuyler Ave., about 350 feet south of the derail. He saw train No. 35 approaching in the vicinity of Indiana Ave., which is between the station and the wye-track switch, and also noticed a red indication on all three units of the northbound home signal on the Big Four wye. Conductor Tewksbury said he drives over this crossing three or four times a day, and, for his own safety, observes the signal on the wye track, and on this occasion he was positive that all units of the signal were showing red indications.

I. C. Operator-leverman Kepley, on duty at KX tower, stated that Big Four train No. 35 and I.C. train No. 10 are due out of their respective passenger stations at the same time, and he has standing instructions to give precedence to the train that arrives first, if both are of the same class. On the morning of the accident he was watching both trains and when I.C. train No. 10 started from the station first, he lined the route for it to move from track 2 to track 3 and gave it the signal, and after this move it would have been impossible to give a signal indication for a Big Four train to move northbound through the wye to track 3. The last train using the wye track prior to the derailment passed at about 4.12 a.m. and he then restored the signal indication to normal and opened the derail and did not change it again. He was unable to estimate the speed of train No. 35 coming around the wye but noticed that it was coming faster than usual and it appeared to him that the engineman worked steam all the way to the derail. He was pretty sure about this because he had been watching them approaching Schuyler Ave. and noted that they were not coasting along, as they usually did looking for the signal. He estimated that with the route lined for a Big Four movement through the wye, it would take a minute and a half to change the line-up so as to allow a north-bound movement from I.C. track 2 to track 3; this would include 50 seconds necessary to run the time release. As near as he could remember, the engine of train No. 10 was on track 3, crossing over from track 2, when the engine of train No. 35 turned over, and he fixed the time of the accident as 6.13 a.m.

Chief Signal Inspector Buttridge, of the I.C. R.R., stated that he arrived at the scene of the accident about 7.30 a.m. and made an inspection of the track and the interlocking plant. He found that all three lights of the home

signal were showing red, with the derail in normal or derailing position, and that the wires in the trunking had been cut into and damaged due to the accident. He then went to the tower and examined the machine and seals. The switch seals were broken and the signal maintainer informed him that it had been necessary to break them in order to move trains, due to the track circuit being damaged on account of the accident. Assuming that train No. 35 had a yellow indication on the top or middle unit of the signal in question and that the operator wished to restore the line-up to normal and open the derail, he said the operation would take approximately one minute and that train No. 35 could not receive a yellow indication on the top unit of this signal and at the same time find the derail open, provided he had kept moving at a speed of 10 miles per hour or faster after first viewing the signal from a point 500 feet away. He further stated that with a northbound train on the circuit of the plant north of the home signal on the I.C. main track as was the case with I.C. train No. 10, and with a line-up to cross from track 2 to track 3, and with train No. 35 on the wye at Schuyler Ave., it would have been impossible for the operator to have given train No. 35 a yellow indication on the top or middle unit unless he had "plugged" the machine, and in order to do this it would have taken time and the seals would have to be broken, and his inspection showed that the plant had not been tampered with in any way. He also stated that it is not possible to display a high yellow indication on the home signal of the Big Four wye and a green indication in the middle unit of the home signal over track 2 on the I.C. main line, for a movement from track 2 to track 3, at the same time. When he made his inspection, nothing had been disturbed that would interfere with his forming a conclusion as to the cause of the accident, and as a result of his inspection he satisfied himself that the accident was caused by train No. 35 running through the derail in derailing position.

I. C. Signal Maintainer Lyons stated that he arrived at the scene of the accident at about 6.20 a.m., and immediately inspected the plant and interlocking machine. None of the seals was broken, but on account of the derailment certain electrical connections were damaged, interfering with the proper functioning of some of the interlocking features of the plant, and in order to permit trains to operate over the crossovers and main tracks of the I.C. R.R. he broke some of the seals on the machine. He broke them about 6.30 a.m. and it was his opinion they had been on the machine about a month. He further stated that if I.C. train No. 10 had a green indication on the middle

unit of the home signal over track 2, to permit a cross-over movement from track 2 to track 3, it would have been impossible for the operator at the same time to have given a high yellow indication on the home signal located on the Big Four wye for the movement of train No. 35.

Engineman Burns, of I.C. train No. 10, stated that he pulled out of the I.C. passenger station at 6.10 a.m. and that the visibility was good. Approaching the home signal on the Illinois Central tracks, he received a green indication on the middle unit of the northbound signal over track 2 when his engine had reached a point between 300 and 500 feet in advance of that signal, indicating that the route was lined for him to cross from track 2 to track 3. He estimated the speed of his train at 15 miles per hour and said he had reached a point very near the K. & S. crossing, or beyond the home signal governing his own train, when he observed train No. 35 moving very slowly on the Big Four wye and while he was watching it the engine seemed to hesitate and then turned over on its left side. He applied the brakes on his train, stopped, went to the I.C. roundhouse and notified them of the accident.

I. C. Train Dispatcher Dougan, on duty at the time of the accident, corroborated the statement of Operator Kepley covering instructions issued concerning the movement of trains through the plant in the order of their approach, if of the same class. Dispatcher Dougan also said that the normal movement of train No. 10 was via track 3, while train No. 35 normally moved from the wye to track 3 and thence to track 2, on which latter track it proceeded toward Chicago.

Big Four Road Foreman of Engines McHenry stated that he inspected engine 6525 at 10.55 a.m. as it lay turned over on the fill and found the independent brake valve in running position, the automatic brake valve in the emergency position, the reverse lever in 50% cut off, and the throttle one inch and three-quarters open in the quadrant. He said that he had noticed in looking at a red signal which is out of focus, that it has a yellow appearance and in looking at the red signal indications of the home signal on the Big Four wye, while standing on the ground south of this signal and looking through the trees, the high red signal indication appeared to him to be a sort of a dirty yellow. This observation was made subsequent to the accident.

### Conclusions

This accident was caused by the failure of Engineman Cahill, of train No. 35, properly to observe and obey signal indications.

The evidence is conclusive that the route through the interlocking plant was lined up for the movement of north-bound I.C. train No. 10 via track 2 to track 3, this being the normal movement for that train. The normal movement for Big Four train No. 35 was through the Big Four wye, connecting at its northern end with I.C. track 3 and thence to track 2, and the evidence is also conclusive that this route was not lined for this train and that the signals so indicated, all three units of the home signal on the wye track displaying red lights. These were the usual movements of these trains through the interlocking plant each morning, with the exception that about half the time train No. 35 would arrive and pass through the plant first, and under these circumstances there was nothing unusual or confusing with respect to the movement of train No. 35 on the morning of the accident. Engineman Cahill had been on this run several years and was thoroughly familiar with the location of the signals, derail, and method of operation; on the morning of the accident, however, he looked through the branches of some trees, thought he saw a yellow signal indication on the top unit of the home signal, and did not again look at the signal when it came within plain view at a distance of about 450 feet. This would have been a sufficient distance to enable him to stop the train before reaching the derail had he been paying proper attention to signal indications.

While Engineman Cahill could have had a clear view of the home signal at a distance sufficient to enable him to stop his train, the investigation developed a situation which would seem to be in need of correction. As previously stated, the first view of the signal is had through the branches of trees and over the roof of a garage, and it was at this point that Engineman Cahill thought he saw a yellow indication displayed on the top unit of the signal; Brake-man Brown from approximately the same position thought he saw a yellow indication on the middle unit, while Road Foreman of Engines McHenry, standing on the ground subsequent to the accident and looking through the trees, said the red indication of the top unit seemed to have a dirty yellow color. The Commission's inspectors, making observations under light conditions similar to those prevailing at the time of the accident, found that the red light displayed by the top unit, when observed from the approximate



location indicated by Engineman Cahill in his statement, was dim and its color difficult to determine. It is appreciated that movements around this wye track are essentially slow-speed movements, but on the other hand, it is believed that such changes should be made as will make it certain that the indications displayed by this home signal can be observed clearly and correctly.

All of the employees involved were experienced men, and at the time of the accident 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.