INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY CONCERNING AN ACCIDENT ON THE CHICAGO RIVER & INDIANA RAILROAD AT CHICAGO, ILL., ON MAY 19, 1934

July 3, 1934.

To the Commission:

On May 19, 1934, there was a derailment of a yard engine and a cut of freight cars on the Chicago River & Indiana Railroad at Chicago, Ill., which resulted in the death of 2 employees and the injury of 2 employees. The investigation of this accident was made in conjunction with a representative of the Illinois Commerce Commission.

Location and method of operation

The Chicago River & Indiana Railroad is a switching line; movements are made under yard rules and special instructions, no time table, train orders, or block signals being in use. The yard within which this accident occurred is in the Ashland Avenue District; there are five running tracks extending east and west through approximately the center of the yard, these tracks being designated from north to south as lead track 1, tracks 2, 3, and 4, and lead track 5. Lead track 5 on which the accident occurred, is used by trains, cars or engines of various railroads moving in both directions in entering or leaving the stock yards. This track is tangent for practically its entire length of approximately 2,800 feet, the accident occurring at a point near the center of this tangent. The grade is level at the point of accident.

The track is laid with 105-pound rails, 33 feet in length, with 20 ties to the rail length, and is ballasted with cinders to a depth of about 3 feet.

Special instructions require all trains and engines to move at restricted speed prepared to stop short of train, obstruction, or anything that may require the speed of the train to be reduced.

The weather was clear and hot, with a temperature of 92° at the time of the accident, which occurred about 12:35 p.m.

Description

Engine 360, eastbound, with a caboose and 21 cars, in the order given, was in charge of Conductor Bell and Engineman Thompson. This train entered the western end of lead track 5 and had proceeded about half way through the yard when it was

derailed while traveling at a speed estimated to have been about 15 miles per hour.

The engine was derailed to the left and stopped on its left side, while the tender remained coupled to the engine, leaning at an angle of about 45°. The caboose and the first five cars also were derailed, the caboose being demolished. The employees killed were the engineman and fireman, and those injured were the conductor and a brakeman who were in the caboose.

Summary of evidence

Conductor Bell stated that they first picked up 4 cars at the potato terminal at Wood Street, about 3½ miles from the point of accident, and then proceeded to the produce terminal where 17 additional cars were picked up. They then entered lead track 5 of the Ashland Avenue yard at a speed of about 20 miles per hour, but soon after entering that track the speed was reduced as a stop was to be made at the east end of the yard to pick up other cars. Conductor Bell and the two brakemen were in the caboose next to the engine and when the train was about half way through the yard he felt from the jar of the caboose that the engine was derailed and then the caboose started bouncing on the ties, traveling some distance before it tipped over; he also heard the air brakes applied in emergency just as the engine left the track. The air had been cut in on the train but he was unable to say if the brakes on all the cars were operative. Conductor Bell's injuries were such that he was unable to inspect the track after the accident.

Head Brakeman Wilkins and Rear Brakeman Barrett estimated the speed to have been about 15 miles per hour at the time of the accident. Brakeman Barrett stated that he coupled up the air at Wood Street and that the brakes worked properly when various stops were made en route, while Brakeman Wilkins said the only test made of the brakes was when stops were made en route.

Section Foreman Kaboj stated that on the morning of the accident he and his men were engaged in putting in new ties on lead track 5, flag protection being provided while the work was being done. A total of 38 new ties had been placed in the track, 2 or 3 being placed together at each point; 32 of these were west of the point of derailment and 6 were east thereof, and some of the ties had been left unspiked when his men went to lunch, during which period no protection was provided. There were some tight rail joints, due to the hot weather, and also some decayed ties, but he said the track was in good condition and when he went to lunch he considered it safe for a speed of

20 miles per hour; however, he did not think it was safe for 35 miles per hour. The accident occurred while he was away for lunch; when he returned he observed that the engine had stopped about five rail lengths beyond the first mark of derailment, this mark being about 1 foot east of a joint in the south rail. The condition of the track indicated that the rails had been pushed out of line, and he thought this was due to the weight of the engine together with the hot weather. Section Foreman Kaboj stated that he had been working in that vicinity during the past 10 days and had noticed this particular engine running through the yard at a high rate of speed, about 35 miles per hour, and he expressed the opinion that the speed must have been about 35 miles per hour at the time of the accident.

Assistant Roadmaster Nolan stated that he arrived at the scene of the accident about 30 minutes after its occurrence. A check of the ties for a distance of about 120 feet, within which distance there were 75 ties, showed that 36 of these ties were not spiked; the first mark of derailment was on the first of 4 consecutive unspiked ties; this mark was about 8 inches from the gauge side of the south or right rail, and from this point eastward the north rail was badly twisted. The only other point at which there were 4 consecutive unspiked ties was about 54 ties farther west. Roadmaster Nolan was of the opinion that the heat caused a kink in the rail, which combined with a slight excess in speed, resulted in the derailment, but after the accident the rails were too badly bent for this fact to be positively determined. He also stated that the track was soft, due to the removal of ballast and subsequent refilling, and the further fact that it had been necessary to dig deeper than the bed of the old ties in order to place the new ties, but while the ballast still was loose, he did not think it justified a slow order, and he did not think that the existence of the unspiked ties had any bearing on the cause of the accident.

Road Foreman of Engines Byrne stated that he inspected the engine and tender before they were moved, and found the flanges in good condition and the brake rigging intact; the throttle was closed. It was his opinion that the accident was caused by spread track, which allowed a driving wheel to drop down on the inside of the rail. He further stated that he had never seen engines operated over this railroad at a speed of 35 miles per hour. General Foreman Wray also inspected the engine after the accident but did not find any defects that could have caused the accident.

Engine 360 is of the 0-8-0 type with a total weight on the driving wheels of 223,500 pounds and a total weight of engine and tender in working order of 417,300 pounds. The driving wheel base is 15 feet and the total length of engine and tender is 71 feet, 6 1/8 inches. Inspection of the engine by the Commission's inspectors reveal evidence of the left no. 4 driving wheel having dropped inside the rail, there being very pronounced marks on the side of the tire extending the full circumference of the wheel; similar marks, but not so pronounced, appeared on the side of the left no. 1 tire, but the other two driving wheel tires on the left side were only slightly marked. At the time of the inspectors' examination of the track, repairs had been made and very little evidence remained, but on either side of the point of derailment the track was in good condition.

Conclusions

It is believed that this accident was caused by insecure track.

On the morning of the accident the section gang had been renewing ties; the section foreman said he had put in 38 ties, some of which had been left unspiked while he and his men went to lunch, but about 30 minutes after the accident the assistant roadmaster found 36 ties not spiked out of a total of 75 successive ties. In addition, the track had been materially weakened by the removal and refilling of ballast where the ties had been renewed, and this fact, coupled with the failure of the section foreman to spike the ties, is believed to be adequate to account for the occurrence of the accident. Flag protection had been provided while the men were at work, being removed during the lunch period; in view of the uncompleted condition of the work this track should not have been left unprotected.

While the train involved in this accident had made several stops without difficulty, no air-brake test had been made and none of the surviving members of the crew had any knowledge concerning the number of operative brakes in the train, which had moved a distance of more than 2 miles, in congested territory and over crossings of other railroads. The officials stated that these trains were required to have air, and steps should be taken to see that this requirement is enforced and obeyed.

Respectfully submitted,

W. J. PATTERSON,

Director.