

In re Investigation of an accident which occurred
on the Chicago, Rock Island & Pacific Railway
at Peoria, Ill., July 17, 1917.

August 13, 1917.

On July 17, 1917, there was a collision at Peoria, Ill., on the Chicago, Rock Island & Pacific Railway, between a passenger train and a yard engine, resulting in the death of 2 employees and injuries to one passenger and to two employees. After investigation of this accident, the Chief of the Division of Safety reports as follows:

The accident occurred in the Peoria yard, just west of Hayward St., about $1\frac{1}{2}$ miles east of the Rock Island Station. This part of the Chicago, Rock Island & Pacific Railway, known as the Bureau Branch, is a single track line from Bureau, Ill. to the junction with the Rock Island branch at Peoria, Ill., from which point it is double tracked to Peoria station, a distance of approximately three-fourths of a mile. The movement of trains is controlled by time table and train orders, no block system being in use.

Beginning at the "Yard Limit" board, at the west end of a curve, about $2\frac{1}{2}$ miles from the point of accident, a stretch of straight track extends for about 1000 feet, followed by a curve to the right. This curve is about 1500 feet long and there is a tangent about 5500 feet long to the next curve, also to the right, which is about 2000 feet long. From the end of this curve the track is a tangent to the point of accident, a distance of 1300 feet. The track at the point of accident was practically level.

The tracks through this territory actually extend in a north and south direction, approximately parallel to the Illinois River. Inbound trains, though really moving in a northwardly direction, are considered as west bound in the schedules, and outbound trains are east bound.

From the Water Works spur, which is at the west end of the curve near the yard limit board, there are 9 facing point and 5 trailing switches westbound, up to and including the "Ice House" switch, where the accident occurred. All of these except the "Ice House" switch have high switch stands, and, all the stands are provided with switch locks, but no further protection of the switches is provided. For west, or inbound trains, two of the facing point switches are right at the ends of curves and a third one is actually on a curve.

The low switch stand for the Ice House Track is on

the River side of the main track, which brings it on the fireman's side for westbound trains, and is 4' 3" from the gauge side of the main line track and 3' 9" from the siding. The tracks are 13' 8" centers. The track is laid with 80 and 85 lb. rails, about 18 oak ties per rail, with tieplates on a few ties. The ballast is cinders.

The trains involved in this accident were Yard Engine 1408, standing on a yard track known as "Ice House No. 1," on the river side of and adjacent to the main track, and regular westbound passenger train No. 201, scheduled to arrive at Peoria at 1:40 p. m.

Engine 1408 was in charge of Foreman Richardson and Engineman McCormick. This engine had gone into the side track, for lunch, about 12:55 p. m., coupled onto some freight cars standing there and shoved them ahead so that the tender of the engine stood about 2 ft. west of Hayward St. crossing, in which position it was struck by train 201.

Train 201, running from Chicago to Peoria, was drawn by locomotive 1020, and was in charge of Conductor Williams and Engineman Slater. It consisted of one combination car and two coaches of steel construction and a parlor car and dining car of wooden construction. This train left Mossville, the last reporting station, at 1:22 p. m., 4 minutes late and ran the 8-3/4 miles to the point of accident in 13 minutes, ran in on the open switch leading to the Ice House Track and collided with the yard engine about 1:35 p. m. After entering the switch the train ran about 450 feet to the point of collision and then shoved engine 1408, with the cars to which it was coupled, about 165 feet further into the siding. Previous to the accident the speed was variously estimated at from 20 to 40 miles per hour, but the damage done would indicate that the speed more nearly approached the higher limit. No orders were held by the crew of train 201 effecting its operation in this district. The weather was clear at the time of the accident.

The force of the impact lifted the front end of the combination car of train 201 from the forward truck and the car body was forced against the tank of its locomotive, breaking it loose and shoving it against the boiler head. Engine 1408 was forced ahead into a box car, to which it was coupled, completely demolishing the car, besides doing minor damage to several other cars. The head end of engine 1020 and rear of tank of engine 1408 were stove in. Neither engine, nor any of the cars, except the one demolished, were derailed. No cars of the passenger train other than the combination car were in any way damaged. Both the engineman and fireman of train 201 were killed in the accident.

Foreman Richardson, in charge of yard engine 1408, stated that about 12:30 p. m. he put some cars into Pottery Track No. 1, east of Hayward St., and then went west past the scene of the accident, to the round house to take water, leaving there on his return at 12:50 p. m. and headed in on Ice House Track No. 1 at 12:55 p. m. for lunch and to allow trains 202 and 201 to pass. He stood by the switch while one of his crew lined it up for the main track after the engine had gone into the siding, but was not sure whether it was locked or not after the movement. The crew then ate their lunch in the shade of cars standing on a siding on the city side of the main track, and not in view of the main track switch. When he had finished his lunch, at about 1:18 p. m., he left the others and walked west towards Hayward St., in order to check up cars west of where his engine was standing, which they were to switch after trains 202 and 201 had passed. As he walked towards Hayward St. he did not pass closer than 20 ft. to the Ice House Track Switch and could not see it on account of the cars standing between him and the main track, nor did he look back after he reached Hayward St. Foreman Richardson stated further that, in leaving his crew after lunch, he gave them no special instructions, nor did he caution them as to the trains due, as they knew about them and were experienced men. Engine 72 was in one of the Pottery tracks and Engine 1340 was on New Ice House Track, east of Hayward St., and almost opposite the Ice House Switch, when his engine went in for lunch. He did not see engine 1340 come out, but heard it moving about 10 minutes after 202 passed. He did not see the crew of 1340 handle the switch for that engine to come out onto the main track and none of his crew handled this switch after his engine first went in.

Switchman Sweeney, of engine 1408, corroborated the statements of Foreman Richardson as to their moves and stated that he threw and locked the switch for the main track after their engine had gone into the siding for lunch. He said he and Switchman Scott left 3 or 4 minutes after Richardson and walked west towards Hayward St., but they could not see the switch on account of cars on the side track between them and the main track. He is positive that neither he nor Scott went near the switch after eating lunch and that they understood that 201 was due before they could go out on the main line to switch the Ice House Tracks. He continued on west and was between Ice House Tracks 2 and 3 when the accident happened. Scott remained at the Hayward St. crossing.

Switchman Scott stated that he had been working in Peoria Yard since July 2nd and that he had been working as a switchman since 1900. He stated that he did not handle the Ice House Switch, but that he went into the siding with the engine

and coupled onto the cars, which were shoved ahead, so that the engine could stand clear of Hayward St. crossing. After lunch he walked to the crossing with Switchman Sweeney and was there at the time of the accident but did not go near the Ice House Switch, nor could he see it as he walked down, because of the cars on the siding between him and the main track. He said he understood about passenger trains 202 and 201 and knew about how they were running, and that his next work would be to uncouple the engine from the cars on track 1 and couple onto those on track 2 and for this move it was not necessary to throw the main track switch. He estimated the speed of 201 to be 35 to 40 miles per hour when he first saw the train as it entered the switch.

Engineman McCormick, of engine 1408, stated as to times and movements substantially the same as the members of the crew with his engine. He was not sure of the movements of the crew, but Switchman Scott was with him and the fireman near the Hayward St. crossing at the time of the collision. His estimate of the speed of train 201 was 20 miles per hour at the time the train passed into the open switch.

Foreman Kelly, in charge of engine 1340, stated that they went in for lunch at 12:40 p. m., standing on New Ice House Track, east of Hayward St. crossing. After train 202 had passed, he said they came out onto the main track and then went west over the Ice House Switch, Switchman Barton throwing the switch for the main line, and then getting on the pilot. He got on the engine as it went over Hayward St. and is positive that 1408 was still on the siding when they left at about 1:10 p. m.

Switchman Barton states that he handled the switch for engine 1340 to come out of the siding onto the main track after lunch, lined it up for the main track and thinks he locked it. After throwing the switch he got on the pilot beam, as the engine approached, and did not wait until it passed the switch. The rest of the crew got on at Hayward St.

Engineman Montgomery, of engine 1340, stated he was positive that the man who threw the switch to let him out onto the main track closed it for the main line and got on the pilot, and is certain he did not again throw the switch.

Switchman Smith, of engine 72, stated they had been working on Pottery Track No. 1 and that his engine was standing near Grant St., east of Hayward St., at the time of the accident. His engine went for water between 12:00 and 12:30 p. m., and on their return ran through Pottery Track No. 1 from the west end, it then being clear, so they did not use the Ice House Switch after engine 1408 used it. He was walking alongside the main

track by the Ice House switch and saw Switchman Barton throw the switch to let engine 1340 out onto the main track, engine 1408 being at that time on the side track. He estimated the speed of 201 as about 25 miles per hour when the train passed him near Grant St.

Crossing Watchman Sheppard, stationed at Hayward St., thought train 201 was running 20 or 30 miles per hour when they entered the open switch and had not slackened much when they went over his crossing. He first said that engine 1408 followed train 202 up from taking water and was not in there when 1340 came out; but, at a later hearing, he stated that he did not remember as to whether 1408 came ahead of 202 or not. As train 201 approached, he says he saw the engineer stand up and then reach for the lever. Switchman Scott had been at his shanty several minutes before the accident.

Yard Clerk Hall stated first that he rode up to Hayward St. from the yard office on engine 1408, and that it followed train 202, but, at a later investigation, he says he was mistaken, as they went ahead of 202. He stood by the Ice House Switch and saw Switchman Sweeney close and lock the switch when engine 1408 went in on that track. He carded cars on three tracks and was 7 or 8 car lengths west of the point of collision when it occurred.

Conductor Williams, of train 201, estimated the speed to be 25 miles per hour when they passed through the open switch and there was nothing then or previously that called his attention to any unusual speed. They left Mossville 3 minutes late but were on time at the time of the accident, as he had looked at his watch at Avery's, a short distance east of the point of collision, and saw they could make the station on time without exceeding the speed limit in the restricted zone, which they were just entering. He compared time with Engineman Slater at Bureau and handed him his orders and their clearance. At this time he says he saw no unauthorized person on the engine. His first knowledge of anything wrong was when he felt an emergency application of the air brakes, before the parlor car, in which he was riding, struck the switch. He saw no member of the crew of 1408 and examined the switch immediately after the accident, finding it set for the Ice House Track, but did not see any lock. He further states that the air was tried before leaving Bureau, that it worked all right on the trip and that he thinks a slight application was made a short distance east of the point of accident.

Brakeman Starr, of train 201, states he was in the baggage car at the time of the collision and estimated the speed to be 20 or 25 miles per hour. He noticed they were turning off from the main track and felt an application of the air, the speed

of the train being somewhat checked. After the accident he says he looked at the switch and found it open and unlocked, the lock lying nearby. He did not know of any unauthorized person riding on the engine.

Operator Smith, of Bureau, was riding on the engine of train 201, without authority, at the time of the accident. He was too badly injured to be present at the investigation. He told the coroner, however, who visited him at the hospital, that he did not see the open switch until close onto it and thinks the engineman saw it at the same time.

The accident was caused by an open switch. The investigation, however, failed to disclose how this switch came to be open.

This investigation clearly shows that the switch was in good condition and in perfect working order prior to and immediately after the accident. The fact that train 201 took the siding and passed entirely off the main track, without being derailed, shows beyond question that the switch was open and set for the Ice House track. The investigation further shows that Engine 1340 was the last to use the switch, and, as it went west over the switch, it must have been set for the main track for this move.

The distance traveled before stopping, and the damage done to the equipment, resulting from the collision, indicates that train 201 was running at a much higher rate of speed than that given by most of the witnesses and must have approximated the highest speed given by any of them.

The operating conditions through this region are distinctly unfavorable to safe operation at the speed permissible under the rules. There is no speed restriction at the point of the accident other than the general rule of 50 miles per hour on tangents and 45 on curves. There are 8 daily passenger trains scheduled over this piece of single track and in about $1\frac{1}{2}$ miles, east of the point of accident, as well as between that point and the station, there are a number of switches to industries, and the restricted track space makes it necessary for switching to be done on the main track. Switch engines are constantly at work, and, on the day of the accident, at least three were working in this immediate territory. To the danger of unprotected switches, there is added the hazard due to this switching on the main line.

The low switch stand in use on the Ice House Switch does not give adequate protection for a facing point switch which is as frequently used as is this and which is therefore in danger of being left open.

To provide protection for the safety of train movements through this territory, signals that would indicate the position of all main line switches to an approaching train, should be located far enough in the rear of them to enable a train to be brought to a stop before reaching them, should the signal indicate danger.

The speed limit of trains running through this territory should also be materially reduced.