

U. S. INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE
INVESTIGATION OF AN ACCIDENT WHICH OCCURRED AT THE
INTERSECTION OF THE TRACKS OF THE TEXAS & PACIFIC
RAILWAY AND THE TEXAS AND NEW ORLEANS RAILROAD,
SOUTHERN PACIFIC LINES, at AVONDALE, LA., ON DECEMBER
23, 1929.

Dept. of Transportation

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March 6, 1930.

To the Commission:

On December 23, 1929, there was a side collision between two passenger trains at the intersection of the Texas & Pacific Railway and the Texas and New Orleans Railroad, Southern Pacific Lines, at Avondale, La., which resulted in the death of one employee, and the injury of four passengers and three employees.

Location and method of operation.

In the vicinity of the point of accident the T & P Railway is a double-track line and the T & N O Railroad is a single-track line, these lines running parallel to each other, trains are operated over both roads by time-table, train orders, and automatic block-signal systems. There is a house track of the T & N O Railroad at Avondale which parallels the main track on the north and a branch line, known as the Incline Track, leads off the house track to the northeast and crosses the tracks of the T & P Railway at an angle of about 26°, train movements over the Incline Track are not governed by automatic signals. The accident occurred at the crossing of the Incline Track and the eastbound main track of the T & P Railway. The incline track switch is a facing-point switch for eastbound trains and is located 507 feet east of the station. There is a crossover 193 feet in length between the main track and the house track, the east switch of which is located 38 feet west of the Incline Track switch. A crossing warning sign and a stop sign are located along the T & P Railway, 2,037.6 and 117.6 feet, respectively, west of the crossing, and a stop sign is located on the south side of the Incline Track 80 feet west of the crossing. All trains are required to come to a stop before proceeding over the crossing.

Approaching the point of accident from the west on the T & N O Railroad the track is tangent for a distance of 3,333 feet to the crossover east of the station, and from the crossover the house track is tangent to the Incline Track switch. Beginning at this switch

the track curves to the left for a distance of 985 feet, the accident occurring on this curve at a point 344 feet from its western end. Approaching from the west on the T & P Railway there is a 0°58' curve to the left 1,141.4 feet in length, from which point the track is tangent to the crossing, a distance of 3,871.7 feet. The grade is practically level and the view is unobstructed.

The weather was clear at the time of the accident, which occurred at about 8.15 a.m.

Description.

Eastbound T & N O passenger train No. 12 consisted of three baggage and express cars, three coaches, one chair car and three Pullman sleeping cars, in the order named, hauled by engine 500, and was in charge of Conductor Svartzenbach and Engineman Foster. This train arrived at Avondale at 8.10 a.m., 3 hours late, and after making a station stop it started ahead, entered upon the Incline Track and while crossing the tracks of the T & P Railway at an estimated speed of from 2 to 6 miles per hour it was struck by T & P train No. 22.

Eastbound T & P passenger train No. 22 consisted of one mail and baggage car, one baggage car, three coaches, three Pullman sleeping cars and one dining car, hauled by engine 414, and was in charge of Conductor Smith and Engineman King. This train passed Luling, 10.7 miles west of Avondale, at 8.01 a.m. 1 hour and 43 minutes late, passed Avondale without stopping and collided with the engine of T & N O train No. 12 while traveling at a speed of 20 miles per hour according to the speed recorder.

Engine 500 and its tender were overturned on their right sides, the engine coming to rest on the T & P tracks about 20 feet east of the crossing in a badly damaged condition. Engine 414 was also derailed but remained upright, with its front end resting on engine 500, its tender was not derailed. The employee killed was the fireman of train No. 12 and the employees injured were the engineman of train No. 12 and the conductor and a train porter of train No. 22.

Summary of evidence.

Train Porter Jones, of train No. 12, stated that when his train stopped at the station at Avondale he went ahead and opened the crossover switches and the switch leading to the Incline Track, then proceeded to the crossing to protect the movement of his train over it. He said the train approached and stopped about 40 feet from the crossing, he gave his train a proceed

signal and after two short blasts of the whistle had been sounded the train started forward. Just about this time he heard the whistle of the T & P train sounded, calling for the train order board at the station. He was standing on the crossing and when the T & P train reached a point in the vicinity of the station he began giving stop signals with a red flag to the crew of that train, but these signals were not acknowledged until the train was about three car-lengths from him. He did not think that steam was shut off on the T & P train prior to the accident and estimated the speed of that train at 25 miles per hour at the time the collision occurred. He did not give his engine crew a stop signal for the reason that he expected the other train to stop as required by the rules, and when he realized that that train would not stop it was then too late to warn the crew of his train.

Engineman Foster, of train No. 12, stated that while approaching the crossing he did not bring his train to a complete stop but reduced speed to about 4 miles per hour. Upon being advised by the fireman that the train porter had given a proceed signal, he continued towards the crossing, the speed being about 6 miles per hour at the time of the accident. He did not hear the whistle of the T & P train sounded and did not see it approaching prior to the accident. He said that he could have stopped his train within a distance of 10 feet had he received any warning of danger. He also said that it is customary to make the movement in the same manner as it was made on the day of the accident providing a flagman precedes the train to the crossing, otherwise the train is stopped to enable the flagman to go ahead and protect, he knew the law requires trains to be brought to a full stop before proceeding over the crossing.

Conductor Swartzenbach, of train No. 12, stated that upon arrival at Avondale the porter went ahead and lined the switches preparatory to moving through the Incline Track. After the train left the station it was first stopped west of the crossover which was about 250 feet from the crossing to wait for the porter to open the switches, then after pulling through the crossover the train was again stopped but he did not know how far the engine was from the crossing at this time. The train again started ahead slowly and shortly afterwards his attention was attracted by the T & P train passing at a high rate of speed, possibly 25 or 30 miles per hour, becoming alarmed, he looked out the window and saw the engines collide. He thought the speed of his train was about 2 or 3 miles per hour at the time of the accident. Conductor Swartzenbach further stated that the usual movement over this crossing is to stop within 100 feet of it and send a flagman ahead, and he was quite positive

that another stop was made after the train moved through the crossover

Brakeman Hinzub, of train No. 12, stated that while his train was passing the station at Avondale he was riding on the rear steps of the last car. He observed the T & P train approaching at a pretty rapid rate of speed and heard the whistle sounded for the train order signal. He estimated the speed of that train at 30 to 30 miles per hour when it passed him and at that time noticed the engineman standing up in the cab. He also noticed the porter at the crossing giving stop signals with a red flag and when the T & P train was about 300 feet from the crossing he heard one short blast of its engine whistle at that time the engine of his train had just reached the crossing and was moving at a speed of about 4 miles per hour. He said that his train was stopped before going through the crossover but was not stopped again until the collision occurred. He did not attempt to stop his train by means of the emergency valve on the rear of the train as he did not realize that the T & P train was not going to stop until it was too late to prevent the accident.

Engineman King, of train No. 22, stated that before departing from Alexandria, the point at which he took charge of the train, a terminal test of the brakes was made and after leaving that point he made a running test; in making several station stops en route the brakes functioned properly, the last stop was at Donaldsonville, a station 53.3 miles west of Avondale. His train approached Avondale at a speed of about 35 miles per hour and after whistling for the train order board he made a brake-pipe reduction of from 12 to 13 pounds, he was then about 300 feet west of the station. The brakes did not seem to take hold as they had on previous occasions and just as soon as the train line exhaust closed he made another reduction of about 15 pounds which also failed to be very effective, he then placed the brake valve handle in the emergency position, applied the independent brake, opened the sanders, reversed the engine and blew a stop signal, at which time his train was about 300 feet from the crossing. The T & N O train was approaching and was about 150 to 200 feet from the crossing. He said that he first observed the flagman standing at the crossing when his train was passing the station but did not acknowledge his signals as he then realized that he could not bring his train to a stop and had sounded a stop signal intended for the T & N O train. He estimated that his train passed the station at a speed of 22 to 25 miles per hour and at the time of the accident it was between 12 and 15 miles per hour. He further stated that before he made the first service application of the brakes he noticed the

air gauge registered 30 pounds brake-pipe pressure and 130 pounds main reservoir pressure and as of the opinion that his train was under full control and as being handled in the usual manner, it being his intention to stop short of the crossing, but for some unknown reason the brakes did not function as they should. He knew the rules required him to stop at the crossing, and he had always done so in the past. He has had experience in handling passenger trains but this was his first trip in approximately 30 days, during that interval he had been operating freight trains on this same division.

Florian Harbo, of train No. 22, stated that he noticed nothing unusual about the braking power of the train before reaching Avondale. The train was traveling at a speed of about 30 miles per hour as it approached this point and when he noticed the train order board in stop position he called it to the attention of the engineer. The board was not changed promptly and the engineer made a heavy service application of the brakes when the engine was about 300 feet west of the station. Upon reaching a point just west of the station he observed the flagman at the crossing giving stop signals, which he also called to the engineer's attention and the engineer applied the brakes in emergency, reversed the engine and applied the straight air, the emergency application being made when the engine was passing the station. He thought the speed at that time was about 25 miles per hour but this was reduced to between 12 and 15 miles per hour at the time of the accident. He did not know what effect the service application of the brakes had when they were applied west of the station but when they were applied in emergency they had very little effect. He said that he is a qualified engineer and was of the opinion that Engineer King handled the train properly, but could not account for the brakes failing to stop the train as he knew of no defects. He had frequently passed the station at Avondale at the same speed and the train was stopped before it reached the crossing.

Conductor Smith, of train No. 22, stated that the terminal test of the brakes at Alexandria and the running test after departing from that point developed that the brakes were working properly, no cars were picked up en route. When the train reached a point about $\frac{1}{2}$ mile west of the train order board at Avondale, and while traveling at a speed of about 30 or 35 miles per hour, steam was shut off and the whistle sounded for the board and upon reaching a point from three to five pole-lengths west of the order board he felt a slight lurch of the train, followed by a heavy application of the brakes and then he heard a long blast of the engine whistle. He realized that something was wrong but did not pull the emergency cord in the train as from the

way the brakes were grinding he thought it was useless to do so. He estimated the speed when the train passed the station at 25 miles per hour which was gradually reduced to 12 or 15 miles per hour at the time of the accident. Conductor Smith said that during recent years trains have always stopped at the crossing and on the day of the accident the brakes were applied in the usual place and a proper distance from the crossing to make an ordinary stop but did not know why it was not accomplished.

Road Foreman of Engines Long stated that a car was picked up at Alexandria after which the inspectors made an air-brake test and reported the brakes in good condition. The running test made after leaving that point proved satisfactory, and they also functioned as intended in making several stops. He rode on the engine part of the time after leaving Alexandria and during that time he noticed nothing wrong about the engine and the engineer handled the train in a satisfactory manner. He was riding in the train as it approached Avondale and the train entered the double track west of that point with the brakes applied and they appeared to be holding well. While approaching the train order office the brakes were again applied, he thought about a 10 pound reduction was made, and he judged the train was running at a speed of about 35 miles per hour when it passed the office. When he heard one blast of the engine whistle he looked out the window and saw the T & N O train moving towards the crossing but he could not tell how close the engine was to the crossing. He said the brakes on his train were not applied in emergency until it was about two car-lengths from the point of accident. Immediately after the accident he inspected the equipment of train No. 22 and found the brake valve on the engine set in emergency position, the reverse lever as in backward motion and the throttle was closed, all angle cocks were open and the brakes were set on the entire train. The needle of the speed indicator was showing 5 miles per hour with the engine standing still. Foreman Long was of the opinion that the brakes had been applied at a sufficient distance in which to bring the train to a stop but the brake pipe reduction was not heavy enough.

The statements of General Car Foreman Rounich, Air Brake Inspector Helbach, and Air Brake Rackman Smith were to the effect that on the day of the accident they inspected and tested the brakes on the cars of train No. 22 at Avondale and there were no defects found. The test was made by using another engine and all brakes set properly with a brake-pipe reduction of 20 pounds.

General Master Mechanic Boardman stated that the speed recorder of engine 414 was removed and tested on December 24. The tape showed that at a point 1.2 miles west of the point of accident the train was traveling at a speed of 43 miles per hour, having been reduced from a speed of 57 miles per hour in a distance of from 0.4 to 0.5 mile. At a point 0.2 mile from the crossing the speed was 45 miles per hour, and 0.1 mile from the crossing it was 40 miles per hour, while at the point of accident the tape indicated the speed was 20 miles per hour. The pencil was dislodged from its fastenings but this was caused by the jar of the collision. The test disclosed that with the recorder running at a speed of 57 miles per hour it indicated 2 miles slow. In his opinion a train of nine cars moving at a speed of 40 miles per hour could not stop within a distance of 0.1 mile, which indicated to him that the engineman did not properly handle the train.

Conclusions.

This accident was caused by the failure of T & P train No. 22 to stop at a railroad crossing at grade, as required by the rules, for which Engineman King is responsible.

The rules of the T & P Railway provide that all trains must approach railroad grade crossings under control and where crossings are not protected by interlockers, will come to a full stop, giving the required whistle signals and know that the track is clear before proceeding. Where crossings are protected by interlockers the rules governing their use will apply. A ruling of the Louisiana Public Service Commission requires all trains to be stopped not less than 200 feet before crossing the track or tracks of another railroad at grade, provided, that when a grade crossing is protected by an interlocking plant trains may proceed over such crossings without stopping.

The crossing at Avondale is not protected by an interlocking plant and Engineman King was familiar with the rules requiring his train to stop before proceeding over the crossing. He said it was his intention to stop and was of the opinion that his train approached the crossing at a speed which would enable him to stop before reaching it but for some reason the brakes failed to properly reduce the speed of the train although he had experienced no difficulty with them prior to that time. The brakes were inspected and tested before starting from the initial terminal, and an inspection and test of the brakes subsequent to the accident disclosed no defects and they operated proper-

ly. While the crew of this train maintained that their train approached Avondale at a speed of between 30 and 35 miles per hour the speed recorder tape indicated that the train had been traveling at a speed of 57 miles per hour and was still running at a speed of 45 miles per hour when the train was within 0.2 of a mile from the crossing and this speed was reduced to 20 miles per hour at the time of the accident. A test of the speed recorder removed from the engine showed that it was approximately correct. In view of these circumstances it is apparent that train No. 22 approached the crossing at a high rate of speed and the engineman did not begin braking soon enough to bring his train to a stop before it reached the crossing.

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.