

BUREAU OF SAFETY

REPORT NO. 1958

Railroad: Pennsylvania
Date: December 27, 1934
Location: Linden, Ohio
Kind of accident: Derailment; engine and train of 4
cars derailed; 4 cars standing on
siding damaged.
Train involved: Passenger
Casualties: 3 killed; 12 injured
Summary of facts: Apparently malicious tampering with
switch by some one in possession of
switch key; switch locked open, all
lenses removed, also red reflector
and lamp burner.
Cause: Train entering open switch at high
speed.

1958

INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY CONCERNING AN
ACCIDENT ON THE PENNSYLVANIA RAILROAD AT LINDEN, OHIO,
ON DECEMBER 27, 1934.

February 21, 1935.

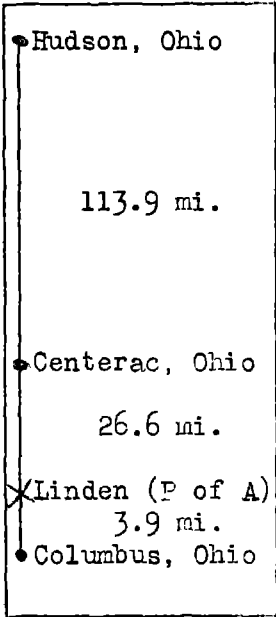
To the Commission:

On December 27, 1934, there was a derailment of a passenger train on the Pennsylvania Railroad at Linden, Ohio, which resulted in the death of 3 employees, and the injury of 8 passengers, 1 mail clerk, 1 express messenger, and 2 employees. This accident was investigated in conjunction with the Public Utilities Commission of Ohio.

Location and method of operation

This accident occurred on that part of the Cleveland Division which extends between Hudson and Columbus, Ohio, a distance of 144.4 miles; in the vicinity of the point of accident this is a single-track line over which trains are operated by time table, train orders, and a manual block-signal system. The accident occurred within yard limits, at the north switch of the storage siding at Linden; approaching from the north, the track is tangent for several miles to the storage switch and for a considerable distance beyond. The grade at the switch is 0.03 percent descending for south-bound trains.

The north storage switch is known as switch No. 2 and is a facing-point switch for south-bound trains, with a No. 10 turnout, and leads off the main track to the left to the storage siding, which parallels the main track on the east. On the opposite side of the main track there is a passing track, the north switch, known as switch No. 1, being located approximately 2,800 feet north of switch No. 2. The low switch stand of switch No. 2, of the New Century type, is located on the east side of the track, with an auxiliary stand located between the main track and passing track upon which is mounted a switch lamp, the center of the lens being slightly above the level of the rails of the main track. The lamp stand has flared reflector discs which serve in place of targets for day indications; normal indications are red when the switch is open and green when closed. At the time of the accident there were box cars on the north end of the storage siding.



To Hudson



Switch No. 1

Direction of train

2,800 ft.

Point of accident
Switch No. 2
Switch stand

Switch lamp

Storage siding
Main track
Passing track

Inv. No. 1958
Pennsylvania Railroad
Linden, Ohio
Dec. 27, 1934

During clear weather, with the sun shining brightly as was the case at the time of the accident, the normal indication displayed by the flared disc of the switch lamp mounted on the low auxiliary stand is not clearly discernible until an engine reaches a point close to the storage switch, and the members of an engine crew probably would notice the position of the switch points before seeing the indication displayed by the switch lamp. The speed of passenger trains is limited to 60 miles per hour.

The track is laid with 100-pound rails, 39 feet in length, with an average of 22 ties to the rail length, tieplated, with 3 spikes to the plate, and ballasted with gravel and cinders to a depth of 18 inches.

The weather was clear at the time of the accident, which occurred about 11:58 a.m.

Description

Train No. 314, a south-bound passenger train, consisted of 1 combination baggage and mail car, 2 coaches, and 1 Pullman chair car, all of steel construction, hauled by engine 7211 and was in charge of Conductor Montooth and Engineman Beach. This train passed Centerac, the last open office, 26.6 miles north of Linden, at 11:33 a.m., according to the train sheet, 41 minutes late, and was derailed at the north switch of the storage siding at Linden while traveling at a speed variously estimated to have been between 25 and 55 miles per hour.

The entire train was derailed, engine 7211 stopping on its right side, east of the tracks and headed southeast, with its front end 366 feet south of the switch points; the tender was behind the engine and on its left side. The cars stopped at various angles to the track but all of them remained upright. The derailed equipment struck box cars standing on the storage siding and damaged four of them, the first two being practically demolished. The employees killed were the engineman, fireman, and a road foreman of engines; the employees injured were the conductor and brakeman.

Summary of evidence

Conductor Montooth stated that at Orrville, 103.3 miles north of Linden, he talked with Engineman Beach and the engineman appeared normal in every respect; it was at that point that Road Foreman of Engines Eckels left the coaches and boarded the

engine, where he was riding when the accident occurred. Conductor Montooth was in the combination car and he said that it felt as if the air brakes were applied immediately before the accident occurred, at which time the speed was about 30 miles per hour. After the accident, on examining switch No. 2 he found it to be open and locked, while the lenses were missing from the switch lamp.

Brakeman Ganey was in the second car and was not aware of anything wrong until the accident occurred; he estimated the speed to have been between 25 and 35 miles per hour. After the accident the switch was open and locked; on going to a nearby house to telephone, a small boy told him that he had seen some boys around the switch.

Baggageman Liggett estimated the speed to have been about 35 miles per hour, and also saw that the lenses were missing from the switch lamp.

Engineman Steel, who was deadheading in the second car at the time of the accident, estimated the speed to have been about 55 miles per hour and said he did not notice any application of the brakes. He said the lamp at this switch was burning when he went northward on Train No. 615 the previous night.

Supervisor of Telegraph and Signals King arrived at the scene of the accident about 15 minutes after its occurrence and immediately examined the switch and its appurtenances. The switch was locked in reverse position, with the padlock in place and closed, but the flared red reflector disc which normally would have been visible to the engine crew of a south-bound train was missing. On the edge of the body of the switch lamp, the extended portion that holds the discs and lenses in place, there were freshly-made marks which indicated beyond question that some one had been tampering with it. All of the lenses were missing from the lamp, as were the burner and globe, but the fount remained in place; thorough search failed to locate the lenses. The switch points were not damaged, and examination of the track for about 2,500 feet north of the switch disclosed nothing wrong with its condition.

Track Supervisor Kaufman inspected the switch and its appurtenances 10 days prior to the accident and at that time the lamp was lighted; it had been reported as being out of service, and he found that the lenses had been broken out and had them replaced.

Track Foreman Chamberlain stated that he last inspected the switch and its appurtenances on Sunday, December 23, about 4 p.m., at which time he filled the fount of the lamp with oil and trimmed the wick, and when he left there everything about the switch and lamp was in proper condition and the lamp was burning; this was the last time he saw the switch prior to the accident. He fills the lamps twice each week, the instructions requiring that all main-track switches and lamps be properly maintained and the lamps kept lighted at all times. The lenses can not be removed by hand, it being necessary to use a screw driver to remove the rim and target in order to take the lenses out. Track Foreman Chamberlain said that trouble had been experienced previously with obstructions being placed on the rails in this locality, such as stone, iron, spikes, or other objects.

Track Walker Ballenger stated that he last saw the lamp at switch No. 2 on December 17, at which time he cleaned and filled it, and it was burning properly and the lenses were in place. About a month previously some one told him that some boys had broken a lens in the lamp; he saw the broken lens but was unable to find out who did it. On the morning of the accident he was sent out to fill the lamp at switch No. 1, but did not go any farther south and knew nothing about conditions at switch No. 2.

Operator Eby, of CW tower, located opposite the south switch of the passing track, about 7,200 feet south of the point of accident, stated that the last train to pass on the main track was Extra 6861, a south-bound freight train which cleared at his station at 8:45 a.m., at which time Train No. 605, a north-bound passenger train, which had moved northward over the passing track, asked for the block in order to move out upon the main track at switch No. 1.

Statements of members of the crews of Extra 6861 and Train No. 605 were to the effect that no outsiders were seen in the vicinity of switch No. 2, and nothing unusual was noticed by them when their trains were passing that point. One of them, however, said that several months previously there had been occasions when the windows had been broken out of the caboose by some one throwing stones in this vicinity as the train passed, and some of them said boys frequently had been seen loitering around the freight cars standing on the storage siding.

Inspection failed to disclose any indication of dragging equipment north of the switch. The first mark of derailment

appeared on the nut of a bolt in the rail joint on the gauge side of the east rail of the main track at a point 6 feet south of the point of frog. The next mark was made by a wheel flange on the ties of the storage siding, 2 feet 4 inches west of the east rail and 5 feet 2 inches south of the mark on the nut; these marks continued diagonally toward the west rail of the siding for a distance of 20 feet, beyond which point the track was torn up.

Conclusions

This accident was caused by an open switch, apparently due to malicious tampering.

After the accident the switch was found to be lined for the storage siding and locked, while the reflector which normally would have been visible to the engine crew of a south-bound engine had been removed from the lamp and was later found just north of switch No. 2 and about 20 feet east of the main track; all of the lenses were missing from the lamp and could not be found, and the burner and globe also were missing. The last train to pass over the switch on the main track was a south-bound freight train, about $3\frac{1}{4}$ hours before the accident occurred, at which time a north-bound passenger train was moving over the passing track, and members of these crews noticed nothing unusual nor did they see any outsiders in the vicinity. Under these circumstances it would appear that some one in possession of a switch key had opened the switch with malicious intent on the morning of the accident and also damaged the switch lamp in such a way as to make it impossible for any advance warning of danger to be given the approaching train.

Previous trouble had been experienced in this vicinity, not only in the form of broken lenses in the switch lamp but also by obstructions being placed on the rails, while stones had been thrown at passing trains.

In view of these facts the officers of this railroad company, and also local authorities, should give immediate consideration for the need of additional protection in order that the lives of employees and the traveling public will not be unnecessarily placed in jeopardy.

Respectfully submitted,

W. J. PATTERSON
Director.