

INTERSTATE COMMERCE COMMISSION
WASHINGTON

INVESTIGATION NO. 2710
THE SOUTHERN RAILWAY SYSTEM
REPORT IN RE ACCIDENT
AT WHITESEBURG, TENN., ON
JULY 17, 1943

SUMMARY

Railroad: Southern

Date: July 17, 1943

Location: Whitesburg, Tenn.

Kind of accident: Head-end collision

Trains involved: Engine and car : Freight

Train number: : Second 74

Engine numbers: 5226 : 5231

Consist: 1 car : 33 cars, caboose

Speed: Standing : 20-25 m. p. h.

Operation: Timetable, train orders and
automatic block-signal and
automatic train-stop system

Track: Single; tangent; 0.60 percent
descending grade eastward

Weather: Clear

Time: About 8:37 a. m.

Casualties: 3 killed; 3 injured

Cause: Switch being opened immediately
in front of approaching train

Recommendation: That the Southern Railway System
install electric switch-locking
at main-track hand-operated
switches in train-control and
automatic block-signal territory

INTERSTATE COMMERCE COMMISSION

INVESTIGATION NO. 2710

IN THE MATTER OF MAKING ACCIDENT INVESTIGATION REPORTS
UNDER THE ACCIDENT REPORTS ACT OF MAY 6, 1910.

THE SOUTHERN RAILWAY SYSTEM

August 23, 1945.

Accident at Whitesburg, Tenn., on July 17, 1945, caused
by switch being opened immediately in front of an
approaching train.

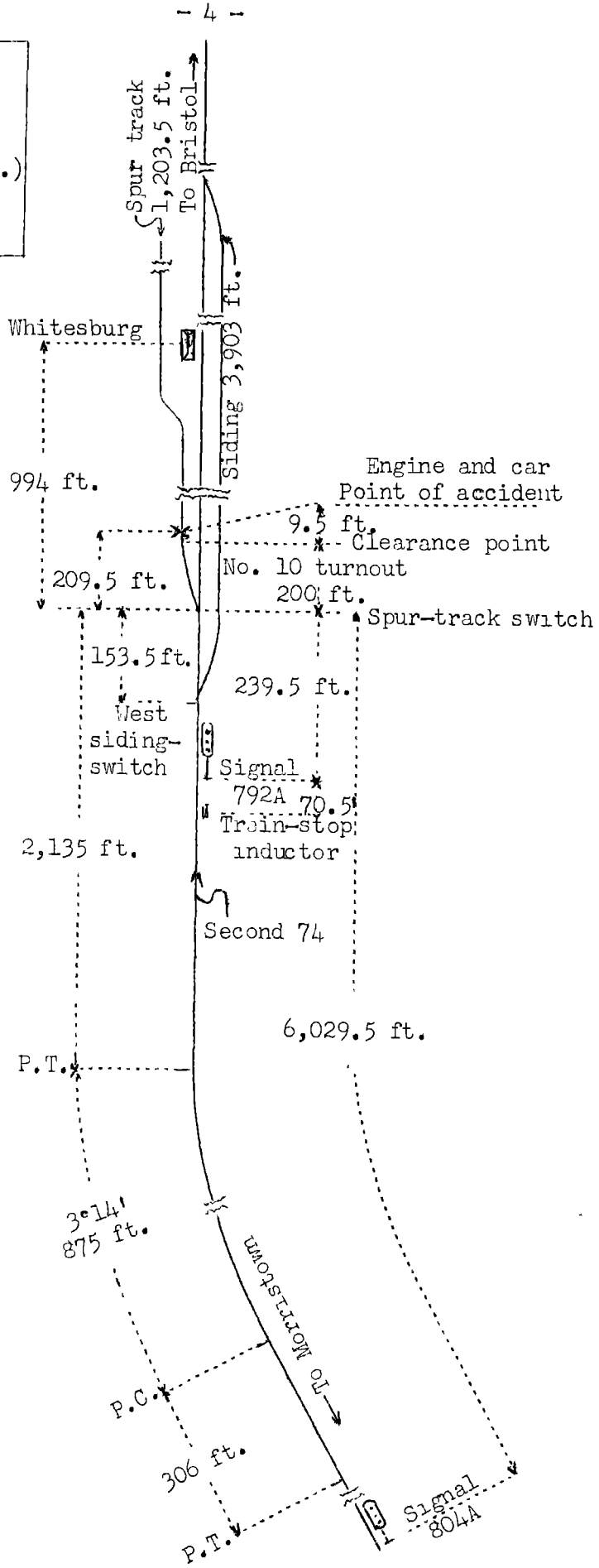
REPORT OF THE COMMISSION¹

PATTERSON, Commissioner:

On July 17, 1945, there was a head-end collision between a freight train and an engine on the line of the Southern Railway System at Whitesburg, Tenn., which resulted in the death of three employees and the injury of three employees.

¹Under authority of section 17 (2) of the Interstate Commerce Act the above-entitled proceeding was referred by the Commission to Commissioner Patterson for consideration and disposition.

- o Bristol, Va.
75.7 mi.
- o Bulls Gap, Tenn.
3.3 mi.
- X Whitesburg (P. of A.)
10.0 mi.
- o Morristown, Tenn.



Inv. No. 2710
 Southern Railway System
 Whitesburg, Tenn.
 July 17, 1943

Location of Accident and Method of Operation

This accident occurred on that part of the Knoxville Division which extended between Morristown, Tenn., and Bristol, Va., 89 miles. In the vicinity of the point of accident this was a single-track line over which trains were operated by timetable, train orders and an automatic block-signal and automatic train-stop system. At Whitesburg there was a spur track 1,203.5 feet in length on the north side of the main track. The switch of this track was facing-point for east-bound movements and was located 994 feet west of the station. The accident occurred on the spur track at a point 209.5 feet east of the switch. As the vicinity was approached from the west there were, in succession, a tangent 306 feet in length, a 3°14' curve to the right 875 feet, a tangent 2,135 feet to the spur-track switch, a No. 10 turnout to the left 200 feet in length, and a tangent 9.5 feet to the point of accident. Throughout a distance of more than 1 mile immediately west of Whitesburg the grade for east-bound trains varied between 1.25 percent and 0.60 percent descending, and at the point of accident the grade was 0.60 percent descending. A siding 3,903 feet in length paralleled the main track on the south. The west switch of this siding was 153.5 feet west of the spur-track switch.

The automatic block system was arranged on the absolute-permissive principle and consisted of double-location signals at sidings and intermediate signals between stations. Signal 804A and signal 792A, which governed east-bound movements, were located, respectively, 6,029.5 feet and 239.5 feet west of the spur-track switch. These signals were of the three-indication, color-light type, and were continuously lighted. The aspects and corresponding indications and names of these signals were as follows:

<u>Aspect</u>	<u>Indication</u>	<u>Name</u>
Green	Proceed	Clear signal
Yellow	Proceed, preparing to stop at next signal. Train exceeding medium speed must at once reduce to that speed	Approach signal
Red	Stop; then proceed at restricted speed	Stop and proceed signal

The automatic train-stop system was of the intermittent-inductive type. Engines were provided with acknowledging devices. A train-stop inductor was located 70.5 feet west of signal 792A.

Operating rules read in part as follows:

104. Conductors are responsible for the position of switches and derails used by them and their trainmen, * * *.

* * *

When practicable, the engineman must see that the switches near the engine are properly lined.

* * *

The maximum authorized speed for freight trains was 40 miles per hour.

Description of Accident

Extra 5226 West, a west-bound freight train, consisted of engine 5226, 15 cars and a caboose. At Bulls Gap, 3.3 miles east of Whitesburg, the crew received copies of train order No. 322 reading in part as follows:

Second No 74 Seventy four
Eng 5231 Meet * * * Extra
5226 West at Whitesburg.
* * *

Extra 5226 departed from Bulls Gap at 8:14 a. m., according to the dispatcher's record of movement of trains, and stopped into clear on the siding at Whitesburg about 8:20 a. m. Soon afterward the engine moved the first two cars to the spur track where switching was performed. About 8:32 a. m. the engine and one car stopped on the spur track with the engine standing 209.5 feet east of the spur-track switch. About 5 minutes later the engine was struck by Second 74.

Second 74, an east-bound second-class freight train, consisted of engine 5231, 33 cars and a caboose. At Morristown, 10 miles west of Whitesburg, the crew received copies of train order No. 322. This train departed from Morristown at 8:15 a. m., according to the dispatcher's record of movement of trains, 4 hours 2 minutes late, passed signals 804A and 792A, which displayed proceed, and while moving at a speed of 20 or 25 miles per hour it entered the spur track and struck engine 5226.

The force of impact moved engine 5226 backward 656 feet. The No. 1 driving wheels of engine 5226 and the front truck of

the car were derailed. The engine truck was detached and the front end of the engine was badly damaged. The engine of Second 74 and its tender were derailed and stopped, badly damaged, on their right sides, with the front end of the engine 169 feet east of the point of collision. The first twelve cars were derailed and stopped in various positions. Of these cars, four were demolished and the remainder were badly damaged. The front truck of the thirteenth car was derailed.

It was clear at the time of the accident, which occurred about 8:37 a. m.

The engineer of Extra 5226 and the conductor and the front brakeman of Second 74 were killed. The front brakeman of Extra 5226 and the engineer and the fireman of Second 74 were injured.

The spur-track switch-stand at Whitesburg was of the hand-tarrow low-stand type and was located 5 feet 6 inches north of the north rail of the main track. It extended 10 inches above the level of the rail. No light or target was provided.

Discussion

About 5 minutes after the engine of Extra 5226 West had stopped clear of the main track on the spur track, Second 74 entered the spur track and struck engine 5226.

As Second 74 was approaching Whitesburg, the speed was about 25 miles per hour and the enginemen, the conductor and the front brakeman were maintaining a lookout ahead from the engine cab. There was no condition of the engine which obscured the view or distracted their attention. The air brakes had been tested and had functioned properly. The enginemen said that signals 804A and 700A displayed proceed for their train. They first became aware that their train had entered the spur track when they felt the engine lurch as it entered the turnout. The engineer immediately moved the brake valve to emergency position, but he could not stop his train short of engine 5226. It could not be determined when the conductor and the front brakeman first became aware of anything wrong as they were killed in the accident.

The conductor, the front brakeman and the fireman of Extra 5226 said that the spur-track switch was lined for movement on the main track at least 5 minutes prior to the time of the accident. When the accident occurred, the front brakeman was in the vicinity of the west siding-switch, the fireman was

about 20 feet east of the spur-track switch and the conductor and the flagman were in the caboose, which was on the siding about 800 feet east of the spur-track switch. No trespasser was observed in the vicinity prior to the accident, and the employees involved could give no explanation for the position of the switch being changed to permit Second 74 to enter the spur track. The front brakeman said that signal 792A displayed proceed when Second 74 was within a short distance west of the signal. It could not be determined when the engineer of engine 5226 first became aware of anything being wrong, as he was killed in the accident.

After the accident, examination of the spur-track switch disclosed that it was in position for entry to the spur track. No defective condition of the switch was found. The signals and the train-stop equipment functioned as intended.

During the past 12 years, the Commission has investigated fifteen accidents, including the present case, which resulted from switches being thrown immediately in front of approaching trains, similar to the accident here under discussion. These accidents resulted in the death of 26 and the injury of 225 persons. If the switches had been equipped with electric switch-locking, these accidents would have been averted.

Cause

It is found that this accident was caused by a switch being opened immediately in front of an approaching train.

Recommendation

It is recommended that the Southern Railway System install electric switch-locking at main-track hand-operated switches in train-control and automatic block-signal territory.

Dated at Washington, D. C., this twenty-third day of August, 1943.

By the Commission, Commissioner Patterson.

(SEAL)

W. P. BARTEL,
Secretary.