INTERSTATE COMMERCE COMMISSION

WASHINGTON

INVESTIGATION NO. 2781

THE DELAWARE AND HUDSON RAILROAD CORPORATION

REPORT IN RE ACCIDENT

AT UNION JCT., PA., ON

OCTOBER 1, 1943

SUMMARY

Railroad:	Delaware and Hudson	
Date:	October 1, 1943	
Location:	Union Jct., Pa.	
Kind of accident:	Side collision	
Trains involved:	D. & H. engine	: C. N. J. freight
Train numbers:	Extra 1212 South	: Extra 894 South
Engine numbers:	1212	: 894
Consist:		: 21 cars, caboose
Estimated speed:	2 m. p. h.	: 25 m. p. h.
Operation:	Timetable, train orders and automatic block-signal system	
Track:	Three; tangent; 1.21 percent descending grade southward	
Weather:	Misting	
Time:	About 11:53 p. m.	
Casualties:	2 killed	
Cause:	Engine fouling main track immediately in front of following train	
Recommendation:	That the Delaware and Hudson Railroad Corporation install electric switch-locking at main-track hand-operated switches in automatic block-signal territory	

INTERSTATE COMMERCE COMMISSION

INVESTIGATION NO. 2731

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

THE DELAWARE AND HUDSON RAILROAD CORPORATION

November 18, 1943.

Accident at Union Jct., Pa., on October 1, 1943, caused by an engine fouling a main track immediately in front of a following train.

REPORT OF THE COMMISSION[1]

PATTERSON, Commissioner:

On October 1, 1943, there was a side collision between a Delaware and Hudson Railroad engine and a Central Railroad of New Jersey freight train on the line of the Delaware and Hudson Railroad at Union Jct., Pa., which resulted in the death of two Central Railroad of New Jersey employees. This accident was investigated in conjunction with a representative of the Pennsylvania Public Utility Commission.

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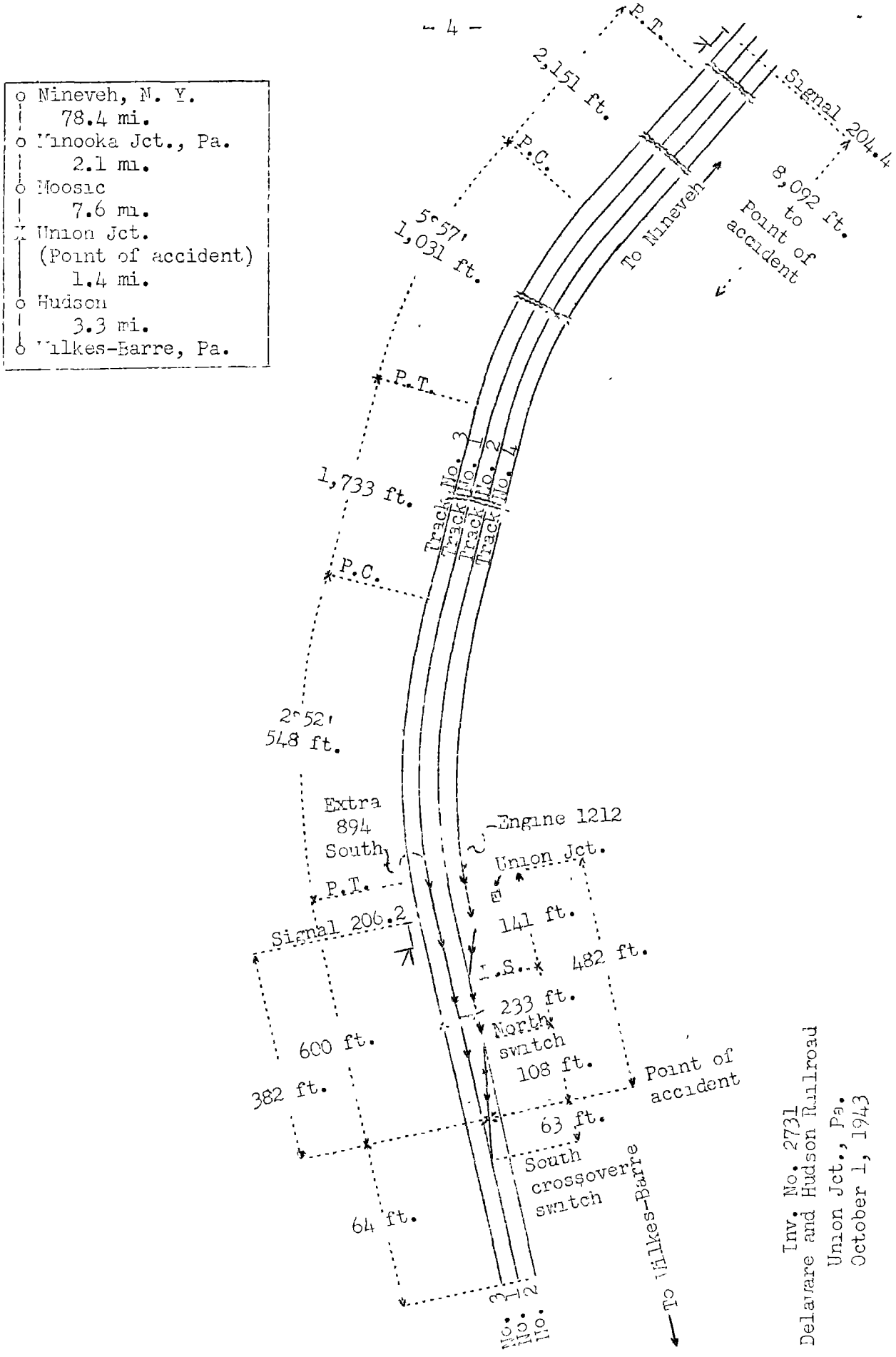
[1]Under authority of section 17 (2) of the Interstate Commerce Act the above-entitled proceeding was referred by the Commission to Commissioner Patterson for consideration and disposition.



Inv. No. 2731
Delaware and Hudson Railroad
Union Jct., Pa.
October 1, 1943

Location of Accident and Method of Operation

This accident occurred on that part of the Pennsylvania Division extending between Nineveh, N. Y., and Wilkes-Barre, Pa., 92.8 miles. Between Minooka Jct., Pa., 78.4 miles south of Nineveh, and Union Jct., a distance of 9.7 miles, this was a four-track line, and between Union Jct. and Hudson, 1.4 miles, a three-track line used jointly by the Delaware and Hudson Railroad and the Central Railroad of New Jersey, hereinafter referred to, respectively, as the D. & H. and the C. N. J. Trains moving with the current of traffic were operated by timetable, train orders and an automatic block-signal system. On the four-track line the main tracks from east to west were No. 4, northward slow speed, No. 2, northward high speed, No. 1, southward high speed, and No. 3, southward slow speed, and on the three-track line, No. 2, northward high speed, No. 1, southward high speed, and No. 3, southward slow speed. At Union Jct. the north switch of a trailing-point crossover, 171 feet long, hereinafter referred to as crossover No. 1, which connected track No. 2 and track No. 1, was 374 feet south of the station. The accident occurred 482 feet south of the station, at the fouling point of track No. 1 and crossover No. 1. From the north there were, in succession, a tangent 2,151 feet in length, a 5°57' curve to the left 1,031 feet, a tangent 1,733 feet, a 2°52' curve to the left 548 feet, and a tangent 600 feet to the point of accident and 64 feet beyond. Throughout a distance of more than 1 mile immdiately north of Union Jct. the grade for south-bound trains varied between 1.43 percent and 1.21 percent descending, and at the point of accident it was 1.21 percent descending.

The switch at the converging point of tracks No. 4 and No. 2 at Union Jct. was 141 feet south of the station. A telephone for communication between members of train crews and the operator at Hudson was provided in the station at Union Jct.

Automatic signals 204.4 and 206.2, which governed south-bound movements on track No. 1, were, respectively, 8,092 feet and 382 feet north of the point of accident. These signals were of the searchlight type and were approach lighted. Signal 204.4 was a one-unit signal and signal 206.2, a two-unit signal. The involved aspects and corresponding indications of these signals were as follows:

Signal	Aspect	Indication
204.4	Green	Proceed
	Yellow	Proceed prepared to stop at next signal
206.2	Red-over-red, staggered	Stop and proceed

The controlling track circuit was so arranged that when either switch of crossover No. 1 was lined for movement through the crossover, signal 204.4 would display yellow, and signal 206.2 would display red-over-red.

Operating rules read in part as follows:

99. When a train stops or is delayed, under circumstances in which it may be overtaken by another train, the flagman must go back immediately with stop signals a sufficient distance to insure full protection, and place and leave two torpedoes on the rail. * * *

The front of a train must be protected in the same way, when necessary, by the front trainman. If he is unable to leave his train the fireman must take his place.

152. (DOUBLE, THREE OR MORE TRACKS.) When a train crosses over to, or obstructs another track, unless otherwise provided it must first be protected as prescribed by Rule 99 in both directions on that track.

503e. Both switches of a cross-over must be opened before a train starts to make a cross-over movement, and the movement must be completed before either switch is restored to normal position.

The maximum authorized speed for freight trains was 30 miles per hour.

Description of Accident

Extra 1212 South consisted of D. & H. engine 1212. About 11:53 p. m., after this train had moved southward from track No. 4 to track No. 2 at Union Jct. and had entered crossover No. 1, it stopped about 108 feet south of the north crossover switch with the front end of the engine fouling track No. 1. Immediately thereafter, when an attempt was being made to back the engine into clear on track No. 2, it was struck by Extra 894 South.

Extra 894 South, a south-bound C. N. J. freight train, consisted of engine 894, 21 loaded cars and a caboose. This train departed from Minooka Jct. at 11:26 p. m., passed signal 204.4, which displayed green, passed signal 206.2, which displayed red-over-red, and while moving on track No. 1 at an estimated speed of 25 miles per hour it collided with engine

1212 at a point 382 feet south of signal 206.2.

From the right side of a south-bound engine the view of signal 206.2 was restricted to about 500 feet and from the left side to about 2,600 feet, because of embankments adjacent to the track and track curvature.

Engine 1212 was derailed and stopped, considerably damaged, upright and in line with track No. 1. Engine 894 and the first four cars of Extra 894 were derailed and stopped, badly damaged, on their right sides on track No. 3.

It was misting at the time of the accident, which occurred about 11:53 p. m.

The fireman and the front brakeman of Extra 894 were killed.

Discussion

The rules of this carrier provide that flag protection must be furnished in both directions before a train or an engine starts to cross a main track. In automatic block-signal territory both switches of a crossover must be opened before a crossover movement is made, and the movement must be completed before either switch is restored to normal position.

Extra 1212 South had entered crossover No. 1 and stopped about 60 feet north of the south crossover switch, where the engine fouled track No. 1, and while moving in backward motion in an attempt to clear track No. 1 it was struck by Extra 894 South. No train order restricting the authority of either train to proceed had been issued. Extra 894 passed signal 204.4 before the north switch of the crossover was opened, and this signal displayed proceed when Extra 894 passed it. The first knowledge the engineer had of anything being wrong was when the engine reached a point about 500 feet north of signal 206.2, where he observed simultaneously the signal displaying red-over-red and a lighted fusee in the vicinity of the signal. The engineer immediately moved the brake valve to emergency position but could not stop his train short of engine 1212. The fireman and the front brakeman called no warning to the engineer, and it could not be determined what indication was displayed by signal 206.2 when it became visible to the fireman and the front brakeman, as they were killed in the accident.

The crew of Extra 1212 consisted of the engineer, the fireman and one brakeman. These employees understood that flag protection was required before their engine entered the

crossover. Before the engine was moved from track No. 4 the engineer placed a lighted fusee near track No. 1 about 500 feet north of the north switch of the crossover. Before the brakeman lined the switches for the movement he communicated with the operator at Hudson and said no information was given him concerning the movement of Extra 894. The operator at Hudson said he thought he had informed the brakeman that Extra 894 had passed Moosic, 9.7 miles north of Union Jct., at 11:32 p. m. The fireman remained on the engine during the time the movement was made. The crew of Extra 1212 thought the lighted fusees provided sufficient protection for the movement. The first they knew of anything being wrong was after their engine entered the crossover and fouled track No. 1, when the engineer saw the reflection of the headlight of the approaching train. The engineer immediately instructed the brakeman, who was proceeding to the south crossover switch, to reopen the north crossover switch, and the engineer reversed the movement in an unsuccessful attempt to back the engine into clear.

If the switches of the crossover at Union Jct. had been equipped with electric switch-locking, it would not have been possible to operate the switches to permit a movement on the crossover when a train was closely approaching, as in this case, and the accident would not have occurred.

Cause

It is found that this accident was caused by an engine fouling a main track immediately in front of a following train.

Recommendation

It is recommended that the Delaware and Hudson Railroad Corporation install electric switch-locking at main-track hand-operated switches in automatic block-signal territory.

Dated at Washington, D. C., this eighteenth day of November, 1943.

By the Commission, Commissioner Patterson.

W. P. BARTEL,

(SEAL)

Secretary.