

INTERSTATE COMMERCE COMMISSION  
WASHINGTON

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REPORT NO. 3710  
THE PENNSYLVANIA RAILROAD COMPANY  
IN RE ACCIDENT  
AT ANACOSTIA INTERLOCKING,  
WASHINGTON, D. C., ON  
OCTOBER 5, 1956

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- 2 -

## SUMMARY

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Date: October 5, 1956

Railroad: Pennsylvania

Location: Anacostia Interlocking, Washington, D. C.

Kind of accident: Collision

Equipment involved: Yard locomotive : Freight train  
with cabooses

Train number: : B. & O. Extra 944 North

Locomotive numbers: Diesel-electric : 944, (Diesel-electric  
unit 5583 units 943A, 297X,  
and 959A)

Consists: Caboose : 113 cars, caboose

Speeds: Standing : Undetermined

Operation: Interlocking

Tracks: Double; 1°30' curve; 0.62 percent  
ascending grade northward

Weather: Clear

Time: 6:58 p. m.

Casualties: 1 killed; 3 injured

Cause: Failure to properly line a route  
through an interlocking and failure  
to control speed of train as required  
by signal indication

- 3 -

## INTERSTATE COMMERCE COMMISSION

REPORT NO. 3710

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

THE PENNSYLVANIA RAILROAD COMPANY

November 19, 1956

Accident at Anacostia Interlocking, Washington, D. C., on  
October 5, 1956, caused by failure to properly line  
a route through an interlocking and failure to control  
the speed of a train as required by signal indication.

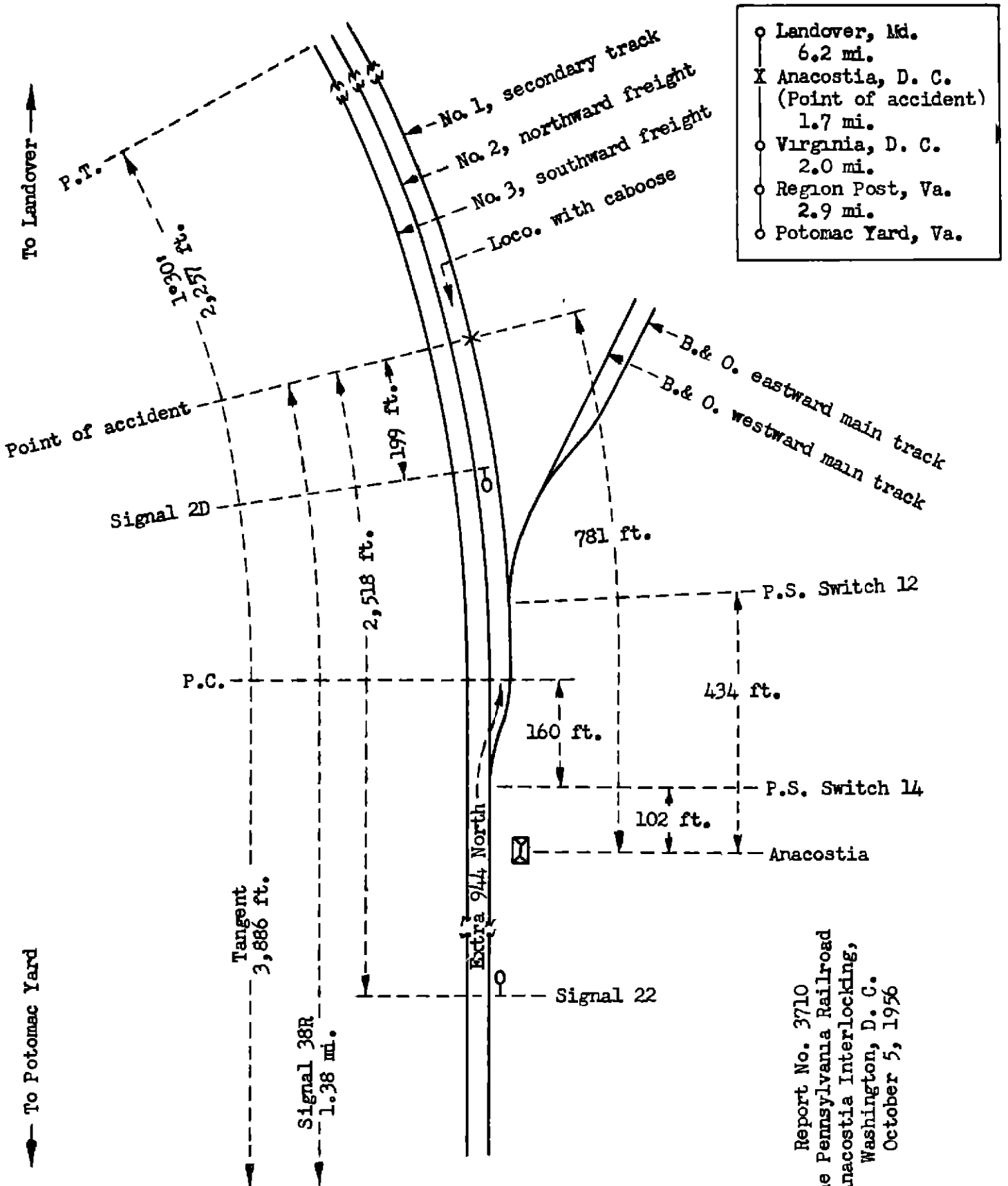
REPORT OF THE COMMISSION<sup>1</sup>CLARKE, Commissioner:

On October 5, 1956, there was a collision between a  
yard locomotive with caboose and a freight train on the  
Pennsylvania Railroad at Anacostia Interlocking, Washington,  
D. C., which resulted in the death of one employee, and  
the injury of three employees.

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<sup>1</sup>

Under authority of Section 17 (2) of the Interstate Com-  
merce Act the above-entitled proceeding was referred by the  
Commission to Commissioner Clarke for consideration and  
disposition.



- Landover, Md.  
6.2 mi.
- X Anacostia, D. C.  
(Point of accident)  
1.7 mi.
- Virginia, D. C.  
2.0 mi.
- Region Post, Va.  
2.9 mi.
- Potomac Yard, Va.

Report No. 3710  
 The Pennsylvania Railroad  
 Anacostia Interlocking,  
 Washington, D. C.  
 October 5, 1956

### Location of Accident and Method of Operation

This accident occurred on that part of the Maryland District of the Chesapeake Region extending between Region Post, near Potomac Yard, Va., and Landover, Md., 9.9 miles. In the vicinity of the point of accident this is a double-track line, over which trains moving with the current of traffic are operated by signal indications. A catenary system is provided for the electric propulsion of trains. From east to west the main tracks are designated as No. 2, northward freight, and No. 3, southward freight. Between Anacostia, 3.7 miles north of Region Post, and a point a considerable distance north of Anacostia a secondary track designated as track No. 1 parallels track No. 2 on the east. The south end of this track connects with track No. 2 at switch 14. North of this switch a track diverges from track No. 1 toward the east at switch 12 and extends to a junction with a double-track line of the Baltimore and Ohio Railroad. Switches 14 and 12, which are facing-point for north-bound movements, are within interlocking limits at Anacostia. They are located, respectively, 102 feet and 434 feet north of the interlocking station. Trains of the Baltimore and Ohio Railroad regularly are operated over the portion of the P.R.R. extending between Region Post and Anacostia. The accident occurred on track No. 1 at a point 781 feet north of the interlocking station and 199 feet north of the north limits of the interlocking at Anacostia. Track No. 2 is tangent throughout a distance of 3,886 feet immediately south of switch 14 and 160 feet northward. North of this tangent there is a  $1^{\circ}30'$  curve to the left 2,257 feet in length. Between points approximately 3,250 feet and 2,450 feet south of the point of accident the grade for north-bound trains varies between 0.09 percent and 1.02 percent descending. Between the latter point and a point 550 feet south of the point of accident it varies between 0.11 percent ascending and 0.15 percent descending, and north of the latter point it is 0.63 percent ascending to the point of accident.

Interlocking signal 2D, governing south-bound movements on track No. 1, is located 199 feet south of the point of accident. Semi-automatic interlocking signals 38R and 22, governing north-bound movements on track No. 2, are located, respectively, 1.38 miles and 2,518 feet south of the point of accident. These signals are of the position-light type. Aspects applicable to this investigation and the corresponding indications and names are as follows:

- 6 -

| <u>Signal</u> | <u>Aspect</u>   | <u>Indication</u>  | <u>Name</u>  |
|---------------|---|--|--------------|
| 2D            | Two white lights<br>in horizontal<br>position   | Stop   | Stop-signal  |
| 38R           | Three amber lights<br>in diagonal posi-<br>tion to the right  | Proceed pre-<br>paring to<br>stop at next<br>signal. Train<br>exceeding Me-<br>dium speed must<br>at once reduce<br>to that speed. | Approach.    |
| 22            | Three amber lights<br>in horizontal position<br>above three amber lights<br>in diagonal position to<br>the left | Proceed at Re-<br>stricted speed.  | Restricting. |

The controlling circuits are so arranged that when the route is lined for movement from track No. 2 to the eastward main track of the B. & O. and the block of signal 22 is clear, the signal indicates Slow-approach. If the block of the signal is occupied, the signal indicates Stop-and-proceed. When the route is lined for movement from track No. 2 either to the westward main track of the B. & O. or to track No. 1, signal 22 indicates Restricting. Signal 38 R indicates Approach under any of these conditions if the block of the signal is clear.

The interlocking at Anacostia is of the electro-mechanical type. The interlocking station is on the east side of the main tracks. The mechanical machine consists of 16 working levers in a 24-lever frame, and the electrical machine consists of one lever. Time, route, indication, and mechanical locking are provided. A track model board is located above the interlocking machine. All switches are shown in normal position on this board. Indicator lights on the board indicate track occupancy. Indicator lights also indicate whether each controlled signal is displaying an aspect to proceed, but they do not indicate the aspect displayed. Switch 12 must be moved to reverse position to establish a route from track No. 2 to the B. & O. line.

This carrier's operating rules read in part as follows:

#### DEFINITIONS

Medium Speed--Not exceeding one-half the speed authorized for passenger trains but not exceeding 30 miles per hour.

Restricted Speed--Not exceeding 15 miles per hour prepared to stop short of train, obstruction or switch not properly lined and to look out for broken rail.

The maximum authorized speed for freight trains in the vicinity of the point of accident is 30 miles per hour.

#### Description of Accident

Yard locomotive 5583, pushing a caboose, moved southward on track No. 1 and stopped about 6:55 p. m. with the south end of the caboose 199 feet north of signal 2D, which indicated Stop. The locomotive was headed northward. Several minutes later the caboose was struck by Extra 944 North.

Extra 944 North, a north-bound B. & O. freight train, en route to the line of the B. & O. at Anacostia, consisted of Diesel-electric units 943X, 297X, and 959A, coupled in multiple-unit control and designated as locomotive 944, 113 cars, and a caboose. This train passed Virginia Interlocking Station, 1.7 miles south of Anacostia, at 6:52 p. m. It passed signal 38R, which indicated Approach, passed signal 22, which indicated Restricting, was diverted to track No. 1 at switch 14, continued on track No. 1 at switch 12, where it should have been diverted to the line of the B. & O., and while moving at an undetermined speed it struck the caboose which was coupled to yard locomotive 5583.

The yard locomotive and caboose were moved northward a distance of 251 feet to the point at which the front of the locomotive of Extra 944 North stopped. The rear end of the yard locomotive was somewhat damaged, the caboose was destroyed, and the front end of the locomotive of Extra 944 North was slightly damaged. With the exception of the caboose, no equipment was derailed.

One yard brakeman was killed. The engineer, the fireman, and one yard brakeman of yard locomotive 5583 were injured.

The weather was clear and it was dark at the time of the accident, which occurred about 6:58 p. m.

Locomotive 5583 is of the switcher type. The control compartment is at the rear.

Discussion

At the time yard locomotive 5583 moved southward on track No. 1 it was intended that it cross to another track at Anacostia and return northward. The yard conductor did not accompany the movement. When the movement stopped at signal 2D the enginemen were in the control compartment of the locomotive. Two yard brakemen were on the platform at the south end of the caboose. The engineer said that he stopped by use of the independent brake, and after the locomotive stopped he left the brake applied. The yard brakemen saw Extra 944 North approaching on track No. 2, and one of them then entered the caboose. Soon afterward the yard brakeman who remained on the platform saw that Extra 944 North had been diverted to track No. 1. He called a warning and alighted from the caboose immediately before the collision occurred. The yard brakeman who had entered the caboose was killed.

As Extra 944 North was approaching Anacostia the enginemen and the front brakeman were maintaining a lookout ahead from their respective positions in the control compartment at the front of the locomotive. The headlight was lighted brightly. The brakes of the train had functioned properly when tested prior to departure from Potomac Yard, 6.6 miles south of Anacostia. Signal 38R indicated Approach, and the indication was called by the employees on the locomotive. The engineer said that the speed was about 20 miles per hour when the locomotive passed the signal. Signal 22 indicated Restricting when it came into view, and the employees on the locomotive called the indication. The engineer said that he applied the independent brake and afterward made a brake-pipe reduction of six or seven pounds with the automatic brake valve before the locomotive passed signal 22. He did not look at the speed indicator, but he estimated that the speed was reduced to about 8 miles per hour. He said that after seeing the aspect displayed by signal 22 he expected to receive train orders at Anacostia and to operate against the current of traffic beyond that point, as he had on the previous north-bound trip. As he approached the interlocking station he saw that the train-order signal was not displayed and that the operator was not on the ground to deliver train orders. He said that he made an emergency application of the brakes as the locomotive was closely approaching the interlocking station. He then saw that switch 12 was lined for movement on track No. 1, and he first saw the caboose when his locomotive was in the vicinity of the switch. He said that the speed was reduced by the emergency brake application but the retardation was less than normal. He left



his seat and entered the engine compartment before the collision occurred. The fireman and the front brakeman said they saw that switch 12 was not properly lined at approximately the same time that the brakes were applied in emergency. The fireman immediately opened his emergency brake valve, but brake-pipe pressure had already been depleted and there was no exhaust from the valve. He estimated that the locomotive was 100 feet north of the interlocking station at this time. The front brakeman estimated that the locomotive was 200 feet north of the interlocking station. Both the fireman and the front brakeman remained in the control compartment. They estimated that the speed was about 10 miles per hour when the brakes were applied in emergency and that it was reduced to about 3 miles per hour before the collision occurred.

Examination of the tape of the speed-recording device taken from the locomotive of Extra 944 North, as interpreted by an official of the B. & O., indicates that the speed of this train was 21 miles per hour at the time the brakes were applied in emergency. It further indicates that the train was stopped by this emergency application of the brakes in a distance of 664 feet. From this it appears that the engineer of this train was mistaken as to the speed of his train and the point at which the brakes were applied in emergency.

The brakes of the equipment of Extra 944 North were tested at Anacostia after the accident occurred, and no exceptions were taken. This train then proceeded to Baltimore. The brakes functioned properly when used en route.

The operator at Anacostia said that as Extra 944 North was passing Virginia he communicated with the B. & O. train dispatcher and received instructions to route the train for normal movement with the current of traffic. He then lined what he thought was the proper route for the movement. When the route is lined for movement from track No. 2 to the eastward main track of the B. & O., levers 11, 12, 13, 14, 15, and 22 are in reverse position. In lining the route for Extra 944 North the operator failed to place in reverse position lever 12, which operates switch 12. This resulted in the train being routed to track No. 1. The operator estimated that the speed of the train was about 15 miles per hour as the locomotive passed the interlocking station. After the operator learned that the front end of the train had entered track No. 1 he again checked the position of the levers. He then found that when he lined the route he had overlooked placing lever 12 in reverse position.

- 10 -

The signal apparatus involved was tested after the accident occurred and it functioned as intended. Inspection of the interlocking and signal apparatus disclosed no defective condition.

On the day of the accident the regularly assigned second-trick operator at Anacostia was on vacation. The operator who was on duty was assigned to perform relief service at various interlockings on the Maryland District. He had been qualified to operate the interlocking at Anacostia in January 1955 after operating it under the direction of the regularly assigned operator during a period of about 10 days, but before the day of the accident he had not operated it alone. On that day he reported for duty at 2:30 p. m. Between the time he reported for duty and the time the accident occurred two south-bound B. & O. trains and a number of P. R. R. movements in both directions passed through the interlocking, and he experienced no difficulty in lining the proper routes. Extra 944 North was the first north-bound B. & O. train to reach Anacostia after 2:30 p. m.

When Extra 944 North approached Anacostia it was intended that the train be routed from track No. 2 to the line of the B. & O., and the crew of the train expected to move via this route. The operator unintentionally lined a route for the train to move from track No. 2 to track No. 1. When this route is lined, signal 22 indicates Restricting. This indication required that the speed of Extra 944 North be restricted to 15 miles per hour and be so controlled that the train could be stopped short of another train or a switch not properly lined.

#### Cause

This accident was caused by failure to properly line a route through an interlocking and failure to control the speed of a train as required by signal indication.

Dated at Washington, D. C., this nineteenth day of November, 1956.

By the Commission, Commissioner Clarke.

(SEAL)

HAROLD D. McCOY,  
Secretary.