

INTERSTATE COMMERCE COMMISSION
WASHINGTON

REPORT NO. 3421
THE ATCHISON, TOPEKA AND SANTA FE
RAILWAY COMPANY
IN RE ACCIDENT
NEAR OXFORD, KANS., ON
OCTOBER 9, 1952

SUMMARY

Date: October 9, 1952

Railroad: Atchison, Topeka and Santa Fe

Location: Oxford, Kans.

Kind of accident: Collision

Equipment involved: Freight train : Motor-truck

Train number: Extra 119 West :

Engine number: Diesel-electric :
units 119L,
119A and 119B

Consist: 54 cars, caboose :

Estimated speeds: 35 m. p. h. : 30 m. p. h.

Operation: Timetable and train orders

Track: Single; tangent; 0.18 percent
descending grade westward

Highway: Tangent; crosses track at angle of
33°54'; 0.08 percent descending
grade southward

Weather: Clear

Time: 1:25 p. m.

Casualties: 4 injured

Cause: Motor-truck occupying rail-highway
grade crossing immediately in front
of approaching train

INTERSTATE COMMERCE COMMISSION

REPORT NO. 3491

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

THE ATCHISON, TOPEKA AND SANTA FE RAILWAY COMPANY

December 16, 1952

Accident near Oxford, Kans., on October 9, 1952, caused
by a motor-truck occupying a rail-highway grade
crossing immediately in front of an approaching
train.

REPORT OF THE COMMISSION¹

PATTERSON, Commissioner:

On October 9, 1952, there was a collision between a
freight train on the Atchison, Topeka and Santa Fe Railway
and a motor-truck at a rail-highway grade crossing near
Oxford, Kans., which resulted in the injury of the driver
of the motor-truck and three train-service employees.

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

Location of Accident and Method of Operation

This accident occurred on that part of the Oklahoma Division extending between Independence and Wellington, Kans., 104.1 miles, a single-track line, over which trains are operated by timetable and train orders. There is no block system in use. The accident occurred on the main track at a point 90.13 miles west of Independence and 1.27 miles east of the station at Oxford, where the railroad is crossed at grade by U. S. Highway No. 160. The track is tangent throughout a distance of 1.3 miles immediately east of the crossing and a considerable distance westward. The grade is 0.18 percent descending westward at the crossing. Immediately west of the point of accident the railroad crosses a water-course, formed by overflow of the Arkansas River, on an open-dack, 16-span pile trestle, 210 feet in length. The east end of the bridge is 260 feet west of the center-line of the crossing. U. S. Highway No. 160 intersects the railroad at an angle of $33^{\circ}54'$. This highway is 30 feet in width and is surfaced with bituminous material. It is tangent throughout a distance of 0.8 mile immediately north of the crossing and 1.8 miles southward. The highway crosses the water-course on a concrete-deck bridge 208 feet in length. The south end of this bridge is 328 feet north of the crossing and about 160 feet north of the east end of the railroad bridge. From the north end of the highway bridge the grade for south-bound traffic on the highway is, successively, 0.20 percent descending a distance of 236 feet, 0.35 percent descending 200 feet and 0.08 percent descending 100 feet to point of accident. The crossing is 30 feet wide. Planking 10 inches in width is provided on each side of each rail at the crossing. Flangeways 3 inches wide are provided. The remaining area of the crossing is surfaced with bituminous material.

A circular railroad-crossing advance-warning sign 2 feet 6 inches in diameter is located to the right of the direction of south-bound highway traffic, 30 feet west of the center-line of the highway and 616 feet north of the crossing. This sign is mounted on a mast with its center 3 feet 3 inches above the level of the highway. It bears two diagonal lines intersecting at right angles and the letters "RR" in black on a yellow background. A standard cross-buck railroad-crossing sign is located to the right of the direction of south-bound traffic, 20 feet west of the center-line of the highway and 114 feet north of the center-line of the track at the crossing. This sign is

mounted on a mast 8 feet 8 inches above the level of the highway and bears the words "RAILROAD CROSSING" on the cross-buck and the words "LOOK OUT FOR THE CARS" on the mast in black on a white background. The lettering of the advance-warning sign and the cross-buck is provided with colorless reflector buttons. A crossing-whistle sign for west-bound trains is located 2,575 feet east of the crossing.

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

14. Engine Whistle Signals

Note.--The signals prescribed are illustrated by "o" for short sounds; "—" for longer sounds.

* * *

SOUND

INDICATION

* * *

(1) — — o ———

Approaching public crossings at grade, * * * to be prolonged or repeated until crossing is reached.

* * *

30. The engine bell must be rung * * * while approaching and passing public crossings at grade * * *

Motor Vehicle Laws of Kansas read in part as follows:

192. (8-566) Certain vehicles must stop at all railroad grade crossings.

(a) The driver * * * of any vehicle carrying explosive substances or flammable liquids as a cargo or part of a cargo, before crossing at grade any track or tracks of a railroad, shall stop such vehicle within fifty feet but not less than ten feet from the nearest rail of such railroad, and while so stopped shall listen and look in both directions along such track for any approaching train, and for signals indicating the approach of a train * * * and shall not proceed until he can do so safely. * * *

The maximum authorized speed for freight trains in the vicinity of the point of accident is 35 miles per hour.

Description of Accident

Extra 119 West, a west-bound freight train, consisted of Diesel-electric units 119L, 119A and 119B, coupled in multiple-unit control, 54 cars and a caboose. This train departed from W. N. Jct., 7.5 miles east of the point of accident and the last open office, at 12:55 p. m., stopped at Kellogg, 2.23 miles east of the point of accident, where cars were set off, and then proceeded and while moving at an estimated speed of 35 miles per hour it struck a motor-truck on a rail-highway grade crossing 1.27 miles east of the station at Oxford.

The vehicle involved was a tractor and a semi-trailer owned by Groendyke Transport, Inc., of Enid, Okla. The driver was the sole occupant. He held Oklahoma operator's license No. 35555. The tractor was a 1951 model 6-cylinder White and was equipped with an enclosed cab. Dual tires were provided on the rear wheels. It was equipped with air brakes and an emergency hand brake. It bore Oklahoma license No. 343-913. The semi-trailer was of the Moser tank type. It was equipped with a 5,240-gallon capacity tank and was mounted on tandem axles. Dual tires were provided on all wheels. It was equipped with air brakes and bore Oklahoma license No. 65-455. The total length of the tractor and semi-trailer, coupled, was 44 feet 7 inches. At the time of the accident the cargo consisted of 5,240 gallons of ethyl gasoline. This vehicle was moving southward on U. S. Highway No. 160 at an estimated speed of 30 miles per hour when it entered upon the crossing and was struck by Extra 119 West.

The Diesel-electric units and the first 19 cars of Extra 119 West were derailed. The first Diesel-electric unit stopped on its left side in the water-course on the south side of the bridge, with the front end of the unit 347 feet west of the point of accident. The rear end of the unit was about 30 feet south of the bridge. This unit was submerged in water to a depth of 7 feet. The second and third Diesel-electric units stopped upright, side by side in the water and at right angles to the track. At the east end the bridge was destroyed throughout a distance of 70 feet. The first car stopped with the front end in the water-course and about 40 feet south of the track. The other derailed cars stopped in various positions on or near the track and west of the crossing. The

first Diesel-electric unit was badly damaged and the second and third Diesel-electric units were considerably damaged. The first to the third cars, inclusive, the sixth, seventh, eleventh, eighteenth and nineteenth cars were considerably damaged and the other derailed cars were destroyed.

The tractor and the semi-trailer were separated by the force of the impact. The tractor stopped near the west side of the highway and 36 feet south of the center-line of the track. The semi-trailer was broken near the middle of the tank. The forward and rear portions of the chassis with the respective portions of the tank attached were separated. The forward portion of the semi-trailer and tank stopped about 38 feet south of the center-line of the track and 40 feet west of the tractor. The rear portion of the semi-trailer and tank stopped near the west side of the highway and 12 feet north of the center-line of the track. The gasoline cargo became ignited when the tank was ruptured by the impact of the collision. The tractor and the semi-trailer were destroyed by the collision and fire.

The engineer, the fireman and the front brakeman were injured.

The weather was clear at the time of the accident, which occurred about 1:25 p. m.

During the 30-day period preceding the day of the accident, the average daily movement over the crossing was 2.1 trains. During the 24-hour period beginning at 9 a. m., November 7, 1952, 953 automobiles, 263 trucks and 14 buses passed over the crossing.

Discussion

As Extra 119 West was approaching the point where the accident occurred the speed was about 55 miles per hour. The engineer, the fireman and the front brakeman were maintaining a lookout ahead from their respective positions in the control compartment at the front of the locomotive. The conductor and the flagman were in the caboose. The headlight was lighted brightly. The brakes of this train had been tested and had functioned properly when used en route. The locomotive bell was ringing. The engineer said that he began to sound the grade-crossing whistle signal on the pneumatic horn when the locomotive was in the vicinity of the crossing-whistle sign and he prolonged the signal

until the locomotive reached the crossing. The members of the crew on the locomotive first observed the motor-truck when it was closely approaching the highway bridge north of the crossing. The engineer said that the speed of the motor-truck did not appear excessive and he thought it would be stopped short of the crossing. When the locomotive was about 100 feet east of the crossing he became aware that the motor-truck was continuing the move southward and that it would enter the crossing in front of the locomotive. He immediately made an emergency application of the brakes but the collision occurred before the speed of the train was reduced. The front brakeman said that the speed of the motor-truck appeared to have increased immediately before it entered the crossing. The engineer and the front brakeman said that there was an explosion when the gasoline cargo of the tank became ignited and fire enveloped the front end of the locomotive after the collision occurred.

The driver of the motor-truck was injured in the accident and he was not questioned in the investigation. In a report of the accident made to the Kansas State Highway Patrol, the driver of the motor-truck stated that the brakes of the motor-truck became defective as it was approaching the point where the accident occurred and he was unable to stop his vehicle short of the crossing. The motor-truck and the semi-trailer were destroyed by the collision and fire, and tests of their brakes could not be made.

The driver of the motor-truck involved was regularly employed in service on a route in this territory. He was familiar with the crossing where the accident occurred. From points on the highway 500 feet and 300 feet north of the crossing, an approaching west-bound train can be seen at distances, respectively, of 2,800 feet and 3,290 feet. A railroad-crossing advance-warning sign and a standard cross-buck railroad-crossing sign for south-bound highway traffic are located, respectively, 616 feet and 114 feet north of the crossing.

Cause

It is found that this accident was caused by a motor-truck occupying a rail-highway grade crossing immediately in front of an approaching train.

Dated at Washington, D. C., this sixteenth day of December, 1952.

By the Commission, Commissioner Patterson.

(SEAL)

GEORGE W. LAIRD,
Acting Secretary.