

**RAILROAD ACCIDENT INVESTIGATION**

REPORT NO. 4110

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**THE ATCHISON, TOPEKA AND SANTA FE RAILWAY COMPANY**

**LAGUNA, N. M.**

**JANUARY 26, 1967**

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**DEPARTMENT OF TRANSPORTATION  
FEDERAL RAILROAD ADMINISTRATION**

**WASHINGTON**

*SUMMARY*

DATE:	January 26, 1967	
RAILROAD:	Atchison, Topeka and Santa Fe	
LOCATION:	Laguna, N. M.	
KIND OF ACCIDENT:	Collision	
EQUIPMENT INVOLVED:	Track motorcar	Freight train
TRAIN NUMBER:		Extra 1847 West
LOCOMOTIVE NUMBERS:		Diesel-electric units 1847, 1810, 1878, 1880
CONSIST:		79 cars, caboose
SPEEDS:	20-30 m.p.h.	49 m.p.h.
OPERATION:	Signal indications	
TRACK:	Double; 3 <sup>0</sup> 09' curve; 0.50 percent ascend- ing grade westward	
WEATHER:	Clear	
TIME:	4:05 p.m.	
CASUALTIES:	2 killed; 3 injured	
CAUSE:	Unauthorized operation of a track motorcar against the current of traffic without pro- tection resulting from failure of the track foreman to take required precautions in operation of track motorcar	

**DEPARTMENT OF TRANSPORTATION  
FEDERAL RAILROAD ADMINISTRATION  
RAILROAD SAFETY BOARD**

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**THE ATCHISON, TOPEKA AND SANTA FE RAILWAY COMPANY  
JANUARY 26, 1967**

*SYNOPSIS*

*On January 26, 1967, a collision occurred between a freight train and a track motorcar on the Atchison, Topeka and Santa Fe Railway near Laguna, N.M. Two maintenance-of-way employees were killed and three were injured.*

*The accident was caused by unauthorized operation of a track motorcar against the current of traffic without protection resulting from failure of the track foreman to take required precautions in operation of track motorcar.*

**LOCATION AND METHOD OF OPERATION**

The accident occurred on that part of the Albuquerque Division extending between Belen and Gallup, N. M., a distance of 140.5 miles. In the accident area this is a double-track line over which trains moving with the current of traffic, which is to the left, operate by signal indications of an automatic block-signal system.

The collision occurred on the westward main track, 49.2 miles west of Belen and 2.4 miles east of the Laguna station point.

Two long sidings, designated as the eastward and westward sidings, parallel the eastward main track on the north and the westward main track on the south at Laguna, respectively. Track

car indicators are located adjacent to the switches at the ends of the sidings. The east switch of the eastward siding is 1.6 miles east of the station point. A track motorcar setoff is adjacent to each main track 14 feet east of this switch.

In the accident area the main tracks are laid in a cut 1,630 feet long. The walls of the cut extend to a height of 47 feet. Because of track curvature and the north wall of the cut, the range of vision in the cut is restricted to about 680 feet.

Details concerning the tracks, carrier's rules governing the operation of track motorcars, train and track motorcar involved, damages, and other factors are set forth in the appendix.

#### DESCRIPTION AND DISCUSSION

Dalies and Grants, N. M., are 41.3 miles east and 26.8 miles west of Laguna, respectively.

At 5:30 a.m. on the day of the accident, the train dispatcher issued a line-up of train movements to the operator at Grants. This line-up read in part as follows:

Westward \*\*\* Trains:

	DALIES	LAGUNA ***
***		
Extra West ***	900 AM	940 AM
Extra 1847 West ***	1240 PM	120 PM
***		

At 8:00 a.m., a signal maintainer and a track force, consisting of a track foreman and four trackmen, went on duty at Laguna. A few minutes later, the signal maintainer telephoned the Grants operator and requested a line-up with times shown for Laguna only. The operator then transmitted this portion of the 5:30 a.m. line-up to the signal maintainer, who made two copies on the prescribed form and gave one copy to the track foreman. According to his statements, the foreman informed the trackmen about train movements shown in the line-up. However, a surviving trackman said the foreman did not give any line-up information to the trackmen on the day of the accident.

About 8:15 a.m., the track force placed its track motorcar on the westward main track and proceeded westward. After reaching

a point 6.3 miles west of Laguna, the track motorcar was removed from the westward main track and the track force began to work on the structure of the eastward main track. It worked in that area for a period of several hours. During that period, several eastbound passenger and freight trains passed on the eastward main track, and the track foreman checked these trains off on his copy of the line-up.

About 10:00 a.m., a track supervisor stopped at the location of the track force and compared line-ups with the track foreman. The foreman then revised some of the times shown for eastbound trains on his line-up. Sometime between 1:30 and 2:00 p.m., the track foreman called the train dispatcher by means of a portable telephone and requested the latest line-up information with respect to times shown for trains at Laguna. He said the dispatcher informed him that a westbound freight train and an eastbound freight train were expected to pass Laguna at about 2:30 and 3:50 p.m., respectively. The westbound freight train mentioned by the dispatcher was Extra 1712 West, which was evidently the "Extra West" shown in the 5:30 a.m. line-up. Neither the train dispatcher nor the track foreman made any reference to the operation of Extra 1847 West, which the 5:30 a.m. line-up showed as expected to pass Dalies and Laguna at 12:40 p.m. and 1:20 p.m., respectively, and which had not yet left Belen. A few minutes after the track foreman concluded his conversation with the train dispatcher, the track supervisor again stopped at the location of the track force and compared line-ups with the foreman. Nothing was disclosed in the investigation to indicate that either the foreman or track supervisor mentioned the operation of Extra 1847 West at that time. After finishing his conversation with the foreman, the track supervisor proceeded westward on his track motorcar.

Extra 1712 West passed Laguna about 3:00 p.m. and passed the location of the track force a few minutes later. After the train passed, the track force replaced its track motorcar on the westward main track to return to Laguna and to perform light maintenance work en route. The track motorcar then proceeded eastward against the current of traffic on the westward main track, although it was authorized to move only with the current of traffic in the territory involved. Statements of the track foreman indicate that he elected to operate the track motorcar on the westward main track to avoid having it delayed by eastbound trains, which were running late with respect to times shown in the line-up.

While en route to Laguna, the track motorcar stopped on the westward main track at two or three points and the track force performed maintenance work for short periods on the track structure. It then continued eastward to Laguna, where the track force was due to go off duty at 4:30 p.m. The track motorcar passed the Laguna station point and passed the east switch of the westward siding a few moments later. At this time, the foreman saw that the track car indicator near the switch was illuminated, indicating that no westbound train was closely approaching Laguna on the westward main track. About the same time, he also saw that the track car indicator at the west switch of the eastward siding was not illuminated, indicating that an eastbound train was nearing Laguna on the eastward main track. The track motorcar continued eastward on the westward main track and, shortly before 4:00 p.m., stopped at the track motorcar setoff located 14 feet east of the east switch of the eastward siding, where it waited for the eastbound train to pass. After stopping at the setoff, the track force turned the track motorcar around on the westward main track so that the front end faced westward. It was the track foreman's intention to return westward to the section tool house at Laguna after the eastbound train passed, and to have the trackmen work at the tool house until 4:30 p.m. The eastbound train passed at approximately 4:00 p.m. and the track force reboarded the track motorcar. The foreman then changed his mind and decided to inspect the walls of the cut located 0.8 mile eastward before going off duty. Immediately thereafter, the track motorcar left the setoff and proceeded, in reverse against the current of traffic on the westward main track, en route to the cut. The foreman was at the controls, and the four trackmen were seated at various locations on the track motorcar.

Soon after the track motorcar left the setoff, it entered a curve to the left and the cut where the accident occurred. As it moved at about 20 miles per hour in the cut, the members of the track force heard the horn of Extra 1847 West and saw the headlight of that train come into view a short distance ahead. The foreman reached for the brake lever on the track motorcar. According to a surviving trackman, the foreman apparently grabbed the throttle lever instead and inadvertently applied power, causing the track motorcar to increase speed. The foreman and trackmen then started to jump to the ground. Immediately thereafter, at approximately 4:05 p.m., as it was moving eastward at 20 to 30 miles per hour on the westward main track, the track motorcar was struck by Extra 1847 West, 2.4 miles east of the Laguna station point.

Two of the trackmen were killed. The foreman and one trackman were injured.

Extra 1847 West, a westbound freight train consisting of 4 diesel-electric units, 79 cars and a caboose, left Belen at 2:55 p.m. without the crew members having any knowledge as to the operation of the track motorcar. This train passed Dalies at approximately 3:15 p.m., 2 hours 35 minutes after the time shown on the 5:30 a.m. line-up issued by the train dispatcher, and continued westward on the westward main track. About 50 minutes later, while moving at 49 miles per hour, as indicated by the speed-recording tape, the train entered the curve involved. It then entered the cut in which the collision occurred. At this time, the train also neared a whistle sign for westbound trains. As the engineer was about to sound the locomotive horn, he saw the track motorcar involved approaching on the westward main track, in the cut, a short distance ahead. He promptly sounded short blasts on the horn and applied the train brakes in emergency. The collision occurred immediately afterward, before train speed was reduced.

The 5:30 a.m. line-up was issued by the third-trick train dispatcher, who went off duty at 8:00 a.m. According to statements of the first-trick dispatcher, who relieved the third-trick dispatcher, he did not issue any line-up information to any one concerning the movement of Extra 1847 West on the day of the accident. He stated that someone, apparently the track foreman, telephoned him about 1:30 p.m. and requested the latest line-up information with respect to train movements at Laguna. He further stated that he responded to this request by furnishing line-up information relative to eastbound train movements at Laguna and to the movement of Extra 1712 West. He said he had no knowledge at that time as to when Extra 1847 West would leave Belen, as he had not yet been informed as to when this train would be ready to depart. At 1:53 p.m., evidently after completion of his telephone conversation with the track foreman, he was informed that the crew of Extra 1847 West was called to leave Belen at 2:05 p.m., and that the train actually did not depart until 2:55 p.m.

Under the carrier's rules, line-ups are given as a matter of information and do not relieve track car operators of responsibility. Track car operators must not depend entirely on line-ups but must at all times keep a sharp lookout and take such other measures as will insure safety. Track car operators will at all times keep themselves informed as to train movement so far as possible and by all methods available. Track cars must move with

the current of traffic in the territory involved. Track cars must be run with caution, always keeping a lookout for trains or other track cars, fully protecting by flag when necessary. When two or more employees are with a track car they must flag curves and other places when the view is obstructed.

The investigation disclosed that the track motorcar left the setoff near the east switch of the eastward siding at Laguna shortly after 4:00 p.m., and that it proceeded eastward against the current of traffic on the westward main track to the accident point although it was required by rule to operate only with the current of traffic in this territory. It also disclosed that the track foreman had not requested any line-up information from the train dispatcher since approximately 1:30 p.m., and that he had not received, or requested, any specific information concerning the operation of Extra 1847 West since shortly after 8:00 a.m., when he received his copy of the 5:30 a.m. line-up at Laguna. Although this line-up indicated that Extra 1847 West would pass Laguna at 1:20 p.m., it had not yet passed that point when the track foreman decided to inspect the walls of the cut located a short distance east of Laguna. Nevertheless, the track motorcar left Laguna shortly after 4:00 p.m., and proceeded against the current of traffic on the westward main track to the cut involved without protection against Extra 1847 West or other westbound trains. As the track motorcar approached the accident point, the view eastward was restricted considerably due to track curvature and the north wall of the cut. The track foreman, however, made no provision to provide flag protection against westbound trains, as required by rule under these circumstances.

#### FINDINGS

Extra 1847 West was not restricted with respect to the track motorcar, and the crew members had no knowledge of the operation of the track motorcar until it was seen a short distance ahead in the curve and cut involved. The track foreman apparently overlooked the operation of Extra 1847 West or assumed that there was sufficient time for the track motorcar to proceed to the cut and return to Laguna before Extra 1847 West reached that point. It is evident that he operated the track motorcar against the current of traffic on the westward main track without authority and that if the track motorcar had been operated with the current of traffic on the eastward main track as required, this accident would



have been avoided. It is also evident that the track foreman failed to keep himself informed as to train movements and failed to provide protection for the track motorcar, as required.

### CAUSE

This accident was caused by unauthorized operation of a track motorcar against the current of traffic without protection resulting from failure of the track foreman to take required precautions in operation of track motorcar.

*Dated at Washington, D. C., this 5th day  
of June 1967.*

*By the Federal Railroad Administration,  
Railroad Safety Board.*

Bette E. Holt

*Acting Executive Secretary*

(SEAL)

### APPENDIX

#### *Tracks*

From the east on the main tracks there are, in succession, a tangent 1,572 feet long, and a compound curve to the right having a maximum curvature of 3°09', 1,568 feet to the collision point and 1,788 feet westward. From the east there are, successively, a tangent 1,526 feet and the curve where the collision occurred. The north wall of the cut in which the collision occurred extends 1,050 feet west and 580 feet east of the collision point. In this area, the grade for westbound trains is about 0.50 percent ascending.

#### *Carrier's Rules Governing Operation of Track Motorcars*

1235. Line-Ups.--Track cars will not be placed or moved on main track unless current "Line-Up" is in possession of track car operator.\*\*\*

"Line-Up" of all trains will be issued by the train dispatcher and will be copied on prescribed form.\*\*\* Before leaving the point at which "Line-Up" is obtained, the track car operator will read it aloud to all other occupants of the track car, retain "Line-Up" in his possession until the end of the work period.\*\*\*

\*\*\*

"Line-Ups" are given as a matter of information and do not relieve track car operators of responsibility. Track car operators must not depend entirely on "Line-Ups" but must at all times keep a sharp lookout and take such other measures as will insure safety.

\*\*\*

1238. Informed on Train Movement.--Track car operators will at all times keep themselves informed as to train movements so far as possible and by all methods available, checking from "Line-Ups" trains as they pass. \*\*\*

1239. Movement on Two or More Tracks.--Track cars, must move with the current of traffic; \*\*\*

1241. Flagging.--When two or more employees are with a track car they must flag curves and other places where the view is obstructed. \*\*\*

1252. Run With Caution.--Track cars must be run with caution, always keeping lookout for trains or other track cars, fully protecting by flag where necessary. \*\*\*

#### *Train and Track Motorcar*

Extra 1847 West consisted of road-switcher type diesel-electric units 1847, 1810, 1878, and 1880, coupled in multiple-unit control, 79 cars and a caboose. The brakes had been tested and had functioned properly. The headlight was lighted brightly. As the train approached the collision point the engineer and front brakeman, the only crew members on the locomotive, were in the control compartment of the first diesel-electric unit. The conductor and flagman were in the caboose.

The track motorcar was of the belt-drive type with a one-cylinder 8- to 13-horsepower engine. It was equipped with 4-wheel brakes, windshield, top, headlights and tail lights. It weighed about 990 pounds and had a seating capacity for eight persons. At the time of the accident, the track motorcar was moving in reverse.

#### *Damages*

Extra 1847 West stopped with the front end 2,413 feet west of the collision point. None of its equipment was derailed. The front end of the first diesel-electric unit was slightly damaged.

The track motorcar was derailed. It was moved westward by Extra 1847 West and stopped wedged under the front end of the train locomotive. It was destroyed.

*Other Factors*

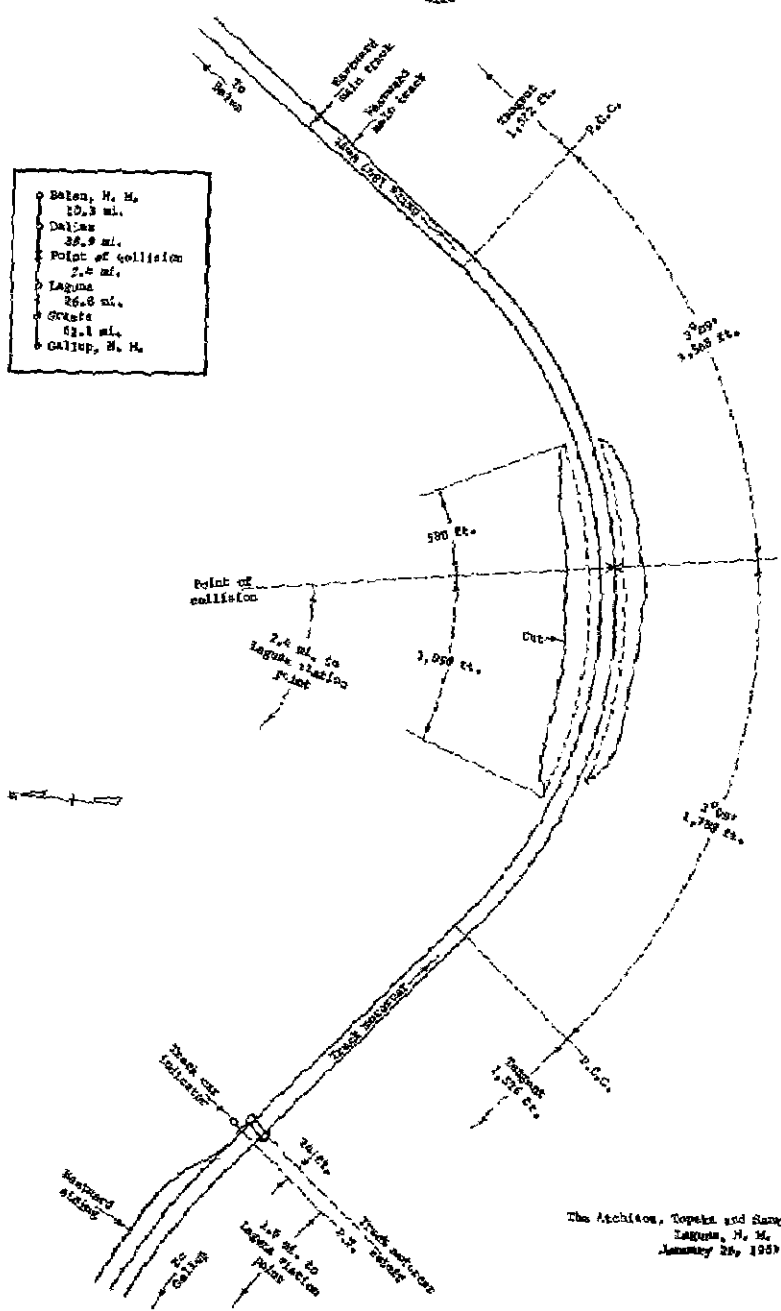
The accident occurred at 4:05 p.m., in clear weather.

The maximum authorized speeds for freight trains and track motorcars in the territory involved are 60 and 30 miles per hour, respectively.

During the past ten years, 37 accidents involving track motorcars have been investigated. The accidents resulted in the death of 50 persons and in the injury of 83 persons.

According to their daily time returns, the engineer, front brakeman, conductor, and flagman of Extra 1847 West had been continuously on duty 7 hours 10 minutes at the time of the accident, after having been off duty 24 hours.

- Balen, N. M. 10.3 mi.
- Dalles 38.9 mi.
- Point of collision 2.2 mi.
- Laguna 26.8 mi.
- Grasta 52.1 mi.
- Gallup, N. M.



The Atchison, Topeka and Santa Fe Railway  
 Laguna, N. M.  
 January 26, 1951