

IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED
ON THE NEW YORK CENTRAL RAILROAD AT ALBANY,
N.Y., ON AUGUST 21, 1917.

October 1, 1917

On August 21, 1917, there was a collision between a runaway freight train and a light engine on the New York Central Railroad at Albany, N. Y., which resulted in injury to one employee. After investigation the Chief of the Division of Safety reports as follows:

The accident occurred on the Mohawk Division at a point about one mile east of the passenger station at Albany and on what is known as West Albany Hill, located between West Albany and Albany. The entire distance between West Albany and Albany, about 3 miles, is in yard limits and trains are operated under automatic block signal and telephone train dispatching systems. The grade between these two points varies from 1 to 1.6% descending for east-bound trains and is known as West Albany Hill.

The train involved in this accident was an east-bound transfer train en route from West Albany to Benneselaer, where trains are classified for points on the Hudson Division, and the Boston and Albany Railroad. This train consisted of 43 loaded cars weighing 2,670 tons. It was hauled by locomotive 3785 and was in charge of Conductor Conklin and Enginemen Baker. A terminal test of the air brakes on this train was made at West Albany about noon on the date of the accident. This test showed that the brakes on 43 of the cars, or about 88%, were in proper working order, giving an average of 62 tons per brake. After the completion of the test, the train stood in the yard at West Albany until about 7 p.m. About 8 p.m., engine 3785 was coupled onto the train and the air pressure was pumped up to 85 pounds in the train line and 110 pounds in main reservoir. Enginemen Baker then made a brake application in the usual manner, and after the trainmen had gone over the train and given him the signal to do so, he released the brakes. Following this, the train stood fully three-quarters of an hour on account of the yard at Benneselaer being blocked.

About 6.30 p.m. the train started for Benneselaer but parted about the fourth or fifth car from the engine, and after coupling up and pumping up the air pressure again, it was necessary to wait some time in order to secure a release

of the brakes. The train finally left West Albany at about 7 p. m., and when it had proceeded a short distance down the hill the engineer claims to have made a running test of the air brakes which brought the train almost to a stop, then released the brakes and when the speed of the train began to increase he made two ten-pound reductions of the air, followed by an emergency reduction, neither of which retarded the speed of the train, and at about 7.08 p.m. it collided with locomotive No. 3720 while running at a speed of about 30 miles an hour, driving engine 3720 backward into switch engine No. 628.

The force of the collision considerably damaged all three locomotives, and caused 23 of the cars in the freight train to buckle and pile up. The weather was clear.

Approaching the point of accident from West Albany, there is a 7-degree curve to the right, 1,060 feet long, with a descending grade of .5% which gradually increases, Black Rock cut being located on this curve. Then there is a 6-degree curve to the left, 1,232 feet long, the grade descending 1.5%; then a tangent 200 feet long on about the same grade; then a 3-degree 31-minute curve to the right, 1,700 feet long, with a descending grade of 1.6%; then a tangent 1,200 feet long on a descending grade of 1.5%; then a 2-degree 45-minute curve to the left 559 feet long, on the same grade; then a tangent 300 feet long on the same grade; then a 6-degree 12-minute curve to the right 840 feet long, on the same grade, then a tangent 400 feet long on the same grade to the point of accident.

Conductor Conklin of the freight train stated that after the engine coupled onto his train at West Albany, an air test was made in the usual manner and the trainmen went over the tops of the cars and turned up the retainers. He walked from the front to the rear end of the train in order to check it, and when he reached the rear end the brakeman signaled the engineer to apply the brakes. He then walked back to the middle of the train and gave the signal to release the brakes. When he reached the front end the engineer told him that he had orders to hold the train because the yard at Renaissance was full. He stated that when the train started to leave West Albany, it parted between the fourth and fifth cars, and he went back there, saw the brakemen coupling up the hose and turning in the air, and after waiting about five minutes to pump up the necessary air pressure they tried to start the train again, but the brakes would not release whereupon he

walked to the rear of the train, tried the release cocks as he went along, and when he reached the rear he opened the angle cock to make sure there was air pressure through the train, and received a strong exhaust of air; after which the brakemen went over the train turning down the retainers and as fast as the brakes were released, turned them up again. He then started toward the head end of the train and got to within 8 or 10 cars from the engine and saw that all the brakes were released, gave the engineman the proceed signal, and the train left there about 7 p.m. He stated that when the train reached Black Rock cut its speed was 10 or 12 miles an hour and the engineman applied the brakes and reduced its speed to about 6 miles an hour, and when it reached signal tower 2, a short distance beyond Black Rock cut, he heard the engineman reverse the engine, and call for brakes, at which time he ran to the rear of the train, opened the angle cock, and received only a slight exhaust of air. The engineman again called for brakes and Conductor Conklin states that he instructed the rear brakeman to run ahead 5 or 6 cars and both began setting hand brakes, the speed of the train at this time being about 25 or 30 miles an hour, and they were still setting hand brakes when the collision occurred, the speed of the train being about 30 miles an hour at that time. After the collision he inspected the undamaged equipment and found all the angle cocks open. He stated that when he went over the train at West Albany he cut out the brakes on two cars, and advised the engineman of that fact. He further stated that they had standing orders to set 10 hand brakes on this hill. He could give no reason why the air brakes failed to control the speed of the train and said he had had no trouble holding trains on this hill on previous occasions. He said that no test of the brakes was made after the train broke in two at West Albany.

Engineman Baker stated that after coupling his engine onto the train at West Albany, a test of air brakes was made, and about three-quarters of an hour later, he started the engine and the train parted. After the conductor and brakeman had coupled the train together he waited long enough to charge the train line to 85 pounds pressure, then made a 15-pound reduction to release the brakes which had applied automatically when the train broke in two, but they did not release, and Air Brake Instructor Dettman, who was on the locomotive, seized the brake valve handle, made another reduction of about 20 pounds and remarked, "There's something wrong here." He stated that the air gauge indicated 85 pounds and 110 pounds train line and main reservoir pressures, and

he heard the usual exhaust when the reductions were made. When the brakes failed to release he thought the train line was overcharged and made the reduction in order to release them. The train crew then went over the train, and released the air brakes, and upon receiving a proceed signal from Bettman, he started the train without any further test of the air brakes having been made. When the train reached Black Rock cut he made a running test of the brakes with a 7-pound reduction while running at a speed of about 5 miles an hour, heard the usual exhaust of air, and the brakes applied properly and reduced the speed of the train. When the speed began to increase he made a reduction of 10 pounds, heard the usual exhaust, but the brakes did not apply; he then made another 10-pound reduction, then placed the brake valve in emergency position, applied the straight air brakes on the engine, and when none of these applications had any effect he released the straight air brakes, reversed the engine, and sounded the whistle for brakes, and shortly thereafter his train collided with the light engine. He admitted that after the train broke in two they should have made a regular test of the air brakes as required by the rules, but did not think it necessary because the brakes were already applied and he considered the brakes to be in good condition.

Fireman Johnston stated that when his train had reached Black Rock cut the engineer made an application of the air brakes and the exhaust was strong, but when the brakes were released the train seemed to push forward and the engineer made a second application of the brakes, but they did not seem to take hold; the engineer then placed the brake handle in emergency position, the train line pressure at that time being 70 pounds, but when the brakes did not apply the engineer reversed the engine.

Lead brakeman Togle stated that when the train broke in two at West Albany he closed the angle cock on the rear car of the head portion of the train, made the necessary couplings, and then opened the angle cock slowly. When questioned further he stated that he was positive he opened the angle cock after making the necessary couplings, and that there was a good flow of air through the train. He stated that after waiting 15 or 20 minutes to secure the desired air pressure the engineer attempted to start the train but could not do so on account of the brakes being still applied, whereupon he and the rear brakeman went over the cars, turned down the retainers long enough to release the brakes, and then turned them up again. The train left West Albany with two hand brakes

set and shortly after it started he began setting more hand brakes and had set about 10 when the train reached Black Rock cut, at which place the engineman made a running test of the air brakes and brought the train almost to a stop. Shortly after making this test the speed of the train gradually increased and when the engineman sounded the whistle for brakes he began setting hand brakes and had set about 7 more, or a total of 17, when he jumped from the train. Brakemen Doyle stated that no test of the air brakes was made after coupling the train after the break-in-two at West Albany, and it was not customary to make such tests under such circumstances, although he knew that the rules required it. He could give no reason why the air brakes failed to hold the train on the hill.

Signalman Cahouten stated that he was on duty at signal station No. 2 and saw the freight train pass there about 7.06 p.m. at a speed of about 45 miles an hour, the engine being in reverse motion, and fire was flying from the wheels. He stated that he saw one man about the center of the train setting hand brakes, and two men on the rear of the train trying to set hand brakes, but they were unable to do so on account of the great speed of the train.

Assistant Superintendent Hisey stated that the practice at West Albany was for car inspectors and air brake inspectors to go over the trains, the air brakes being tested with the yard air pressure. After the road engine is coupled to the train the crew is required to make a terminal test of the brakes before leaving, and after a car has been cut out or picked up, or anything has happened to the train line, a brake test is required before proceeding. He stated that the terminal test consisted of the engineman applying the air brakes and the conductor and other members of the crew would then go along the train and note whether the brakes had applied, then the engineman would release the brakes and the crew would go over the train again and ascertain whether all the brakes had released. He stated that they had been handling trains on this hill with the air brakes since September 1, 1916, but that the crews are required to set at least 10 hand brakes before starting down the hill, this being an extra precaution. He also stated that they required the trains to have at least 85% of the air brakes operating.

Air Brake Instructor Dettman stated that he went on duty at West Albany at about five minutes to 7 p.m., saw the crew of the freight train trying to get their train started, got on the engine and made a 10-pound reduction, and when he heard no exhaust of the air remarked to the engineman, "You ain't

got your air; something is the matter." He then got off the engine, walked back 30 or 35 car lengths with the conductor, releasing the brakes by hand, and was coming back toward the engine and when within about 15 car lengths of it, gave the engineman a signal to try the brakes and said, "are you all right" which the engineman evidently took for a signal to proceed. The train then started and he got on one of the cars and crossed over to the opposite side of the train, released the bleed cocks on a few cars as they passed him to ascertain whether there was air in the auxiliary reservoir and the train went on down the hill. He said that when he made the reduction and heard no exhaust, that indicated to him something was shut off, probably an angle cock being closed, and he went back over the train to find out what the trouble was; he examined some of the cars on the head end and found no closed angle cocks. He stated that he did not feel sure the train was in proper condition to go down the hill, but when it started the engineman was out of sight and he could not signal him to stop.

This accident was caused by the failure of the crew of the runaway train to make a proper test of the air brakes, as required by rule, before starting their train from West Albany, for which failure Conductor Conklin and Engineman Baker were primarily responsible.

Rule 44 of the New York Central book of rules governing the operation and supervision of air brakes reads as follows:

"Whenever the consist of a train has been changed, or an angle cock has been closed, standing brake tests must be made to the extent of knowing that all angle cocks have been opened and that brakes apply and release in response to manipulation of the engineman's brake valve."

Rule 43 reads as follows:

"Engineman must test the air brakes by making an application that will satisfy him that the brakes can be operated from the engineman's brake valve, and if he finds that they cannot be, must at once signal for brakes."

This test must be made when engines have been changed, or at other times after parted hose has been recoupled; also a sufficient distance (so that the train can be stopped by hand brakes) from drawbridges, railroad crossings and other hazardous places and before going down heavy grades."

These rules were not complied with after the train parted, and notwithstanding the statement of Brakeman Hogle, it is believed that he failed fully to open the brake pipe after making the coupling. No other member of the train crew actually saw Brakeman Hogle open both angle cocks; in fact, there were conflicting statements as to where the break-in-two occurred. Conductor Conklin on one occasion said the break was between the second and third cars, and on another that it was between the fourth and fifth cars; Engineman Baker said that when the break occurred there were three cars attached to the engine, and Brakeman Hogle said there were five, and Air Instructor Dettman when asked between what cars the train was broken in two, replied, "One tells me the third car and one tells me the fifth."

When Instructor Dettman warned both Engineman Baker and Conductor Conklin that there was something wrong with the air, after he had made a reduction at the brake valve, they should have been especially careful not to start their train until absolutely certain the brakes were in proper condition. This knowledge could only have been obtained by making the test required by the rules.

There is no evidence that any serious difficulty has been experienced heretofore in controlling the speed of trains on this grade with the air brakes, and there is no reason to believe that the speed of the train involved in this accident could not have been so controlled if the brakes had been tested and put in proper condition before attempting to descend. After the accident the air brake apparatus on engine 3705 and the 26 remaining cars of the train were tested and found to be in good condition.

Attention is called to the fact that, although the yard test of the brakes on this train showed six inoperative brakes, thus reducing the percentage of operative brakes to very near the legal minimum, and increasing the tonnage per brake to an abnormal figure, there was apparently no attempt made to repair the inoperative brakes, notwithstanding that the train stood in the yard at least six hours after the test was made.

Engineman Baker was employed in 1890, suspended 90 days in 1907, 9 days in 1912, and 10 days in 1913 for responsibility for collisions, and suspended 10 days January 30, 1917, for running through a derail. Conductor Conklin was employed in 1891, discharged in 1907 for responsibility for an accident,

re-employed in 1910, suspended twice and reprimanded once since that time for minor offenses. Brakeman Hogle was employed on January 1, 1916, and was suspended 10 days for demolition of a car. All of the other employees involved had good records and none had been on duty in violation of the hours of service law.

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