

SUMMARY FOR FE-13-03
SELECTED AND POSSIBLE CONTRIBUTING FACTORS

SELECTED FACTORS

Railroad: Burlington Northern Santa Fe Corporation
Location: Buena Park, California
Region: 7

Month: June
Date: June 8, 2003
Time: 1:40 a.m., PST

Data for Fatally Injured Employee(s)

Conductor
34 years old
6 years of service
Last rules training: July 7, 2002
Last safety training: March 31, 1999
Last physical: March 29, 1996

Data for All Employees (Craft, Position, Activity)

Craft: Transportation and Engine

Positions:

Train Z-KCKLACI-05 (BNSF 5351 West)

Conductor
Engineer

Train M-BARPICI-07 ("M" Train)

Crew members (not specified)

Train Dispatcher

Activity: Operating train from Barstow, California, to Los Angeles, California

EVENT

A Conductor sustained fatal injuries after jumping from the leading locomotive of his train while traveling at 39 miles per hour.

SUMMARY FOR FE-13-03 CONTINUED

POSSIBLE CONTRIBUTING FACTORS

PCF No. 1

Visual obstructions at nighttime created confusion and panic.

(Explanation: After passing the green signal at Basta, which authorized the train to proceed, the crew members of BNSF 5351 West noted that the next signal at Buena Park was obstructed by track curvature and a building next to the right of way. Compounding the confusion, the crew members saw an illuminated light, which at first they thought might be on the building, but then decided was a locomotive's headlight on dim. Because of their line of sight, the light appeared to the crew members to be the headlight of an oncoming train, but it was unclear whether the train was on their track or the adjacent main track.)

PCF No. 2

The Engineer and Conductor could not agree on what action to take, and did not work together effectively to respond to the perceived emergency.

PCF No. 3

As the train slowed down to 39 mph, the Conductor ran past the Engineer, opened the rear door behind the Engineer, ran out onto the exterior walkway to the end of the locomotive, and jumped, despite admonitions from the Engineer not to do so, and also in non-compliance with the railroad's operating rules regarding de-boarding moving equipment.

Additional Information

The light that the crew of BNSF 5351 West had observed was the dim headlight on a helper locomotive located on the rear of the "M" train, which was standing on the adjacent track. The BNSF 5351 West stopped on Main Track One, about 300 feet from the helper locomotive.

REPORT: FE-13-2003

RAILROAD: Burlington Northern Santa Fe Corporation (BNSF)

LOCATION: Buena Park, California

DATE & TIME: June 8, 2003; 1:40 a.m., PST

EVENT¹: The Conductor sustained fatal injuries after jumping from the leading locomotive of his train while traveling at 39 miles per hour.

EMPLOYEE: Craft: Transportation and Engine (T&E)

Activity: Operating train from Barstow, California to Los Angeles, California

Occupation: Conductor

Age: 34 Years

Length of Service: 6 Years

Last Rules Training: July 7, 2002

Last Safety Training: March 31, 1999

Last Physical Exam: March 29, 1996

CIRCUMSTANCES PRIOR TO THE ACCIDENT

A Los Angeles-based train crew comprising a Conductor and an Engineer reported for duty on June 7, 2003, at 7 p.m., PST at Barstow Yard, Barstow, California, after receiving their statutory off-duty rest period. The crew was called to operate Train Z-KCKLAC1-05 (BNSF 5351 West) from Barstow, California to Los Angeles, California. The train crew, after receiving the initial Track Warrant and Track Bulletin at Barstow Yard, operated from Barstow to Los Angeles over two subdivisions, the Cajon Subdivision, between Barstow and San Bernardino, and the San Bernardino Subdivision, from San Bernardino to Los Angeles.

The BNSF 5351 West was an intermodal train with three locomotives, 65 loads, and no empties. It weighed 4,500 tons and was 6,013 feet long. The train originated at the BNSF terminal in Kansas City, Kansas. The initial terminal air brake test was performed at the BNSF Yard in Kansas City prior to the train departing, and the required 1,000-mile air brake inspection was performed at Belen, New Mexico.

¹ “Event is defined as “occurrence that immediately precedes and directly results in the fatality.” Possible contributing factors are identified in the following report and attached summary.

The BNSF 5351 West departed Barstow Yard at 12:35 a.m., on June 8, 2003, en route to Los Angeles, California. At the time of the incident, the train was being operated westbound on the Southern California Division, San Bernardino Subdivision of the BNSF. The method of operation was Centralized Traffic Control or CTC.

The maximum authorized speed on this subdivision was 50 mph for freight trains and 79 mph for passenger trains.

On June 8, 2003, the BNSF 5351 West had followed a westbound manifest Train M-BARPIC1-07 ("M" train) from San Bernardino, on the San Bernardino Subdivision, to Fullerton Junction, on Main Track Two for a distance of 45.5 miles. At about 1:30 a.m., the Train Dispatcher lined the crossover switches at Fullerton Junction from Main Track Two to Main Track One to allow BNSF 5351 West to pass the M train. The signal at Fullerton Junction displayed a red over green aspect. This authorized the train to operate through the crossover switches and onto Main Track One, then continue at the maximum authorized speed. The next signal they passed was at Basta, which displayed a green aspect, authorizing the train to proceed. The next signal at Buena Park was obstructed by track curvature and a building next to the right of way.

The terrain in this area was a descending grade of 0.23 percent with some sweeping curves between Fullerton Junction and Buena Park. West of Basta, the track curved to the right, beginning with a 1 degree and 27 minute curve and continuing with a 1 degree and 13 minute curve to the right, proceeding westward to just east of Buena Park.

The Engineer was seated at the locomotive controls, and the Conductor was seated on the opposite side of the control compartment of the leading locomotive. After passing Basta, they began to discuss whether a building ahead of them had an illuminated light, or if they were looking at a locomotive with the head light on dim. They decided it was not a light on the building. The Engineer started the conversation with the Conductor by asking the location of the M train. The Conductor replied that he thought that there was an opposing train operating on their track (Track One). Because of their line of sight, the light appeared to the crew of BNSF 5351 West to be the headlight of an oncoming train. As the crew members talked, the Conductor became more convinced that they were going to be involved in a head-on collision. Because they could not determine what track the train ahead was on, the Conductor wanted to stop the train. The Engineer said that they had just passed a control signal displaying a green aspect for Main Track One, and the green signal aspect would indicate that the headlight was not on the same track as they were.

As the Conductor became more concerned, the Engineer made a full service application of the train's air brake system. The Engineer reduced the throttle to idle and placed the locomotive controls in the dynamic brake position. The Engineer told the Conductor that he could stop the train before they reached the other locomotive. The Engineer advanced the dynamic brake selector to throttle eight (full dynamic brakes). The Conductor shouted, "This is not good enough; This is not good enough! We are going to have a head-on collision with the oncoming train!" The Engineer told the Conductor again, "I can stop our train before we reach the other train, if the other train is on Main Track One. The other train must be stopped because the head light is on dim."

The train had slowed down from 50 mph to about 49 mph when the Conductor pulled his emergency brake handle located on the Conductor's side of the locomotive cab, which initiated an emergency application of the train's air brake system.

THE ACCIDENT

As the train was slowing down to about 39 miles per hour, the Conductor ran past the Engineer, opened the rear door behind the Engineer, ran out onto the exterior walkway, and continued down the walkway to the end of the locomotive. The Engineer called to the Conductor, "Don't jump; we are going to stop." The Conductor, believing that a head-on collision was imminent, jumped from the locomotive and sustained fatal injuries.

After the BNSF 5351 West stopped, the Engineer contacted the Train Dispatcher and informed him that the Conductor had jumped from the train. He advised the Train Dispatcher of their location and asked that emergency personnel be directed to their location.

Emergency response personnel arrived, and the Conductor was pronounced dead at the scene.

POST-ACCIDENT INVESTIGATION

The light that the crew of the BNSF 5351 West had observed was the dim headlight on a helper locomotive located on the rear of the "M" train which was standing on Main Track Two. The BNSF 5351 West stopped on Main Track One, approximately 300 feet from the helper locomotive on the rear of the "M" train standing on Main Track Two.

The Conductor was taken to the Orange County Morgue, in Santa Ana, California, where a Federal post-accident toxicological test was performed by the Coroner on duty. The Engineer received a Federal Post-Accident Toxicological Test at the Los Angeles Medical Clinic. All test results were negative.

The Buena Park Police Department, Buena Park Emergency Response Team, and Orange County Coroner responded to the scene.

APPLICABLE RULES

Burlington Northern Santa Fe Railroad

Burlington Northern Santa Fe Railroad Employee Safety Rules, Effective January 31, 1999, (including revisions up to Tuesday, June 25, 2001)

S-1.4.5 On or Off Moving Equipment

Do not get on or off moving equipment, except in an emergency to avoid injury.

S-13.5.2 Getting off Equipment

B. Moving Equipment

- Face the direction the equipment is moving.
- Get off with the trailing foot first to direct you away from the equipment.
- When getting off a caboose, walk down the steps, turn at the bottom step and face the car, then get off.
- Avoid jumping to the ground from a rail car or an engine ladder, step platform or deck.

General Code of Operating Rules, Fourth Edition, Effective April 2, 2000.

1.1.1 Maintaining a Safe Course

In case of doubt or uncertainty, take the safe course.

1.1.2 Alert and Attentive

Employees must be careful to prevent injuring themselves or others. They must be alert and attentive when performing their duties and plan their work to avoid injury.