National Transportation Safety Board

Office of Railroad, Pipeline and Hazardous Materials Investigations

Washington, D.C. 20594

BNSF – Head on Collision

Panhandle, TX

June 28, 2016

Mechanical Group Factual

Accident

NTSB Accident Number:	DCA16FR008
Date of Accident:	June 28, 2016
Time of Accident:	8:21 a.m. (CDT)
Type of Trains:	Freight
Railroad Owner:	BNSF
Train Operator:	BNSF
Fatalities:	3
Injuries	1
Location of Accident:	Panhandle, TX

Mechanical Group Members

National Transportation Safety Board-Group Chairman
Joey Rhine
490 L'Enfant Plaza East, SW
Washington, D.C. 20594
Office: [redacted]
Cell: [redacted]
E-mail: [redacted]

Federal Railroad Administration
Stacy Stokes
Fort Worth, TX
Cell: [redacted]
E-mail: [redacted]

BNSF Railway
Roy Jackson
Kansas City, KS
Cell: [redacted]
E-mail: [redacted]

Synopsis

On Tuesday, June 28, 2016, at approximately 8:21 a.m. central daylight time (CDT), two BNSF Railway (BNSF) intermodal trains collided about MP 525.42 on the BNSF's Panhandle Subdivision. Each train was crewed by a locomotive engineer and a conductor. Eastbound train S-LACLPC1-26K, consisting of three head-end locomotives, two distributive power locomotives, and 56 loaded cars collided with westbound train Q-CHISBD6-27L, consisting of five head-end locomotives and 54 loaded cars. The westbound train was routed into the Panhandle siding at milepost 526.1. The collision occurred about one-half mile east of the east switch of the Panhandle siding. Investigators examined the east switch of the Panhandle siding and observed a run through switch condition.

As a result of the collision and derailment there was a significant fire. Three crew members were fatally injured in the accident. The engineer of the westbound train jumped before impact and survived with minor injuries.

This area of the BNSF Panhandle Subdivision utilizes a Traffic Control System which is controlled by a dispatcher in Kansas City, Kansas which is without an active Positive Train Control system. No passenger trains operate through this territory.

BNSF has reported initial damage estimates of $16 million dollars; this estimate includes $12 million in car and equipment, $3.5 million in lading, and about ½ million dollars in track and signal damage.

The general weather conditions at the time of the accident were daylight, 74F°, clear skies with visibility of 10 miles, and 6-12 mph shifting wind.

Parties to the investigation are the Federal Railroad Administration (FRA), BNSF Railway (BNSF), the International Association of Sheet Metal, Air, Rail, and Transportation Workers (SMART), and the Brotherhood of Locomotive Engineers and Trainmen (BLET).

Figure 1 Photo of locomotive BNSF 8191 after being cleared from collision area.

Train Consist

S-LACLPC1-26K

The eastbound S-LACLPC1-26K consisted of three forward facing locomotives and a rear end distributed power consist that consisted of two locomotives positioned back to back. The loaded 56 car (108 platforms) train was 10,209 feet long including the locomotives and weighed 9,120 tons.

1. BNSF 5162 Fwd GE C44-9W Built 2004
2. BNSF 7838 Fwd GE ES44DC Built 2010
3. BNSF 3967 Fwd GE ET44C4 Built 2015
4. BNSF 8234 Fwd GE ES44C4 Built 2014 DPU
5. BNSF 3970 Back GE ET44C4 Built 2015 DPU

Q-CHISBD6-27L

The westbound Q-CHISBD6-27L consisted of four forward and one rearward facing locomotive. The loaded 54 car (87 platforms) train was 8,497feet long including the locomotives and weighed 7,451 tons.

1. BNSF 5416 Fwd GE C44-9W Built 2000
2. BNSF 7553 Fwd GE ES44DC Built 2007
3. BNSF 7907 Fwd GE ES44DC Built 2010
4. BNSF 8191 Fwd GE ES44C4 Built 2014
5. BNSF 5212 Back GE C44-9W Built 2004

Accident Sequence

A preliminary review of event recorder data indicates that the eastbound S-LACLPC1-26K was approaching the POC at MP 525.42 on the BNSF's Panhandle Subdivision traveling at 65 mph with the throttle position in notch 4. The last throttle response was 41 seconds prior to the PCS switch being opened.

A preliminary review of event recorder data indicates that the westbound Q-CHISBD6-27L was approaching the POC at MP 525.42 on the BNSF's Panhandle Subdivision traveling at 35 mph. The throttle position was in notch 4 then progressed to the dynamic braking position. The PCS was opened 16 seconds prior to the speed reaching 0 mph.

Wreckage Description

S-LACLPC1-26K

BNSF 5162 derailed landing on its right side. It sustained heavy structural and fire damage with only the cab compartment remaining attached to the locomotive frame.

BNSF 7838 was totally destroyed with only the frame remaining.

BNSF 3967 derailed remaining upright. The cab and engine compartment received heavy damage. The trucks were detached and missing.

Distributed power locomotives BNSF 8234 and BNSF 3970 did not derail and received no damage.

Freight cars 1 through 9 derailed during the incident receiving heavy to total damages, and car 21 derailed.

Q-CHISBD6-27L

BNSF 5416 was totally destroyed with only the frame remaining.

BNSF 7553 derailed remaining upright. The cab compartment was torn off and the engine compartment received heavy fire and structural damage.

BNSF 7907 derailed remaining upright receiving heavy damages to the front pilot assembly and platform.

BNSF 8191 derailed upright with moderate structural and truck damages.

BNSF 5212 derailed landing on its left side. The cab compartment was torn open and the engine compartment received moderate structural damages.

Freight cars 1 through 2 derailed during the incident and received heavy to total damages, and car 3 derailed one truck.

Total locomotive damages are $8,627,394

Total car damages are $2,033,294

Pre-Departure Inspections

On June 26, 2016, a Class I Air Brake test and Pre-departure inspection was conducted on the S-LACLPC1-26K in Los Angeles, California by BNSF Qualified Mechanical Inspectors.

On June 27, 2016, a Class I Air Brake Test and Pre-departure inspection was conducted on the Q-CHISBD6-27L in Chicago, Illinois by BNSF Qualified Mechanical Inspectors.

All inspections and tests were completed in accordance with 49 CFR parts 215 and 232.

Equipment Post Accident Inspections

On June 29, 2016 the mechanical group conducted an air brake test on cars 10-56 on the S-LACLPC1-26K with no exceptions taken. The brakes applied and released as required.

On June 29, 2016 the mechanical group conducted an air brake test on cars 3-54 on the Q-CHISBD6-27L with no exceptions taken. The brakes applied and released as required.

Evidence Collected

Eastbound Train

5162 Recovered an extremely burnt dvr

7838 Nothing recovered

3967 Recovered a burnt event recorder box

8234 have .dat file(.dat file sent)

3970 have .dat file(.dat file sent)

Westbound Train

5416 Nothing recovered

7553 Recovered a burnt event recorder

7907 Recovered the event recorder and dvr (.dat file sent)

8191 Recovered the event recorder and dvr

5212 Recovered the event recorder and dvr

Locomotives on the scene siding

7911 have dvr

5451 have dvr

Documentation Received

Train list
Weight list
Any diagrams & photos of accident scene
Aerial photos of accident scene (if available)
Event Recorder data download
Forward facing camera download
Locomotive/Railcar maintenance records and/or repair records
FRA form F6180-49A inspection records and/or repair records
Daily inspection

Air brake test inspection certificate

Hot box data

WILD data

TPD data

Dragging equipment data

Waybills

Rear End Device inspection/calibration record

Air gauge certification

Group Member to the Investigation – Acknowledgement Signatures

The undersigned designated *Group Member to the Investigation* representatives attest that the information contained in this report is a factually accurate representation of the information collected during the on scene phase of this investigation, to the extent of their best knowledge and contribution in this investigation.

_____ Date _____

Joey Rhine, NTSB

_____ Date _____

Stacy Stokes, FRA

_____ Date _____

Roy Jackson, BNSF