Brotherhood of Locomotive Engineers and Trainmen

A Division of the Rail Conference
International Brotherhood of Teamsters

Safety Task Force

CLEVELAND, OHIO

Before the National Transportation Safety Board

NTSB Accident Number: DCA-11-FR-002

Class: Major

April 17, 2011

Proposed findings, probable cause, and safety recommendations, in connection with the rear-end collision of an eastbound BNSF Railway freight train (C-BTMCNMO-26) striking a standing BNSF Railway Maintenance of Way train (U-BRGCRI-15), near Red Oak, Iowa, resulting in two fatalities, a derailment, and subsequent fire.

William C. Walpert, BLET-Safety Task Force, National Chairman
Carl W. Fields, BLET-Safety Task Force, Party Spokesman

FINAL SUBMISSSION

ACCIDENT SYNOPSIS

On April 17, 2011 at about 6:55 a. m. central daylight time, BNSF eastbound coal train C-BTMCNMO-26, collided with the rear end of a standing BNSF maintenance of way (MOW) equipment train U-BRGRCRI-15, near Red Oak, Iowa. The accident occurred at milepost (MP) 448.4 on main track number two on the Creston Subdivision of the BNSF Nebraska Division. The striking coal train was recorded at impact to be traveling approximately 23 mph when it struck the standing MOW equipment train.

As a result of the collision, the two leading BNSF locomotive's (9159-6133) of the striking coal train derailed along with the first two coal cars. The BNSF 9159 lead locomotive's modular crew cab became detached, partially crushed and involved in a subsequent diesel fuel fire. The second locomotives fuel tank was breached causing spilled fuel to catch on fire. Seven additional coal cars were damaged by raking, but were not derailed. The ten rear cars of the standing MOW equipment train were derailed.

Both the engineer and conductor of the striking coal train were fatally injured in the collision. The engineer and conductor on the locomotive of the standing MOW train experienced

non-life threatening injuries. Damages are estimated to exceed $8.5 million dollars. The weather at the time of the incident was reported as five miles visibility with mist, with a temperature of 30 ° at Red Oak airport, which is approximately two and one-half miles east of the accident location.

The striking coal train's locomotive event recorder reflected that before the collision, their train speed increased and the throttle was decreased, as the train crested a hill west of the accident site. The last throttle activity occurred 1 minute and 53 seconds prior to impact. The train's brakes were not applied prior to impact.

ACCIDENT NARRATIVE

Standing Maintenance of Way (MOW) train

The engineer and conductor of the MOW train went on duty in Lincoln, Nebraska at 1:15 a.m. and they departed at approximately 3:15 a.m. At railroad control point (CP) 4580 the MOW train entered the number two main track behind two eastbound coal trains. The MOW train then stopped at a red stop signal at CP 4535 (MP 453.5). The two non-incident coal trains ahead of the struck MOW train continued to proceed eastward as the traffic pattern allowed. The MOW train followed them next receiving a yellow (Approach) signal at CP 4535. The MOW train then encountered and received a red (Restricting) "G" (Grade) plate signal at MP 450.38, continuing at restricted speed until stopping approximately 300 feet behind the second non-incident coal train, which was stopped at CP McPherson.

While these two trains were stopped at the east end of main number two on the multiple tracks at CP McPherson, Amtrak train No. 6 passed them eastward on Main No. 1, at approximately 6:22 a.m. The second non-incident coal train then received a signal to proceed east and followed Amtrak No. 6. The MOW train then followed and stopped at the red (Stop) signal at CP McPherson.

Striking Coal train

The engineer and conductor of the striking coal train went on duty in Lincoln, Nebraska at 2:31 a.m., departing approximately at 3:45 a.m., with 130 loads, zero empties (130 x 0), 18, 529 trailing tons, and 7,122 feet in length (including the three locomotives). At about 6:08 a.m. as the coal train was stopped at Balfour (MP 467.9), Amtrak train No.6 on Main number one, passed the striking coal train at Balfour. Once the striking coal train was passed by Amtrak No. 6, it received a signal to proceed eastbound where it traversed from multiple to single back to multiple main tracks at CP 4580 on the number two main track. Maximum track speed at the accident location was 79 mph for passenger trains and 60 mph for freight trains. The striking coal train was further restricted to 45 mph because the train's tons per operative brake (TPOB) exceeded 100 (actual TPOB was 142.5).

Signal system recorder and dispatcher data records reflected that the striking coal train passed a yellow (Approach) signal at CP 4535 and then received a red (Restricting) "G" (Grade) plate signal at MP 450.38 which protected the rear end of the standing MOW train at CP McPherson.

According to locomotive event recorder data from the striking coal train, it passed CP 4535 at approximately 30 mph in throttle position 1. The striking coal trains speed reduced to approximately 12 mph as the throttle was in position 7, when the train passed the red (Restricting) "G" plate signal at MP 450.38 approaching the top of the 0.6% grade. Until reaching MP 449.4 (the milepost numbers were decreasing in an eastward direction) the striking coal train maintained the speed between 11 and 12 mph using throttle reductions. As the striking coal train crested the grade, its speed increased from 11 mph to 23 mph at the point of collision. At impact, the throttle was in position 4 and the train brakes were not applied.

The Collision

The striking coal train collided with the rear car of the standing MOW train at about MP 448.4, on Main number two track. The rear car of the 34-car MOW train (Herzog clip car HZGX 150) was crushed and ejected to the north. Its wheel set was lodged underneath the front pilot plate of the striking trains lead locomotive (BNSF 9159). Several other pieces of the derailed equipment came to rest on the Main number one track. At the same time of the collision, the signal circuit on the Main number one track registered a track occupancy indication at the BNSF Network Operations Center (NOC) in Fort Worth, TX. Based on locomotive event recorder and signal system recorder data, the time of the collision was a few seconds after 6:55 a.m.

The striking coal train traveled about 690 feet post impact. The locomotive event recorder data indicated that following impact, the train speed dropped from 23 mph to 21 mph and then

the emergency brakes applied. The event recorder data indicated that neither the engineer nor the conductor activated the brakes before or after the impact.

As the MOW train was stopped at CP McPherson, the crew felt a strong impact that shoved their train forward approximately 17 feet (per the locomotive event recorder). The engineer looked back at the rear end of their train when he observed a large smoke plume and fire and called 911. He then ran back to the area to assess and assist with the situation when he observed the lead locomotive of the striking coal train (BNSF 9159) was on fire.

Struck train

The MOW equipment train consisted of one locomotive, twenty-one loads and 13 empties (21 x 13 = 34 total), 3,170 feet in length including the one locomotive. The last car of their train, clip car HZGX-150, was the first car struck by the BNSF 9159 locomotive. It is a diesel engine powered self-propelled unit that can be coupled into a train for transport. The car was manufactured by Herzog Railroad Services, Inc. by altering a gondola car originally purchased by BNSF weighing 177,000 lbs, and is 54 feet in length. The clip car was folded roughly in half (by collision forces) and ejected to the north side of Main track No. 2, catching on fire (300 gallon diesel fuel tank). The powered wheel set from the clip car became lodged at the base of the BNSF 9159 locomotive, and carried to the final resting point.

The next to the last car was BNSF 927022, an 89-foot long flat car equipped with a Kershaw 'Scorpion Ramp' roll-up loading ramp. The Scorpion Ramp consists of six segments tied together with pin joints and hydraulic rams. In its stored position, the ramp takes the shape of a square. When the ramp is fully open and extended, it is 52 feet 8 inches long. The ramp is

powered by a diesel engine. The fuel tank holds 11.5 gallons and the hydraulic fluid tank has a capacity of 25 gallons. This car was originally designed by Bethlehem Steel in 1974 and weighs 155, 400 lbs. The struck end of this scorpion car overrode and came to rest on top of the BNSF 9159 with the Scorpion Ramp extended approximately 24 feet across the top of the locomotive.

The next four cars (32-29) were 89-foot long flat cars loaded with MOW machines, and were ejected to the north side of Main track No. 2 in the area near the overhead bridge. Most of the MOW machines broke free from their supports, and were scattered along the right-of-way. The next three cars (28-26) were 89-foot long flat cars also loaded with MOW machines. These cars, along with the scorpion car, came to rest pitched against each other in an overriding fashion and leaning against the front end of BNSF 9159. The distance traveled by the striking coal train from the point of collision to the final resting position was estimated to be 690 feet.

Overhead Bridge

The west-facing side of the county highway bridge located about 477 feet east of the collision point showed signs of recent damage. The damage appeared along the concrete face and the I-Beam directly above the centerline of Main track No. 2. The overpass height was measured at 22' from the top of the rail to the bottom of the I-Beam. The I-Beam flange was partially sheared and rolled upward toward the overpass surface.

Lead Locomotive BNSF 9159

The lead locomotive of the striking coal train was BNSF 9159, operating short hood forward. It sustained extensive frontal damage. It derailed, however the unit stayed upright and generally in line with the track. This was an Electro-Motive Division (EMD) style SD70ACe style locomotive manufactured in 2008 and built pursuant to a crashworthiness design standard as prescribed in the AAR Standard S-580, revision date 2005. The locomotive measures approximately 74 feet long, 10 feet wide and 16 feet high. It weighs approximately 420,000 lbs. The locomotive was equipped with a video recorder, however due to extensive damage; the video data was not able to be recovered.

Approximately 16 feet of the front end of the locomotive was compromised as a result of the collision. The front coupler assembly was sheared off just aft of the knuckle. The short hood and collision posts, normally positioned perpendicular to the deck, were pushed and deflected at an angle of approximately 35° to 40° in the direction of the cab compartment. The end plate, snowplow, anti-climber, short hood, and collision posts were severely damaged and deformed. A major impact area was identified on the front doorway frame of the operating cab. The frame was found to be split at the top right. The inner doorway, or vestibule, floor area had indications of severe loading and was bent rearward and upward.

Modular Cab Design

This model locomotive is equipped with an isolated or "Quiet" cab that is designed to improve crew comfort by reducing both vibration and sound levels. The quiet cab is a modular self-contained assembly that is mounted atop the deck of the locomotive between the short hood

and the electrical cabinet. It measures approximately 9 feet 3 inches in height, 9 feet 6 inches in length, and 10 feet wide, weighing about 10,000 lbs. The cab is bolted in place at its rear floor underside on two cylindrical hollow posts welded to the top plate of the locomotive. The rear operating cab attachment fixtures consist of two steel hollow cylindrical posts, approximately 10 inches in diameter, which are welded to the deck. Welded atop these sections are square plates, or flanges, to which the rear section of the cab is bolted.

The cab was separated from the deck of the locomotive and the bottom half of the cab rotated up just over 90°. The left rear corner was crushed inward toward the interior. The windshield area was pushed back relative to the deck, but rotated forward, relative to the lower portion of the cab. The roof moved forward, relative to the lower portion of the cab, and also rotated back somewhat more than 90°, relative to the deck. The cab was crushed at the rooftop in a manner consistent with rolling into the electrical locker. The electrical locker indicated it had been crushed at the upper right hand side and pushed back 25- ½ inches . The cab side walls remained intact to the point of the window line, which is approximately 4 feet from the roof. The underside of the cab was relatively intact and undamaged. The entire cab had extensive fire exposure and damage.

The modular cab of the locomotive sustained a substantial loss of occupied space. The estimated amount of survivable space in the cab was 65 cubic feet. The 5000 gallon fuel tank that is mounted to the under frame was not breached.

Alerter System on BNSF 9159 Locomotive

Most BNSF road locomotives are equipped with an "electronic alertness device," commonly referred to as an alerter. Alerters are designed to assist in maintaining the vigilance of the crew members in the locomotive cab and to apply train brakes should the device detect inactivity for a period of time that exceeds the programmed monitoring cycle. The BNSF 9159 was equipped with an alerter device; its event recorder captured alerter alarms.

From 3:05:00 a.m. to 6:53:02 a.m. on April 17, 2011, there were 32 alerter alarms recorded. The attached table (Attachment A) provides information during the 12 minutes preceding the collision. During the 12 minutes prior to the collision, the striking coal trains alerter alarmed three times after a period of inactivity and was reset using the alerter reset button after a strobe displayed for 5 seconds and an audible alarm also sounded for an additional 2-3 seconds. The collision occurred 1 minute and 53 seconds after the last throttle movement and the alerter would have been due to alarm in about 7 seconds had the collision not occurred.

The Electro-Motive Diesel, Inc. model locomotive (BNSF 9159) on the head end of the striking coal train has a reset alerter cycle as follows: alerter inactivity is about 120 seconds for speeds 0 – 40 mph at speeds greater than 40 mph the activity response for the alerter increases as a function of speed.

Second (Trailing) Locomotive BNSF 6133

The second locomotive, BNSF 6133, was a General Electric model ES44AC built in 2006 (no one occupied the cab of this locomotive at the time of the accident). This locomotive

also derailed, but remained upright and generally in line with the track. Collision damage was less severe and primarily involved raking damage along the right side from derailed MOW equipment train cars and lading. The diesel fuel tank was punctured on the right rear corner of the sidewall / end plate and leaking diesel fuel caught fire.

Coal Train Rail Car Damage

The first two loaded coal cars (1-2) derailed upright and came to rest in line with the track. These two cars and the next seven (3-9) were damaged by raking action along their sides from derailed MOW equipment cars and lading. Post-accident, an air brake test was performed on the equipment with no exceptions taken.

Emergency Response

Logs indicated that Montgomery County Sheriff's Emergency Dispatch received a 911 call at 6:57 a.m. reporting the collision. Six additional 911 calls were received reporting the collision over the next few minutes, including a call from the BNSF NOC at 7:03 a.m. Logs show the first fire unit arriving at the scene of the collision at 7:10 a.m.

Fire was found at three separate locations, and emergency response personnel report that it took two hours to extinguish all fire sources.

Injuries

Both crew members on the striking coal train were fatally injured. The engineer and conductor on the MOW equipment train reported back and neck pain and sought medical treatment.

Personnel Information

Engineer of Striking Coal Train

The 48-year old engineer was fatally injured. He was hired by the BNSF on July 14, 1997. His seniority date as an engineer was March 15, 1999. He had passed rules examinations on a regular basis and was current in his certification. His most recent engineer recertification was on July 10, 2008. He had five prior disciplinary actions on his record, including one for excessive speed. His most recent physical examination conducted was on March 21, 2011, reflecting minor hearing loss, minor vision impairment, and no exceptions to his color vision.

The post-accident toxicological results reflected negative for alcohol and drugs. Two items were found in additional testing; chlorpheniramine (used to treat symptoms related to allergies and the common cold) was found in the engineer's urine but not in his blood. In addition, ranitidine (used to treat ulcers and GERD) was found in both his blood and urine.

The engineer had been placed on an Employee Review Process (ERP) on March 11, 2009, and was actively still on it at the time of the accident. Employees in the ERP program are tested more frequently for areas of concern inconsistent with proper train handling procedures.

This is performed by management both physically and through locomotive event recorder downloads. At the time of the accident, the engineer's performance had improved and was being considered to be removed from the ERP program.

Conductor of Striking Coal Train

The 48-year old conductor was also fatally injured. She was hired by the BNSF on November 22, 2004. Her seniority date as an engineer was January 21, 2007. She was certified as a locomotive engineer but was working as the conductor. She had one disciplinary action on her record for excessive speed in restricted speed operation (working as a conductor at that time). The post-accident toxicological results reflected negative for alcohol and drugs. A prescription medicine, valsartan (used to treat high blood pressure) was detected in the urine and blood.

Striking Train Crew's Work / Rest Cycles

Both the engineer and conductor were called for duty at 1:01 a.m. and went on duty on Sunday April 17, 2011 at 2:31 a.m. (the accident trip) in Lincoln, NE. They had both been off duty for 12 hours and 1 minute, and had stayed at an away-from-home lodging facility provided by the BNSF.

The day prior to the accident (Saturday April 16th), the engineer was called for duty at 3:02 a.m., went on duty at 4:30 a.m., and traveled from Creston, Iowa, to Lincoln, Nebraska, and went off duty at 2:30 p.m. Between April 11th and April 15th he had marked off work for union business and to take a rules examination.

The day prior to the accident (Saturday April 16th), the conductor was called for duty at 3:00 a.m. and went on duty at 4:30 a.m., traveling from Creston, IA, to Lincoln, NE, going off duty at 2:30 p.m. On Friday April 15th, she was on duty from 2:25 a.m. to 2:10 p.m. On Thursday April 14th, she worked from 3:10 a.m. to 1:10 p.m.

Cellular Telephone Use

An examination of phone records belonging to the engineer and conductor indicated that neither individual was using their cell phones for verbal communication or texting during the accident trip.

Track and Site Information

The Creston Subdivision is located on the Nebraska Division and begins in Creston, Iowa, continuing westward to Lincoln, Nebraska. The railroad in the vicinity of the accident consists of multiple (two) main track territory. The maximum authorized timetable speed at this location is 60 mph for freight trains (45 mph for trains exceeding 100 tons per operative brake) and 79 mph for passenger trains.

The collision occurred near the east end of a 10.6 mile length of parallel tracks between CP 4580 and CP McPherson. Intermediate signals are located on both main tracks at MP 450.38 about mid way (at CP 4535, MP 453.4 and CP McPherson, MP 447.5). These intermediatete signals consist of three position type color-light displays with G (Grade) plates and number

plates attached to the signal masts. There is no speed or stop signal enforcement designed into the train control system in this area (i.e.; no Positive Train Control).

Site-Distance Test

A site-distance test was conducted to determine the visibility of the two signals leading up to the accident site, and to the rear car of the standing MOW train. The weather and time of day were comparable to the conditions that existed at the time of the accident. The below graph illustrates the duplication of the signals displayed in the field, as well as the distance they were first observed.

Observable Feature Distance Observed
Yellow approach signal at CP 4535 **4,658 feet**
Red restricting G Plate Signal number 24504 **3,147 feet**
Exemplar clip car placed at point of impact: **1,364 feet**

Method of Operation

Train operations on this portion of the BNSF are governed and authorized by Traffic Control Signal (TCS) indications with the train dispatcher located at NOC in Fort Worth, Texas. The crews were governed by General Code of Operating Rules (GCOR), effective April 7, 2010. The territory was designated the BNSF Nebraska Division, Creston Subdivision. At the time of the accident, the current timetable in effect was the Nebraska Division Timetable No. 7, effective May 12, 2010.

Track

No exceptions were taken with the track leading up to and exiting the accident area.

Signal System

A post-accident field inspection was performed with the signals in the accident area. No indications of tampering or vandalism were found that would interfere with the operation or display of the signals in the field. All signals performed as designed.

Operations

No exceptions were taken with regards to the operations portion of this investigation.

Human Performance

Due to the fact that the engineer and conductor were fatally injured, and the loss of data from the video recorder off their lead locomotive, the download off the event recorder reflects inactivity by both crew members from stopping their train short of an obstruction (not consistent with operating under restricted speed application). The setting of the monitoring cycle of the alerter on the lead locomotive was such that nearly two (2) full minutes had passed since the alerter required any activity by the locomotive engineer, which may have contributed to the accident.

The fatalities to the crew also prevented investigators from delving deeply into the off-duty activities of the crew to ascertain whether fatigue may have been a contributing factor in the accident, in light of the fact that the accident occurred during the circadian rhythm. The locomotive engineer was marked off from work for five consecutive days prior to reporting for duty on the trip before the accident, which strongly suggests that he maintained a "normal" schedule of waking days and sleeping nights during that period. Moreover, the trip during which the accident occurred had a backward rotating starting time, by two (2) hours, as compared to the previous trip. It also should be noted that the trip during which the accident occurred was the second backward rotating starting time for the conductor in a 48-hour period.

PROBABLE CAUSE

The Brotherhood of Locomotive Engineers and Trainmen conclude this accident was primarily a result of the crew members on board BNSF train CBTMCNMO-26 failing to operate their train consistent with restricted speed, e.g.; failing to stop their train short of an obstruction thereby striking BNSF train UBRGCRI-15. We believe that the 2-minute alerter cycle was a contributing factor, as the crew's alertness was not confirmed by the system in a way that could have averted the accident. We further believe the circadian trough induced fatigue, combined with backward rotating work schedules for the locomotive engineer and the conductor, also contributed to the accident.

PROPOSED RECOMMENDATIONS

Electro-Motive Diesel, Inc. (EMD):

1. Work with the railroad carriers and labor organizations to design and install software in all EMD locomotives an upgraded optimum alerter system that requires more frequent responsive action during certain portions of the circadian cycle. This enhanced cognitive alerter system will demand an increase in activity by crew members operating throughout the trough of the circadian cycle.

Department of Transportation, Pipeline and Hazardous Materials Safety Administration (PHMSA):

1. Revisit and incorporate regulations in the Hazardous Material Regulations (HMR) requiring any vessel on rail carrying a hazardous material to be placarded, regardless of quantity or degree of hazard (HMR-Table 2). This will greatly aid first responders in hazard recognition and mitigation.

Labor Organizations:

1. Work in conjunction with the railroad carriers and Electro-Motive Diesel, Inc, to design and install software in all EMD locomotives an upgraded optimum alerter system that requires more frequent responsive action during certain portions of the circadian cycle. This enhanced cognitive alerter system will demand an increase in activity by crew members operating throughout the cycle of the circadian cycle.

2. Work in conjunction with the railroad carriers on developing training tools related to heightening awareness regarding fatigue and sleep deprivation.

Federal Railroad Administration:

1. Revisit the language in 49 C. F. R. Section 214.7 and amend the definition of restricted speed by reducing the maximum authorized speed for heavy tonnage trains from 20 mph to 10 mph on main tracks and controlled sidings.

2. Issue regulations comparable to how main track electric locked switches are handled, on main tracks and sidings, such as:

    a. Requiring that a train must stop and wait for five minutes before entering a restricted speed block between the hours of 8:00 a.m. and 8:00 p.m.; and/or
    b. Prohibiting trains from entering a restricted speed block between 8:00 p.m. and 8:00 a.m.; and
    c. Permitting the locomotive engineer to exercise discretion to decline to enter a restricted speed block any time that weather materially restricts vision.

3. Review available accident/incident data to determine whether a correlation between backward rotating starting times by operating crews and accident/incident frequency can be identified.

BNSF Railway, the Association of American Railroads, and the American Short Line and Regional Railroad Association:

1. Work in conjunction with the labor organizations and Electro-Motive Diesel, Inc, to design and install software in all EMD locomotives an upgraded optimum alerter system

that requires more frequent responsive action during certain portions of the circadian cycle. This enhanced cognitive alerter system will demand an increase in activity by crew members operating throughout the trough of the circadian cycle.

2. Work in conjunction with the labor organization on developing training tools related to heightening awareness regarding fatigue and sleep deprivation.

3. Amend the definition of restricted speed by reducing the maximum authorized speed for heavy tonnage trains from 20 mph to 10 mph on main tracks and controlled sidings.

4. Regarding operating in a restricted speed block: Modify your restricted speed rules comparable to how main track electric locked switches are handled, on main tracks and sidings, such as:

    a. Requiring that a train must stop and wait for five minutes before entering a restricted speed block between the hours of 8:00 a.m. and 8:00 p.m.; and/or
    b. Prohibiting trains from entering a restricted speed block between 8:00 p.m. and 8:00 a.m.; and
    c. Permitting the locomotive engineer to exercise discretion to decline to enter a restricted speed block any time that weather materially restricts vision.

National Transportation Safety Board:

1. Recommend all locomotive manufacturers to immediately design and install in all existing and newly built locomotives, an upgrade to their software system regarding the cognitive alerter systems currently in place to require more frequent responsive action during certain portions of the circadian cycle.

2. Recommend to the Department of Transportation (PHMSA) to incorporate regulations in the Hazardous Material Regulations (HMR) requiring any vessel on rail carrying a hazardous material to be placarded, regardless of quantity or degree of hazard (HMR-Table 2). This will greatly aid first responders in hazard recognition and mitigation.

3. Issue recommendations to the Carriers and the FRA that they revisit the language and application in the field when trains are to be operating in a restricted speed block, comparable to how main track electric locked switches are handled, on main tracks and sidings, such as:

    a. Requiring that a train must stop and wait for five minutes before entering a restricted speed block between the hours of 8:00 a.m. and 8:00 p.m.; and/or
    b. Prohibiting trains from entering a restricted speed block between 8:00 p.m. and 8:00 a.m.; and
    c. Permitting the locomotive engineer to exercise discretion to decline to enter a restricted speed block any time that weather materially restricts vision.

CERTIFICATE OF MAILING

I certify that I have on this date electronically forwarded to Mr. Michael Flanigon (mike.flanigon@ntsb.gov), a full and complete copy of the "Proposed findings, probable cause, and safety recommendations" with regard to the BNSF rear–end collision resulting in two fatalities, a derailment, and subsequent fire, between BNSF CBTMCNMO-26 (coal train) and BNSF U-BRGCRI-15 (MOW train), near Creston, Iowa, on April 17, 2011. NTSB Docket No.: DCA 11 FR 002, submitted by the Brotherhood of Locomotive Engineers and Trainmen's Safety Task Force to the National Transportation Safety Board. A hard copy was also forwarded addressed to the party of interest as required by 49 CFR § 845.27 (Proposed findings).

National Transportation Safety Board
c/o Mr. Michael Flanigon
Investigator In Charge, DCA11FR002
490 L' Enfant Plaza
Washington, DC 20594

Sincerely yours,

William C. Walpert
Brotherhood of Locomotive Engineers & Trainmen
National Secretary-Treasurer
National Director, Safety Task Force
Standard Building, Mezzanine floor
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Cleveland, OH 44113-1702

Attachment A

BNSF 9159 Alerter Alarm Data - -Last 12 Minutes

Time	Activity	Speed MPH	Distance Traveled In Feet Since Last Activity
No activity for 2 minutes 2 seconds			
6:42:56 – 6:43:02	Alerter Alarm Begins 7 Second Duration 5 Seconds Flashing Light 2 Seconds Light And Horn Alerter Reset by Alerter Reset Button	16	3,400
No activity for 2 minutes 1 seconds			
6:48.11 – 6:48:18	Alerter Alarm Begins 8 Second Duration 5 Seconds Flashing Light 3 Seconds Light And Horn Alerter Reset by Alerter Reset Button	13	2,224
No activity for 2 minutes 2 seconds			
6:53:02 – 6:53:09	Alerter Alarm Begins 8 Second Duration 5 Seconds Flashing Light 3 Seconds Light And Horn Alerter Reset by Alerter Reset Button	17	2,452
No activity for 1 minute 53 seconds			
6:55:05	**Collision**	**23**	**3,344**