National Transportation Safety Board

DCA16MR004

AMTRAK Derailment

Cimarron, Kansas

March 14, 2016

September 21, 2016

Operations

Party Members:

Tomas R. Torres

NTSB Operations Group Chairman

Ron Sprague

BLET/ Safety Task Force

Arnoldo Gonzalez

FRA

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Smart/UTU

Synopsis

On March 14, 2016, at 12:02am CDT, Amtrak train #4 (Southwest Chief) derailed near MP372.9 in the vicinity of Cimarron, KS. This LA to Chicago train consisted of two locomotives and 10 cars. Four cars were derailed on their sides, one car derailed and was leaning, two cars derailed upright, and one car derailed a single truck. There were approximately 130 passengers and 14 crew members on board. Initial reports indicated that between 10 and 33 passengers were

transported and/or treated for injuries at two area medical centers. The American Red Cross responded to assist with passengers.

This event occurred on the Burlington Northern Santa Fe Railway Company (BNSF), La Junta Subdivision. The maximum allowable speed on this section of rail is 60 mph for passenger trains and 40 mph for freight trains. Estimated damages are $1,463,000.00.

Parties to the investigation were Amtrak, BNSF, FRA, BMWED, SMART, BLET, and the Gray County Sheriff's Office.

Figure 1Picture of feed truck that rolled down the hill from feed plant.

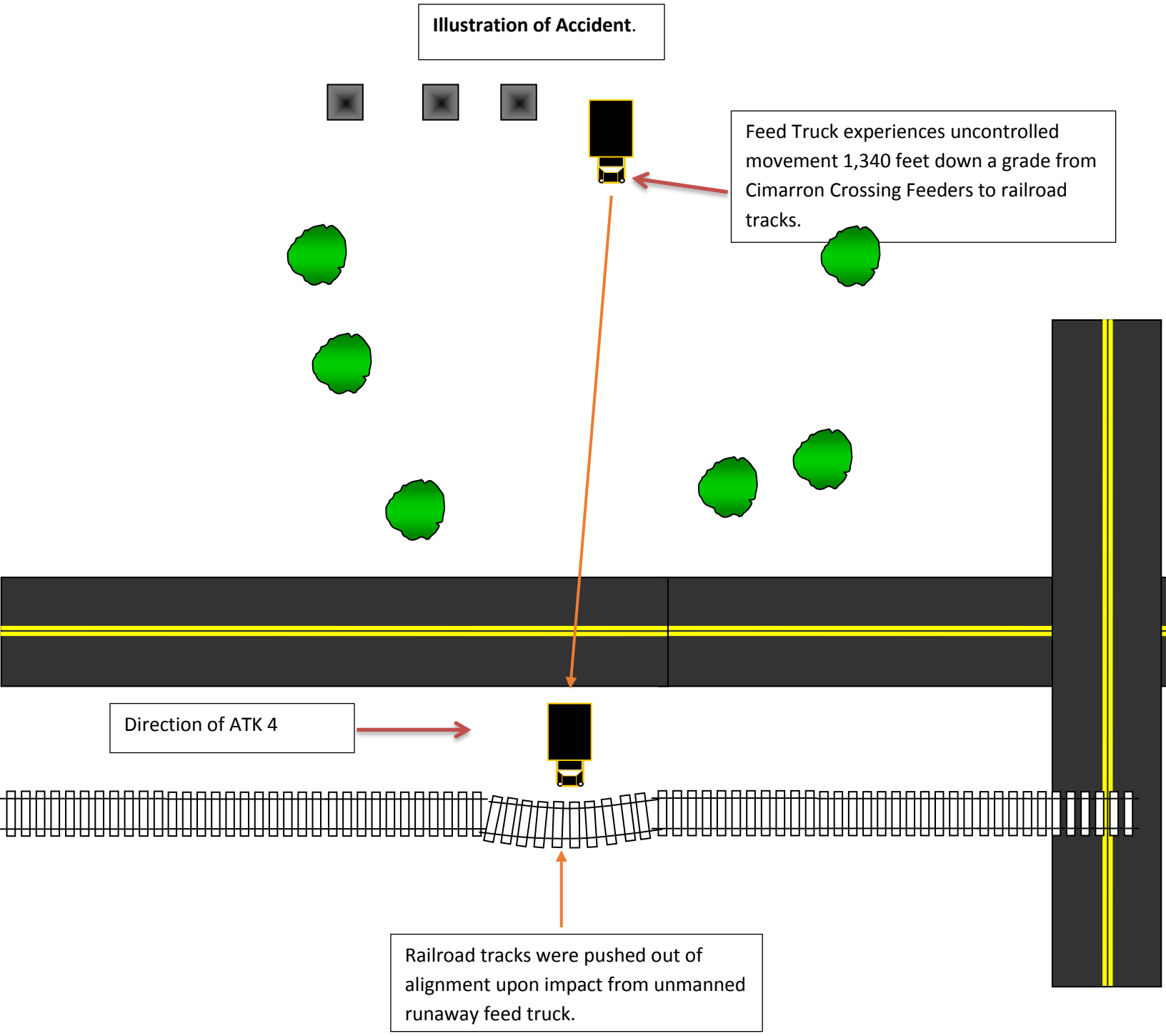

Figure 2. This is an illustration of the runaway feed truck.

On Monday March 14, 2016, at approximately 12:02 am CST, eastbound Amtrak No.4 derailed just west of MP 373 near, Cimarron, Kansas. Cimarron is approximately 15 miles west of Dodge City on the La Junta Subdivision.

Crew members consisted of an Engineer, Conductor, and Assistant Conductor and a Engineer Trainee. None of the crew members were injured.

The Amtrak No.4 consisted of two locomotives and ten cars. The rear eight cars derailed. The locomotives and the first two cars remained on the rail. The next three cars derailed upright. The next car derailed leaning to the north at 45-degree angle. The last four cars derailed on their side and to the north.

The event recorder data from the lead locomotive, ATK 153, showed the train was traveling at approximately 60 miles per hour (mph) when the Locomotive Engineer initiated an emergency brake application. The locomotive Engineer stated during the interview that she initiated the emergency brake application prior to entering the misaligned track.

The weather conditions at the time were clear, dark, and approximately 40 degrees.

All crew members were transported to an area hospital and drug and alcohol tested in accordance with CFR 49 Part 219.

Narrative

The Crew of Amtrak No.4 included a Locomotive Engineer, Engineer Trainee, Conductor and Assistant Conductor. Their assigned train consisted of two locomotives, 10 passenger cars, and 1130 feet long and weighs 721 tons. Amtrak No. 4 departed La Junta CO. at scheduled time of 7:41pm Mountain Standard Time (MST).

The train was scheduled to travel to Chicago, Illinois. The train stopped at two stations prior to the derailment to pick up passengers, Lamar, CO. and Garden City, KS.

The crew for ATK No.4 went on duty on March 13, 2016, at 7:11 pm MST, in La Junta, Co. The train crew stated that upon going on duty that they performed a job briefing which consisted of reviewing General Track Bulletins (GTB), Track Warrants and speed restrictions that applied to their train movement. The Track Warrant was their authority to operate between La Junta and Dodge City KS. The crew performed a Class II Air Brake test before departure.

The engineer stated that they had an uneventful trip from La Junta to Garden City, KS. The Student engineer was at the controls and operated the train from La Junta, CO to Garden City, KS.

At Garden City the Engineer took charge and began operating the train from Garden City, KS to the accident location. Train crew was operating on clear signal indications (green) as the train approached MP 373. As both the Engineer and Conductor saw the track misalignment the Engineer simultaneously initiated an emergency brake application.

As eastbound Amtrak No. 4 approached the accident area, the Locomotive Engineer was seated behind the control stand on the eastside of the locomotive. The Engineer Trainee was seated on the firemen seat on the west side of the locomotive. The Conductor and Assistant Conductor were in the body of the train.

On this segment of the railroad there is a .031 degree left hand curve followed by tangent, 0.35 percent descending grade. The Timetable direction was east. The geographical direction is north.

The train was operating at 60 mph approaching the accident area as indicated by the Event Recorder data. The maximum authorized speed for Amtrak No.4 at the incident location is 60 mph as noted between MP 343.2 and MP 409.3 as designated by permanent speed restrictions on La Junta Sub. located on page 22 of the current BNSF Kansas Timetable No.1 The Engineer's view of the misaligned track was restricted by the curvature of the track approaching the accident site; distance visibility was limited being that it was dark and the headlight beam only illuminated a distance of three railroad cars lengths ahead of the train. The Engineer and Engineer Trainee became aware of the misaligned track as soon as the train was out of curve, at which time the engineer simultaneously initiated an emergency train airbrake application and braced themselves for the derailment. After emergency brake application the train traveled and additional 1,000 feet before coming to a stop.

After the train came to a rest, the Conductor called the Engineer on the radio and asked if the train had struck a vehicle at the public crossing. The Engineer responded to the Conductor and said the track was misaligned and that she made an emergency airbrake application. The Conductor quickly got out of train and started to inspect the train and discovered that the train had derailed and that the rear four cars were lying on their side. The Conductor notified the Engineer and instructed her to call the train dispatcher and request assistance from emergency personnel.

The Engineer made three attempts to call the BNSF Train Dispatcher without a response. After the third attempt, the Engineer Trainee used his personal cell phone to call 911. The Engineer Trainee made contact with 911 Dispatcher and reported that the train had derailed and they needed emergency personnel assistance.

The Conductor and Assistant Conductor swept the passenger cars and began to evacuate the passengers. The Conductor and Assistant Conductor passed out glow sticks to the passengers as they escorted them in the dark to safety.

Emergency personnel arrived and took charge of accident and evacuated the remainder of passengers and provided assistance to the injured.

Method of Operation of the BNSF La Junta Subdivision

The La Junta Subdivision of the BNSF Kansas Division Timetable extends from MP 124.7 near Emporia, Kansas to MP 533.6 near Las Animas, Colorado in a timetable east-west direction. The maximum authorized speed on the subdivision is 79 mph for passenger trains and 55 mph for freight trains with permanent speed restrictions between posted timetable mileposts. In the vicinity of the accident area, the BNSF operates trains over a single main track with passing sidings utilizing Track Warrant Control (TWC) with Automatic Block Signal System (ABS) and Automatic Train Stop System (ATS). Additionally, train movements on the La Junta Subdivision are governed by operating rules, timetable instructions, and signal indications of the automatic block signal system.

1. The BNSF defines TWC as a method to authorize train movements or protect men or machines on a main track within specified limits in a territory designated by the timetable.
2. The FRA defines ABS as a block signal system wherein the use of each block is governed by an automatic block signal, cab signal, or both.
3. The FRA defines ATS as a system so arranged that its operation will automatically result in the application of the brakes until the train has been brought to a stop.

Operating Documents

The crew is governed by the General Code of Operating Rules (GCOR), Seventh Edition, effective April 1, 2015, and the BNSF Kansas Division Timetable No. 10, dated April 17, 2013, La Junta Subdivision.

The operating rules and supplements provided by Amtrak are as follows:

- General Code of Operating Rules, Seventh Edition, Effective April 1, 2015
- BNSF Timetable No. 10, dated April 17, 2013
- BNSF System Special Instructions, All Subdivisions, No.6 dated April 1, 2015
- Amtrak TE&Y Safety Rules

- Track Warrant
- General Track Bulletins

Crew Information

Crew information for the operating crew on AMTRAK No.4 can be found in the docket for this accident.

Post-Accident Toxicological Testing - According to Title 49 Code of Federal Regulations (CFR) Part 219 (Subpart C- Post-Accident Toxicological Testing) all of the operating employees were required to submit specimens for post-accident toxicological testing. All test results were negative for illicit drugs and alcohol.

Hours of Service and Rest Cycle - Title 49 CFR Part 228 – **Hours of Service of Railroad Employees** requires that railroad operating employees not work over 12 hours in a 24-hour period and must have a minimum of 10 hours off duty between shifts. The operating employees' duty hours were within the requirements of the regulation.

Operational Testing - Title 49 CFR 217.9 contains specific requirements for the testing and observations of operating employees while they perform their duties. Amtrak maintains an operational testing program to monitor the performance and rules compliance of operating employees.

Engineer

Hire Date	10/14/11
Medical Exam	08/7/15
Hearing Exam	08/7/15
Vision Exam	08/7/15
Certification date	11/04/15
Certification Expiration	11/04/18
Last skills Performance Ride	01/19/16
Last FRA 303 Efficiency Test	02/29/16
Knowledge Test	06/24/15

Figure 3.Table is a list of the Train Engineer training history

Conductor

Hire date	03/07/05
Medical Exam	10/07/15
Hearing Exam	10/07/15
Vision Exam	10/07/15
Certification Date	10/07/15
Certification Expiration Date	10/07/18
Last FRA 123 Efficiency Test	01/04/16
Knowledge Test	11/20/15
FRA 239 Emergency Preparedness Training	02/14/14
FRA 239 Emergency Preparedness Training Expiration Date	02/14/16

Figure 4.Table is a list of the Conductor's training history.

Assistant Conductor

Hired Date	06/15/15
Operating Rules Exam	08/07/15
Medical Exam	05/19/15
Hearing Exam	05/19/15
Vision Exam	05/19/15
Assistant Conductor Training	08/07/15

Figure 5.Table is a list of the Assistant Conductor training history.

Engineer Trainee

Hire Date	08/31/12
Medical Exam	07/27/15
Hearing Exam	07/27/15
Vision Exam	07/27/15
Last FRA 303 Efficiency Test	02/29/16
Knowledge Test	
Certificate	10/17/15

Figure 6.Tableis a list of the train's Engineer Trainee training history

Engineer 10-day work history

Date	Previous Time Off	Time On Duty	Time off duty	Total Time On Duty
03/08/16	10:41	19:11	03/09/16-00:31	04:20
03/09/16	04:24	04:55	03/09/16-04:35	04:35
03/10/16	34:41	19:11	03/11/16-01:25	05:41
03/11/16	04:00	05:25	03/11/16-08:40	04:15
03/13/16	58:31	19:11	03/14/16-00:45	04:34
Prescription/OT Drugs	None			
Alertness Prior to reporting to Duty	Very Alert			
Quality of rest prior to reporting for duty	Excellent			

Figure 7. Table is a list of dates the engineer work prior to the accident.

Conductor 10-day work history

Date	Previous Time Off	Time On Duty	Time off Duty	Total Time On Duty
03/08/16	04:00	05:02	03/08/16-08:37	04:35
03/09/16	34:24	19:11	03/10/16-00:43	04:32
03/10/16	04:12	04:55	03/10/16-08:39	04:44
03/13/16	82:32	19:11	03/14/16-00:38	04:27
Prescription/OT Drugs	None			
Alertness Prior to reporting to Duty	Very Alert			

Quality of rest prior to reporting for duty	Good			

Figure 8.Table is a list of dates the conductor worked prior to the accident.

Engineer Trainee 10-day work history

Date	Previous Time Off	Time on Duty	Time off Duty	Total Time on Duty
03/08/16	04:00	05:02	08:37	04:35
03/08/16	10:41	19:11	03/09/16-00:31	04:20
03/09/16	04:24	04:55	03/09/16-08:30	04:35
03/10/16	34:41	19:11	03/11/16-00:25	05:14
03/11/16	04:00	05:25	03/11/16-08:40	04:15
03/13/16	58:31	19:11	03/14/16-00:45	04:34
Prescription/OT Drugs	None			
Alertness Prior to reporting to Duty	Good			
Quality of rest prior to reporting for duty	Good			

Figure 9.Table is a list of dates the Engineer Trainee worked prior to the accident.

Assistant Conductor 10-day work history

Date	Previous Time Off	Time On Duty	Time off Duty	Total Time on Duty
03/8/16	25:45	10:15	1600	05:45
03/9/16	27:11	19:11	03/10/16-00:43	05:32
03/10/16	04:12	04:55	08:39	03:44
03/13/16	82:32	19:11	03/14/16 10:00	

Prescription/OT Drugs	OMEPRAZOLE, BUPROPION, AND LEVOTHYROXINE			
Quality of rest prior to reporting for duty	Excellent			
Alertness Prior to reporting to Duty	Very Alert			

Figure 10.Table is list of dates the Assistant Conductor worked prior to the accident.

Employee Interviews

The Operations Group which included FRA, SMART TD, BLET, and NTSB interviewed 4 train crew members. A summary of the interviews of the 4 operating crewmembers involved in the accident are below:

Engineer Interview Summary

Engineer stated that she reported to work at 7:00 pm on March 13, 2016 and noted nothing out of the ordinary. The Conductor contacted the train dispatcher and conducted the required Job Briefing reviewing the General Track Warrants and speed restrictions.

Train departed at 7:41 pm with operating the train from La Junta to Garden City. Incurred some delay account signal indications as they approached Syracuse. When train arrived at Garden City Engineer takes charge of the train and gets behind the controls. When they depart Garden City Engineer and discuss train handling techniques coming into Garden City. Shortly thereafter they come up on a speed restriction at mile post 369.9 and discuss that the speed restriction has been shorten from 5 miles to 1.5 miles. Then train passes a whistle board and as they come out of the curve they both see the misaligned track and Engineer initiates an emergency brake application. Engineer does not remember if she initiated the emergency brake application before or after the misaligned track at mile 373. Engineer thought that because of the misaligned track that the train would end up out on the field, but locomotive ended on track still upright. Once train came to a stop Conductor calls out on the radio and asks if the train had struck a vehicle. Engineer answered that both rails were bent (meaning the track was misaligned). Conductor then said that he would inspect the train. Engineer toned the train dispatcher, and after a couple of attempts the train

dispatcher finally answered. Conductor calls Engineer on radio and reports that lounge car was leaning and that all coach cars were derailed- need ambulances and authorities. The uses personal cell phone to call 911 and makes a report of accident before train dispatcher answers radio call. Engineer states that accident occurred at approximately midnight.

When the train dispatcher answers the radio, Engineer reports that the train has derailed account the rail was bent. Train dispatcher asks if switch was aligned against train movement. Engineer answers train dispatcher by saying that the rails were bent.

Conductor Summary

Conductor stated they went on duty at 7:11 pm on March 12, 2016 at La Junta, Colorado with all crew members reporting on time. Shortly after going on duty crew members had a job briefing, received paper work and Daily Track Bulletins. Conductor called train dispatcher and received a track warrant to proceed from La Junta, Colorado to Dodge City, Kansas.

Conductor stated that territory between La Junta, Colorado and Dodge City, Kansas is Track Warrant Control with Automatic Block System signals.

Conductor stated that he hired with Amtrak in September of 2003, became a conductor in 2005.Worked in El Paso, TX for a number of years and in worked several different stations as Assistant Conductor and as Conductor. Last Conductor Certification rules training was in October of 2015.

Train arrived at La Junta at approximately 7:36 pm. Trip was uneventful throughout the course of the trip until time of accident. Train made a stop at Garden City at approximately 11:30 pm, and was there for about three minutes to board about eight passengers. Normal delay at Garden City is about two minutes, but there were a few extra passengers and it took an extra minute to the board passengers.

Conductor stated that at time of incident he felt train shake and rumble and instructed Assistant Conductor to brace himself. After train came to a stop he called the Locomotive Engineer and asked if train had struck a vehicle. Engineer responded by saying that rail was bent, that something was wrong with the track.

The Conductor instructed Assistant Conductor to get off and inspect train from the firemen side, and that he would inspect from the engineer side of the train. Once he came upon the first sleeper car he noticed that wheels were of the track and upright. He continued to walk towards the rear of train and encountered some passenger's cars that were leaning at about 40 to 45-degree

angle. Conductor then contacted the Engineer again and requested that they contact the train dispatcher and report incident. Conductor said that Engineer was already making an attempt to make contact with the BNSF train dispatcher.

The Conductor and Assistant Conductor assisted passengers out of cars through emergency exits. They also passed out glow sticks to passengers in order to keep track of them in the dark. Shortly thereafter accident emergency personnel arrived and took charge of the evacuation of passengers.

The Conductor was asked if he had received CFR 49 Part 239 (Emergency Preparedness training). He answered yes. Conductor also stated that the training helped him to be able to instruct and evacuate the passengers.

Assistant Conductor Summary

AC stated crew went on duty at 7:11 pm on the March 13, 2016. He reports to work at least a one before on duty time. Once he arrives at the yard office he gets all paper work related to their train movement, such as General Track Bulletins, rule of the day. When crew goes on duty they have job briefing and review General Track Bulletins and safety rule of the day.

After crew got on train they departed to their first stop at Lamar Co. Then went onto Garden City KS and picked up 8 or so passengers. There was an extra passenger that had to be ticketed, after that he walks towards the front of the train where Conductor was situated. Once he arrived to where conductor was the train started to shake and rumble. Conductor stood up and said to hold on. When train came to a stop he walked out the firemen side and Conductor went out the engineer side to inspect the train. Assistant Conductor said visibility was bad account it was dark and dust was flying up in the air. Conductor then called the Engineer and asked if train had struck a vehicle, Engineer responded by saying that the rail was bent.

AC and Conductor started walking towards the rear of the train and could see that the dining car was off the tracks. As they walked back their flashlights couldn't cut through the darkness. As the AC got near the café' car he noticed that it was leaning over. At that same time Conductor yelled out to him to get away from the cars because they were leaning towards the Assistant Conductor.

Shortly thereafter the AC heard the Locomotive Engineer call out on the radio- emergency, emergency, emergency. Engineer toned the Train Dispatcher but dispatcher did not answer.

Conductor said that he was going to call 911. Conductor called the Locomotive Engineer and stated that coaches were on the ground.

Passengers started to emerge, and the Assistant Conductor's main concern was for the passenger's safety. Assistant Conductor removed the diaphragm from the dining car and assisted passengers out from the leaning car. The Assistant Conductor than instructed the passengers to walk to the other side of the train so that the leaning car would not fall on top them. Assistant Conductor ran into the onboard service members and instructed them to pass out blankets and to place glow sticks around the passenger's necks in order to keep track of them in the dark. Assistant Conductor heard the Conductor call out over the radio for someone to bring a ladder so that passengers could be able to climb out of a car that was lying on its side. Local firemen arrived and took charge of the evacuation of the remainder of the passengers.

Summary

stated that on March 13, 2016 he arrived at the La Junta yard office at approximately 6:30pm. Went into crew room and started reviewing GTB's, orders and notices. Conductor was already at the yard office. Crew had job briefing and discussed GTBs, speed restrictions and notices. Discussed that some speed restrictions were shortened and some the train speed was increased. The Train departed at scheduled time of 7:41 pm. operated train between La Junta CO. and Garden City KS. At Garden City Engineer took charge of train, trip was uneventful, no issues. Engineer and discussed different types of train handling techniques. was sitting on the fireman seat as the train approached the accident area. When track defect became visible stood up and braced himself as the Engineer made an emergency brake application. does not remember if Engineer placed train in emergency prior to traversing the misaligned track or afterwards. As soon locomotives traversed misaligned track the train came to a stop. stated that visibility was clear and dark. The distance visibility was only as far as the headlight beam was shining, which about 3 to 4 railroad car links. said there was not sufficient time to warn other crew members prior to accident. said when train went over the track defect his paper work went up in the air.

After train came to stop Conductor called the Engineer over the radio and asked if train had struck a vehicle. Engineer transmitted to Conductor that the rails were bent. The toned the train dispatcher and verbally transmitted emergency, emergency, emergency over the radio. The train dispatcher did not respond after two or three attempts, then used his personal cell phone to call 911. When 911 answered the they informed him that they were already aware of situation.

The climbs down from the locomotive and goes back toward the rear of train to assist the Conductor. Shortly thereafter, Conductor reports that lounge car is leaning and that all coach cars are derailed. The arrives at the lounge car which was leaning, climbs up the side to assist in evacuating a passenger that needed assistance. Shortly thereafter firemen and emergency personnel arrived and took charge of evacuation. states that emergency preparedness training really help this emergency situation.

NTSB Investigators interviewed Truck Driver of runaway truck, Supervisor, Chute operator.

Interview Truck Operator

Truck operator stated that on March 13, 2016 he reported to work at 6:00am. Made three or four loads on feed truck. At approximately 10:00am a coworker that was operating the loading bays asked him for his assistance and to get something unstuck in one of the pipes. Truck Operator stated that he came out of the chemical bay and parked the feed truck, and gets out to assist his co-worker. Sometime during the process when assisting the co-worker, the unattended feed truck that he was operating started rolling down the hill. The feed truck made an uncontrolled movement down the hill, crossed Highway 50 and then struck the railroad tracks. He got in his personal vehicle and drove down the hill, parked his vehicle on the south side of the tracks. He then got out of his vehicle crossed the tracks and got on the runaway feed truck, back out on to Highway 50 and drove it back up the hill to the feed plant. Upon arriving at feed plant he reported incident to his supervisor. No action was taken by the supervisor other than he did not want to hear about it. Truck operator stated that the end of tour of duty at 5:00 pm he picked up his personal vehicle that he had left on south side of right away of the railroad tracks.

The truck operator stated that on Saturday March 22, 2016 he had problems with this same feed truck- an illuminated low pressure warning light. Truck operator stated that he reported low pressured warning to the supervisor and that he dismissed his complaints. Truck operator stated that on Sunday March 13, 2016 before he got out of truck to assist his coworker he applied that parking brake. Truck operator stated that he heard the air exhaust (gushing sound) when he applied the parking brake indicating that it had been activated.

The operator said he works 13 days straight, 10 to 12 hours a day, and has every other weekend off. Daily he reports to work at 6:00am and gets off at about 5:00 pm. The truck operator

stated that he was suspended for 3 days without pay and that he was supposed to return to work on Thursday March 17, 2016.

Cimarron Crossing Supervisor

Supervisor states that he got a call between 9:00am and 10:00am from mill operator that they had a truck incident. Supervisor arrived at feed mill within five minutes of call. When he arrived supervisor was told that truck had ran down the hill just over the highway. Truck operator went down to retrieve the truck and bring it back to the feed mill. The muffler was bent against the drive shaft. The supervisor stated that no one told him that the truck had come in contact with the railroad tracks. The supervisor said that he did look at the path the truck took down the hill but did not go to inspect where the truck came to rest. He states he was told the truck came to a stop the edge of the pavement. Truck operator informed the supervisor that brakes on the truck were not working. Supervisor gets into the truck and sets the parking brake, puts truck into gear and truck does not move. Supervisor tested the trucks brakes again Monday morning and brakes again function properly. Supervisor also said that he has all repair receipts for the truck.

Mill Operator

Mill Operator said that on the morning of the accident the soak leg (part of the mill) was clogged. He called the truck operator and asked him for his assistance. The mill operator stated he was up on the mill and he needed somebody at ground level to assist him. The truck operator pulled up next to the bins and got out of the truck to provide assistance. The Mill operator then told truck operator to open the gate on the soak mill, he saw the corn flow through the chute. The mill operator than looks down and sees the truck rolling and momentarily thinks that the truck driver had gotten back on the truck to drive away. When mill operator looked down again he saw the truck operator on the ground and yells at him that the truck is rolling away.

Mill operator said that truck operator then proceeds to chase truck but truck was already rolling fast down the hill. The truck operator then gets in his personal vehicle to drives down the hill to get the truck. Mill operator saw the feed truck cross the highway, and when it came to a stop it rocked back and forth. The truck operator reaches the bottom of hill gets in the in feed truck and drives it back to the mill.

When truck operator arrives back to the mill, he asked the truck operator if truck was damaged. The truck operator answered he did not know. They walked around the truck and

noticed that the bumper was all busted up. They continue to work and at about 11:45 am the truck operator asks the mill operator if he would drive him to the bottom of the hill to go get his personal vehicle.

At about 9:50 am mill operator calls the supervisor and reports that they had an incident. The supervisor arrives shortly and explains to him what had occurred. Mill operator states that when truck operator pulled up to the bins to assist him he heard a blast of air coming from the truck. He thought the sound of blast of air was the truck operator applying the parking brake.

Train Consist

Amtrak Train No 4 consisted of 2 locomotives 10 cars. The lead unit was the ATK153, followed by the ATK152, and coupled to ten cars.

LOCOMOTIVES AMTK 153
AMTK 152
CARS 001 AMTK 61023
002 AMTK 39023
003 AMTK 32109
004 AMTK 32071
005 AMTK 38044
006 AMTK 33020
007 AMTK 34042
008 AMTK 31013
009 AMTK 34056
010 AMTK 34046

Sight Distance Observations

On the evening of March 16, 2016, Operations Group had placed a distinguishable object at location identified as area of previous track misalignment caused by grain truck striking track. The purpose of this placement was to allow for the determination of the distance between the point the Engineer was first able to see the misalignment and the actual misalignment location.

On March 17, 2016, NTSB and BLET investigator boarded ATK Train #4 at Garden City, Kansas at 12:20 am, riding in the lead locomotive number ATK3. As train approached MP 373 at 25mph, Engineer sounded horn at 1:02 am with two short blasts indicating that he had seen something on

or near the tracks. Simultaneously BLET investigator dropped an illuminated object and used the Locomotive distance counter to measure the distance from when engineer was able to see the object on track and when locomotive train was over object. Locomotive counter measured 381 ft. SMART investigators then measured the distance from the location of the illuminated object on the ground to the previously determined spot of the track misalignment. Measurement was 403 ft. as determined with a wheel counter.

Post Actions Taken

Amtrak is scheduling a Passenger Train Emergency Response Training with local agencies.

I have read and approve the details in this Factual Report.

Tomas R Torres – NTSB

//s// July 25,2016

_____ Date _____

Ron Sprague – BLET

//s// July 21, 2016

_____ Date _____

John O'Brien – SMART-TD

//s// July 21, 2016

_____ Date _____

Arnoldo F. Gonzalez – FRA

//s// July 25, 2016

_____ Date _____

Danny O'Connell-Amtrak

//s// July 21, 2016

_____ Date _____