

# National Transportation Safety Board

Office of Railroad, Pipeline and Hazardous Materials

Washington, DC 20594



DCA-24-FR-007

## **HUMAN PERFORMANCE & SYSTEM SAFETY**

Group Chair's Factual Report

July 12, 2024

## **A ACCIDENT**

Location: Decatur, Alabama  
Date: January 31, 2024  
Time: 4:10 p.m. local time  
Train: Freight cars

## **B HUMAN PERFORMANCE & SYSTEM SAFETY GROUP**

Group Chair	Stephen M. Jenner, Ph.D. National Transportation Safety Board Washington, DC
Group Chair (Ops)	Ben Strot National Transportation Safety Board Albuquerque, NM
Group Member	Chris Christianson SMART-TD Baton Rouge, LA
Group Member	Randy Hunt Norfolk Southern Railway Atlanta, GA
Group Member	David Wyatt BLET Tampa, FL

## **C. SUMMARY**

See Docket for full description of accident.

## **D. RESPONSIBILITIES AND ACTIONS OF THE A80 CONDUCTOR**

The A80 conductor was directing the movements of the switching operation for the three-person crew operating on the East end of the yard. The work that day was to build a train and deliver three cars to a nearby industry. During the switching operations in Decatur yard, the conductor was in radio contact with the A80 engineer

regarding each move. During his shift, the conductor also supervised a conductor trainee whom he had worked with the previous day. He told investigators that he typically has trainees “watch and see how I work. I try to get them involved some; don’t try to put a lot of responsibilities on them,” which included how he talked on the radio and how he switched cars.

While the A80 crew was kicking cars into track 9, the A80 conductor had a clear view of track 7 and observed that the cars had rolled from the location where the cut had been made. He communicated with A80 engineer that the cars had rolled. At this time, the A80 conductor heard on the radio the brakeman of the A08 crew reporting that cars were rolling on track 7. The A08 brakeman was telling the A08 engineer to make either a shove or pull movement with the engine. The A08 engineer purportedly replied, “I’m trying, I’m trying.” The A80 conductor then heard the sound of a collision. He and the conductor trainee both ran to the west end of the yard and saw the A08 engineer on the ground and other members of the A08 tending to him.

Post accident inspection of the equipment noted that there were three hand brakes applied to the east three cars in the cut that rolled out of CT7. In interviews with NTSB investigators, the A 80 conductor stated that those hand brakes were on the cars (“existing handbrakes”) when he made the cut to bring the 11 cars out of CT7. He told investigators that in Decatur Yard the securement guidelines was that just three handbrakes need to be applied on the east end of the yard.<sup>1</sup> Investigators asked the conductor if he had checked all three of the handbrakes that were applied, and he stated, “I seen all three.”

The A80 conductor told investigators that he had never seen cars roll away in Decatur Yard.

## **E. OPERATIONS TESTING RELATED TO TRAIN SECUREMENT**

The Decatur trainmaster told investigators that he conducts four checks (announced) and two checks (unannounced) each month by riding with the crew and actively observing yard operations. He also indicated that he goes through the yard during the day when he first goes on duty to observe the locations of the engines and to check for unsafe conditions. He told investigators that prior to recent changes in operations he was less active in his observations.

The trainmaster told investigators there is a “three handbrake” rule on the east end of the yard, and on all tracks, there's no C-102 required. There's no air on most of

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<sup>1</sup> The conductor referenced C102 in his response about the number of handbrakes required to be applied.

the cars anyway, you know, it's a classification yard." He indicated that the rule is found in timetable instructions.

In the trainmaster's experience, the only rollout that occurred was when crews were dropping cars (on the east end of the yard) and the knuckles did not function properly. He stated that a car may roll over a switch, but none have rolled out the yard. He believed that there were 2-3 instances in 2023 where a car ran through a switch.

## **F. EMPLOYEE BACKGROUND AND EXPERIENCE**

### **1. Crew of A08 (operating at the West end of the yard)**

#### **a. Brakeman**

The brakeman was hired in January 1997, and in July that year he marked up as a conductor. He worked in Memphis, TN, and then went to Decatur, AL and worked as a brakeman / switchman. He then entered locomotive engineer school in 2004, and became a qualified engineer in March 2005. He operated locomotives until 2014, and then began "working on the ground" since then (10 years) working job A08.

#### **b. Conductor**

The conductor was hired in February 1997, and marked up in June 1997. He went to locomotive engineer school in 2003. After he became a qualified engineer, he operated engines in Decatur. For the last 12 years (2 years as an engineer followed by 10 years as a conductor) he had worked in Decatur.

### **2. Crew of A80 (operating on the East end of the yard)**

#### **a. Engineer**

The engineer had worked for Norfolk Southern for about 25 years, and operated as an engineer for about 20 years. He had not operated a locomotive on the road since 2006. Since then, he has operated in different yards. He worked exclusively in Decatur for the last 7 years; the first 5 years he was on the ground, and the last two as a locomotive engineer.

#### **b. Conductor**

The conductor had no prior railroad experience before he began working for Norfolk Southern. At NS, he started as a conductor trainee in July 2011 in Sheffield, AL, and became a qualified conductor in January 2012. He had always worked as a conductor. He had worked off the extra board for 6 years, and since then has worked "off and on" in Decatur. He had been working the Decatur job for 2 years.

c. Conductor Trainee

The conductor trainee had worked in a non-railroad craft for many years before he began working on the railroad. He had completed formal conductor training in McDonough, Ga, in 2023, that included both classroom and field training. He had been a conductor trainee for about 3 ½ month and worked various jobs, including the Sheffield Yard. He had worked in the Decatur Yard for about one month.

3. Additional interviews

a. Utility Conductor DU04-AA-31 (making air hose couplings on the east end of CT01)

The Utility conductor was hired in 2000 by Norfolk Southern, and became a qualified engineer in 2005. He had worked primarily as a utility man since 2016. He had worked in different locations, including Memphis, Sheffield and Decatur. While in Decatur, he was worked as an engineer, conductor and utility man. As a utility man, he assists crews with various tasks, such as transporting crews and acting as a "floating brakeman." On the day of the accident, he assisted multiple crews in the yard (A04, A08, A75) that included making air hose couplings on the east end of the yard.

b. NS Decatur Trainmaster

The Decatur trainmaster has been working for NS for about 30 years. He worked as a carman, service attendant, in transportation, switchman, conductor, engineer on the Georgia Division. He operated trains about 10 years out of Atlanta. He then worked as a Road Foreman in Virginia in a couple different districts. He was transferred to Sheffield, Alabama in 2005. He served as a Road Foreman between Memphis and Chattanooga for about 5 years. He then became a Trainmaster in Memphis East where he stayed until 2013. He then was transferred to Mobile, Alabama and worked as a Train Master. About 2015 he was transferred back to Decatur for about 2 years. He then moved to Sheffield tower where he worked for a year; then was transferred back to Decatur (2019). On January 31, his shift began at 0500 and he was on duty when the accident occurred.

## **G. DISCIPLINE (RELATED TO TRAIN OPERATIONS) - LAST 10 YEARS**

### **a. A80 Conductor**

The A80 conductor was disciplined on October 25, 2018, while working the Decatur job (at an industry about 4 miles from Decatur Yard). His records indicated that he had "failed to properly secure equipment with a sufficient number of effective hand brakes. Allowed equipment to roll back into train."

During his February 2, 2024, interview with investigators, the A80 conductor stated that while he was working at that nearby industry in Decatur, he gravity-rolled seven cars and tied one handbrake up to stop the cars. However, that did not stop the cars, which rolled out into a curve striking other cars and causing a derailment.

### **b. The conductor trainee had not been disciplined.**

### **c. The A80 engineer received a "Minor" discipline (July 21, 2017) for failure to shut down an NS locomotive when the delay exceeded 30 minutes.**

d. The A08 engineer received a "Serious" discipline (August 10, 2022) for failure to operate by PTC rules in PTC territory and improper use of dynamic and airbrakes in the vicinity of Memphis West District. This resulted in "30 days deferred" disciplinary action.

## **H. WORK/REST ROUTINE**

On the day of the accident, the Utility Conductor went on duty at 6:00 a.m. The 08 crew (engineer, conductor and brakeman) all went on duty on January 31 at 7:00 a.m. The A80 crew (engineer, conductor, and conductor trainee) all went on duty January 31, 2024, at 3:00 p.m.

The A80 Conductor and the A80 engineer worked the "swing shift job" where they work Saturday to Wednesday, and were off Thursday and Friday. The work schedules for the crew of A80 and the A08 engineer three days prior to the day of the accident are included in the tables below:

#### A80 Conductor

<b>Date</b>	<b>Start time</b>	<b>End time</b>
Wednesday Jan 31	3:00 p.m.	4:17 p.m. (accident)
Tuesday Jan 30	3:00 p.m.	2:38 a.m. (Jan 31)
Monday Jan 29	6:00 p.m.	4:41 a.m. (Jan 30)
Sunday Jan 28	6:00 p.m.	4:25 a.m. (Jan 29)

#### A80 Conductor's sleep

After arriving home following his Monday and Tuesday shifts, the A80 conductor went to bed within an hour. He typically sleeps about 5 hours. After waking on those two days, he did some chores around the house. He told investigators that on Wednesday, before the start of his 3:00 p.m. shift, he felt "perfectly fine."

#### A80 Conductor trainee

<b>Date</b>	<b>Start time</b>	<b>End time</b>
Wednesday Jan 31	3:00 p.m.	4:17 p.m. (accident)
Tuesday Jan 30	3:37 p.m.	2:43 a.m. (Jan 31)
Monday Jan 29	6:00 p.m.	5:32 a.m. (Jan 30)
Sunday Jan 28	6:00 p.m.	5:30 a.m. (Jan 29)

#### A80 Conductor trainee's sleep

After his Sunday and Monday shifts (each ending the following morning), the A80 conductor trainee ate, arrived home, and went to bed about 7:00 a.m. and slept to about 1:00 p.m. He received a similar amount of sleep following his shift that ended early Wednesday morning. At the start of his Wednesday 3:00 p.m. shift, he told investigators that in terms of his alertness he "felt really good."

#### A80 Engineer

<b>Date</b>	<b>Start time</b>	<b>End time</b>
Wednesday Jan 31	3:00 p.m.	4:17 p.m. (accident)

Tuesday Jan 30	3:00 p.m.	2:30 a.m. (Jan 31)
Monday Jan 29	6:00 p.m.	4:23 a.m. (Jan 30)
Sunday Jan 28	6:00 p.m.	4:30 a.m. (Jan 29)

### A80 Engineer sleep

The A80 engineer told investigators that he “got his rest” and felt “good” at the start of his Wednesday 3:00 p.m. shift. (Details of his sleep schedule were not available).

### A08 Engineer<sup>2</sup>

<b>Date</b>	<b>Start time</b>	<b>End time</b>
Wednesday Jan 31	7:00 a.m.	4:17 p.m. (accident)
Tuesday Jan 30	7:00 a.m.	5:01 p.m.
Monday Jan 29	7:00 a.m.	4:03 p.m.
Sunday Jan 28	7:00 a.m.	4:15 p.m.

## **I. MEDICAL**

### 1. Crew of A80

- a. The locomotive engineer’s last company physical was August 9, 2021. His medical history form listed no medical conditions. (Other medical conditions identified but not listed in his medical history form were determined to be properly treated).
- b. The conductor’s last company physical was Jan 23, 2023. His medical history form listed no medical conditions. He had been prescribed two medications (Meclizine and Cefdinir) to be taken as needed.<sup>3</sup> He told investigators that he didn’t have any medical issues, did not have a cold or allergies, and “felt fine” and alert on the day of the accident.

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<sup>2</sup> Details of the A08 engineer’s off-duty schedule were not available.

<sup>3</sup> Meclizine is an antihistamine that prevents symptoms of motion sickness like nausea, vomiting or dizziness. Cefdinir is used to treat bacterial infections in many different parts of the body.



- c. The conductor trainee's last company physical was August 11, 2023. His medical history form listed no medical conditions. He had passed his vision and hearing tests.

## 2. A08 - Locomotive Engineer

- a. The A08 locomotive engineer's last company physical was Dec 26, 2023. His medical history included moderate hypertension (controlled with medication) and moderate OSA (controlled using a CPAP). He had been prescribed Lisinopril to be taken as needed.<sup>4</sup>

## J. TOXICOLOGY

Post-accident toxicological tests were conducted in accordance with 49 CFR Part 40 and Part 219. Urine specimens were collected for the crewmembers of crew A80 (except for the conductor trainee) and the crew of A08 on January 31, 2024, at the Decatur Morgan Hospital in Decatur, AL. All test results (except for the fatally injured A08 Engineer) were negative for blood alcohol.

Specimens for the A08 engineer tested positive for alcohol - ethanol (blood specimen) but negative for alcohol from the vitreous humor specimen. The Medical Review Officer's final Report stated: "Ethanol likely due to postmortem production as a result of decomposition."

Submitted by:

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Human Performance and System Safety Investigator

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<sup>4</sup> Lisinopril is used alone or in combination with other medications to treat high blood pressure in adults.