



Inside **THE** RAIL

From NASA's Confidential Close Call Reporting System



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This isn't the MINOR LEAGUES...

Baseball and the railroad industry have a lot in common. Both originated in the 19th century and have deep traditions that are woven into the fabric of America. One major difference though is the process of developing the knowledge and skill needed for the job. Young ball players are developed in the minor leagues where learning from mistakes is part of the game. However, for railroaders there is no farm system and mistakes left unchecked can have more severe consequences. Railroad trainees learn the ins and outs of the job through on-the-job training immediately in the "Big Leagues", through the tradition of trainers passing down knowledge and experience while providing oversight.

In this issue of *Inside the Rail*, C³RS presents close-call events from different crafts revealing problems that occurred while training was in progress. The following narratives provide you with insight on how even under the watchful eye of a trainer or qualified person, mistakes can happen quickly.

Head in the Game

Distracted by training, this Student Engineer lost track of speed and the Engineer intervened.

■ *While explaining something to [a] Student Engineer, we [were] heading east going on a down grade. The train picked up speed to X MPH for maybe five seconds. Then I applied the brakes to bring it back down to [the] speed limit.*

C³RS Expert Analyst's Callback Summary:

The reporter, an Engineer, was talking to the Student Engineer to explain the physical characteristics of the territory. The train started to pick up speed while on a slight downhill grade, so the Engineer applied the brakes immediately and brought the train back into compliance. The Student Engineer had only been over this territory a few times and did not realize the grade difference. Positive Train Control was not operable at the time of the overspeed event.

Warning Track Power

An Electric Traction Manager provides insight into how a lack of detail on a form filled out by a trainee contributed to this close-call event.

■ *Trainee and I were working the Electric Traction Manager's desk. [We] received a request for power, wrote the authority form up and made a mistake on the switch and*

section number part of the form. When he gave the Lineman permission to Voltage Meter test the de-energized circuit, the Lineman reported a hot Voltage Meter test. I asked the Lineman what authority he wanted to perform his work and the Trainee wrote down the right body of the authority but had the wrong switch and section number for the authority. I told the Lineman I would call him back. I called the Dispatcher [to] extend the Power Block and rewrote the authority, performed the correct switching, had him Voltage Meter test the new authority and issued the new authority. The mistake was found and corrected in the procedures we go through when issuing authorities on the Electric Traction Manager's desk, but it was still a close-call event.

Keep Your Eyes on the Ball

A Yardmaster explains why it's important to maintain awareness and stay focused while training.

■ *A Yardmaster Trainee gave permission to the yard switchers to occupy the north end of the yard. While the switchers were doing their work, the Trainee [also] gave permission to a Train to enter the north end of the yard while the switchers were working.*

C³RS Expert Analyst's Callback Summary:

The reporter, a Yardmaster, stated that they were training a student at the time of the incident. The Yardmaster normally

keeps post-it notes on the desk to keep track of the general location of switch crews in the yard. On the day in question however, there were two switch crews working in the yard but only one was documented. When one of the switch crews notified the Student Yardmaster that they were in the clear, both the Student and the Yardmaster believed that no other crews were switching, and allowed a passenger train into the north end of the yard. The switch crew that was still working, called the passenger train to stop them because they were still occupying the track where the passenger train was routed. After the last switch crew cleared, the passenger train was allowed to proceed. The passenger train was delayed by approximately five minutes as a result of the incident. The Yardmaster had an extended conversation with the student regarding the event.

Cover All the Bases

With a trainee shadowing, a Laborer allows a distraction to contribute to missing routine steps in establishing Blue Flag Protection.

■ *A Laborer did not call the Yardmaster for Blue Flag Protection while training a coworker on how to service the train car. While I was training another coworker and explaining how to service the train, I forgot to place [a] safety hold on the equipment I was preparing to service. I did all the correct things to begin service, putting my tags on both engineer cabs, but I got distracted in my attempt to show how to perform the duties of servicing the train car. I didn't realize that I had started servicing the train and didn't call the Yardmaster over the radio for track protection.*

C³RS Expert Analyst's Callback Summary:

The reporter, a Laborer, stated that having a coworker shadowing became a distraction. While explaining the job and watching out for the coworker's safety, the Laborer did not contact the Yardmaster for protection before servicing a train. The Laborer did contact the Yardmaster after the event, to let them know of the situation and that they were now clear. The Laborer also stated that in the future, concentrating on the task at hand before trying to explain the process to a coworker or trainee would be helpful.

Missing the Signs

An Engineer provides a first-person account of how an unusual circumstance while training resulted in a speeding event.

■ *With [the] cab signals and Positive Train Control (PTC) failed and cut out, [and] running under Automatic Block Signal rules instead of Cab Signal System (CSS) as usual. [We] began to pick up speed on an Approach Limited wayside signal to X MPH [10 MPH overspeed] when I should have remained at Y MPH. With a Student Engineer in training, we were focusing on several new situations, not going above Z MPH due to CSS/PTC failed limitations. We reduced speed immediately into compliance and reviewed rules and instructions.*

C³RS Expert Analyst's Callback Summary:

The reporter, an Engineer, stated the Student Engineer was operating the train at the time of the incident. The Engineer reiterated that they were having a conversation with the Student Engineer on how to operate with failed Positive Train Control. The Engineer believes the Student Engineer was focused on not exceeding the Maximum Authorized Speed for failed PTC and the train accelerated too much after passing an Approach Limited signal. The Engineer immediately let the Student Engineer know of the situation and the Student Engineer returned to compliance.

To see other records related to training and other close call events that are submitted to C³RS, visit the C³RS website at <https://c3rs.arc.nasa.gov> and click on the Confidential Close Call Reporting System Online Database under the Online Resources tab.

Did You Know?

If you submit a C³RS report, a NASA C³RS Expert Analyst may call you if you do not include enough information or to better understand the safety issues you are sharing. It is very important that you return our call within three days so that your identification (ID) strip (sent by the U.S. Mail) can be returned to you quickly.

The more information you include in your report, the faster the ID strip can be returned to you!

Report Intake By Craft January through June 2022		C ³ RS Inside The Rail Issue 17 July 2022 https://c3rs.arc.nasa.gov	Monthly Report Intake Previous 3 Months	
Transportation	1,400		April	266
Engineering	38		May	283
Mechanical	36		June	249