Issued: October 21, 2024 Railroad Investigation Report RIR-24-10

# CSX Transportation Employee Fatality

Walbridge, Ohio
September 17, 2023

## 1 Factual Information

### 1.1 Accident Description

On September 17, 2023, about 3:24 a.m. local time, a member of a CSX Transportation (CSX) mechanical department crew (the accident carman) was struck and killed by a pair of remote-control locomotives during switching operations in a remote-control zone (RCZ) on the Walbridge Yard lead track in Walbridge, Ohio.[1] At the time of the accident, the accident carman was walking across multiple tracks to line and lock a switch to prepare for railcar inspections.[2] The locomotives were operating as yard job Y397 and were being used to perform switching operations under the control of a single remote-control operator (referred to as a conductor in this report) positioned on the lower ladder on the west side of the trailing locomotive. As the accident carman began crossing the lead track to access the switch, he was struck by the locomotives, which were traveling south about 10 mph. (See figure 1.) Visibility conditions at the time of the accident were dark and clear, but the area was illuminated with overhead lighting. The temperature was 63°F with no precipitation.

[1] (a) All times in this report are local. (b) Visit www.ntsb.gov to find additional information in the public docket for this NTSB accident investigation (case number RRD23FR017). Use the CAROL Query to search safety recommendations and investigations. (c) A *remote-control zone* is an area where remote control operation of locomotives is authorized.

[2] *Carmen* line switches to direct train traffic away from track where they plan to inspect railcars; this prevents trains from entering that track. Locking a switch prevents unauthorized personnel from lining it in a different direction.

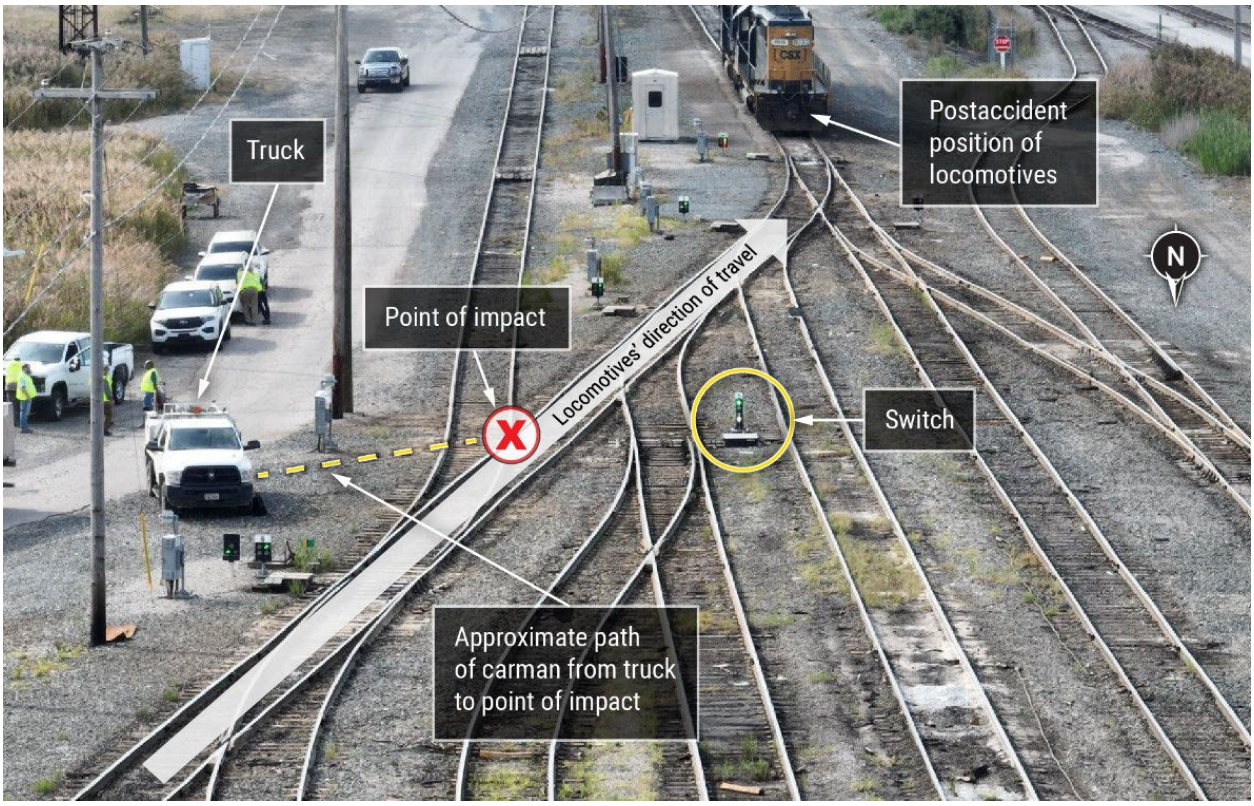


**Figure 1.** Accident scene. (Source: CSX.)

The mechanical department crew consisted of two carmen. They started their shift at 11:00 p.m., September 16, 2023, the day before the accident. The accident carman radioed the conductor for permission to enter the RCZ and lock up tracks 3 and 5. After receiving permission, the crew parked a truck east of the lead track and several other yard tracks. (See figure 2.) Walbridge Yard surveillance camera video reviewed by National Transportation Safety Board (NTSB) investigators showed the accident carman exited the driver's side door of the truck and walked west toward the switch on track 5 to line and lock it. When interviewed by the NTSB, the second carman did not describe completing a job briefing before the crew entered the RCZ.[3]

[3] CSX rules require a job briefing before several tasks, including entering a remote-control zone. See section 1.5 for more information about CSX rules and guidance.

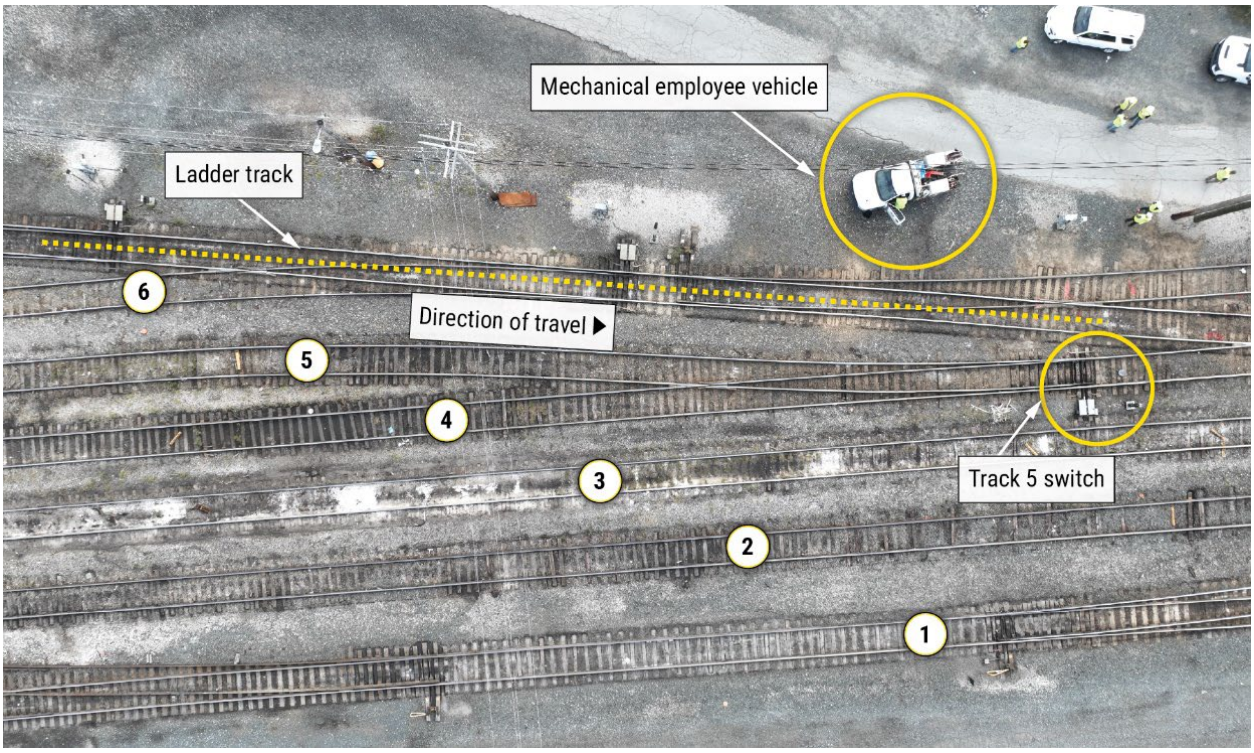


**Figure 2.** Aerial view of the tracks.

At 3:24 a.m., the accident carman turned on his headlamp as he walked toward the track 5 switch. On surveillance video, light from his headlamp is visible on the ground between his location and a straight line toward the track 5 switch. The video does not show this light shining in any other direction, including toward the approaching locomotives, as the accident carman neared and then crossed the first rail of the ladder track at 3:24:01 a.m. Based on event recorder data, the locomotive was about 32 feet from the accident carman. The surveillance camera video shows the lead locomotive striking the accident carman at 3:24:04 a.m.

The second carman, who was unaware that an accident had occurred, exited the truck's passenger door, and crossed the lead track to place a blue signal on yard track 5.[4] As the second carman returned to the truck, he saw the accident carman lying near

[4] Title 49 *Code of Federal Regulations* 218.23 requires that blue signals be displayed in accordance with 49 *Code of Federal Regulations* 218.25, 218.27, or 218.29 by each craft or group of workers before their going on, under, or between rolling equipment and may only be removed by the same craft or group that displayed them.

the lead track. The second carman then radioed to stop all train movement in the yard and request help.[5]

## 1.2 Work History

The accident carman had over 18 years of service as a carman while working for CSX. Between 2010 and 2023, he had completed safety rules training and blue signal training certification for each year, excluding the year 2020. These records showed that the accident carman had also received 25 documented safety briefs during the same time.

The conductor had over 11 years of service as a conductor while working for CSX. The conductor's training and certification history showed that he had completed his required operating rules examination in 2022, and that he had completed the required physical characteristics and remote-control operator recertification examinations in 2023.

## 1.3 Site Observations

Walbridge Yard has four separate RCZs used by CSX crew members to assemble and disassemble train consists in the yard's classification tracks. RCZs, when properly "activated," allow CSX employees to operate a locomotive remotely on designated tracks specific to that zone without the requirement of having a crew member observing the leading end of the movement. This is specifically defined in CSX operating rule 902.4: "Once activated, the remote-control zone is under the control of the remote-control operator foreman. The remote-control crew that activated the zone may make movements within the limits of the zone without providing protection."[6]

CSX RCZ locations at Walbridge Yard are specified in the Toledo terminal subdivision timetable instructions. The conductor told NTSB investigators during his interview that on the day of the accident, he had established an RCZ on the designated tracks in the eastbound yard. He established this RCZ by operating his locomotive from the leading end over this route, checking to ensure that the switches are properly lined, and verifying visually that the zone limit signs designating the RCZ were correctly displayed. Afterward, he reported to the yardmaster that he had an active RCZ on the switching lead before commencing his switching operations.

[5] The radio message was broadcast to the yardmaster and all trains operating in the yard.

[6] CSX Operating Rules. Issued February 1, 2023.

## 1.4 Postaccident Toxicology Testing

In accordance with Title 49 *Code of Federal Regulations* 219.201, the accident carman underwent postmortem toxicology tests for alcohol and other drugs. No tested-for substances were identified.[7]

## 1.5 CSX Rules and Guidance

When receiving permission to enter an RCZ, CSX Operating Rule 502.3 requires employees to hold a job briefing. Specifically, "a detailed job briefing must be completed by all employees involved to include at a minimum: work to be performed; move that will be made; tracks to be utilized, and amount of time required fouling the zone."

Further, CSX Operating Rule 2100.4 states that "employees must stop and look in both directions before fouling or crossing a track or set of tracks (it is permissible to cross more than one track without stopping at each track if safe to do so)."

NTSB investigators reviewing the Walbridge Yard surveillance camera footage observed that the accident carman crossed tracks twice without looking in both directions immediately before the accident.

## 1.6 Postaccident Actions

As a result of this accident, CSX issued a safety alert and held safety meetings to discuss and emphasize the safety alert, briefings, situational awareness, and knowledge of emergency action plans.[8] CSX is working with its vendor to modify the remote-control locomotive software on how frequently the bell rings on the locomotive. Before the accident, the bell rang for 5 seconds at the start of every movement. With the modified software, that same bell will now ring automatically for 5 seconds for every 250 feet traveled. Further, CSX replaced remote-control locomotive warning signs throughout the yard. CSX also modified the rules on permission needed for entering the RCZ.

On September 29, 2023, the Federal Railroad Administration issued Safety Bulletin 2023-07, in reference to this accident. In this bulletin, the Federal Railroad Administration "reminds all railroads and railroad employees of the importance of

[7] Postaccident toxicology testing required by the Federal Railroad Administration includes testing for amphetamines, barbiturates, benzodiazepines, cannabinoids, cocaine, MDMA/MDA, methadone, opiates/opioids, phencyclidine, tramadol, ethyl alcohol, brompheniramine, chlorpheniramine, diphenhydramine, doxylamine, and pheniramine.

[8] CSX Safety Alert. Issued September 18, 2023.

maintaining constant situational awareness when approaching or fouling railroad tracks."[9]

# 2 Analysis

The NTSB found that the following factors did not contribute to this accident: fatigue, drug or alcohol use, cell phone use, train handling, mechanical defects, or track defects. Further, records reviewed by NTSB investigators demonstrated that both the accident carman and the conductor had been sufficiently trained, evaluated, and qualified on the CSX operating rules relating to performing work while on or about tracks. The conductor involved in this accident had properly established an active RCZ before the accident and was authorized to operate within that zone without leading-end protection.

During his interview with NTSB investigators, the yardmaster stated that because the accident carman was only placing locks on the switches, he was required to provide his own protection. He stated that because there was no equipment entering the RCZ, and no switches being thrown, the RCZ remained active and did not require the conductor to operate his locomotives from the leading end.

Based on the information provided by CSX employees during their interviews with NTSB investigators, and a review of the radio recordings provided, investigators determined that while the conductor gave the accident carman permission to "lock up 3 and 5" tracks within his zone, the crew did not perform a detailed job briefing as required in CSX rule 502.3. The omission of a job briefing resulted in a lost opportunity to review hazards, including the presence of remote-control locomotives in the area.

The accident carman had been sufficiently trained, evaluated, and qualified on CSX operating rules relating to performing work while on or about tracks. However, given the proximity of the locomotive to the accident carman as he approached and then crossed over and onto the active track, the accident carman failed to adhere to CSX operational rule 2100.4, which directs employees to look both ways before crossing a track. This failure was consistent with inattention to surroundings and contributed to the accident. CSX is working to modify its remote-control locomotive software to provide more frequent audio warnings and better protect employees from lapses in attention.

# 3 Probable Cause

The National Transportation Safety Board determines that the probable cause of the CSX employee fatality that occurred on September 17, 2023, was the failure of the

[9] FRA Safety Bulletin 2023-07. Issued September 29, 2023.

accident carman to comply with the CSX operating rule that required an employee to stop and look both ways before fouling a track. Contributing to this accident was the failure of the accident carman to conduct a thorough job briefing as prescribed by CSX operating rules before the accident.

The NTSB is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in the other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, "accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties … and are not conducted for the purpose of determining the rights or liabilities of any person" (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB's statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)).

For more detailed background information on this report, visit the NTSB Case Analysis and Reporting Online (CAROL) website and search for NTSB accident ID RRD23FR017. Recent publications are available in their entirety on the NTSB website. Other information about available publications also may be obtained from the website or by contacting—

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