



# National Transportation Safety Board

## Railroad Accident Brief

### CSX Transportation Employee Struck by Remote Control Locomotive Richmond, Virginia

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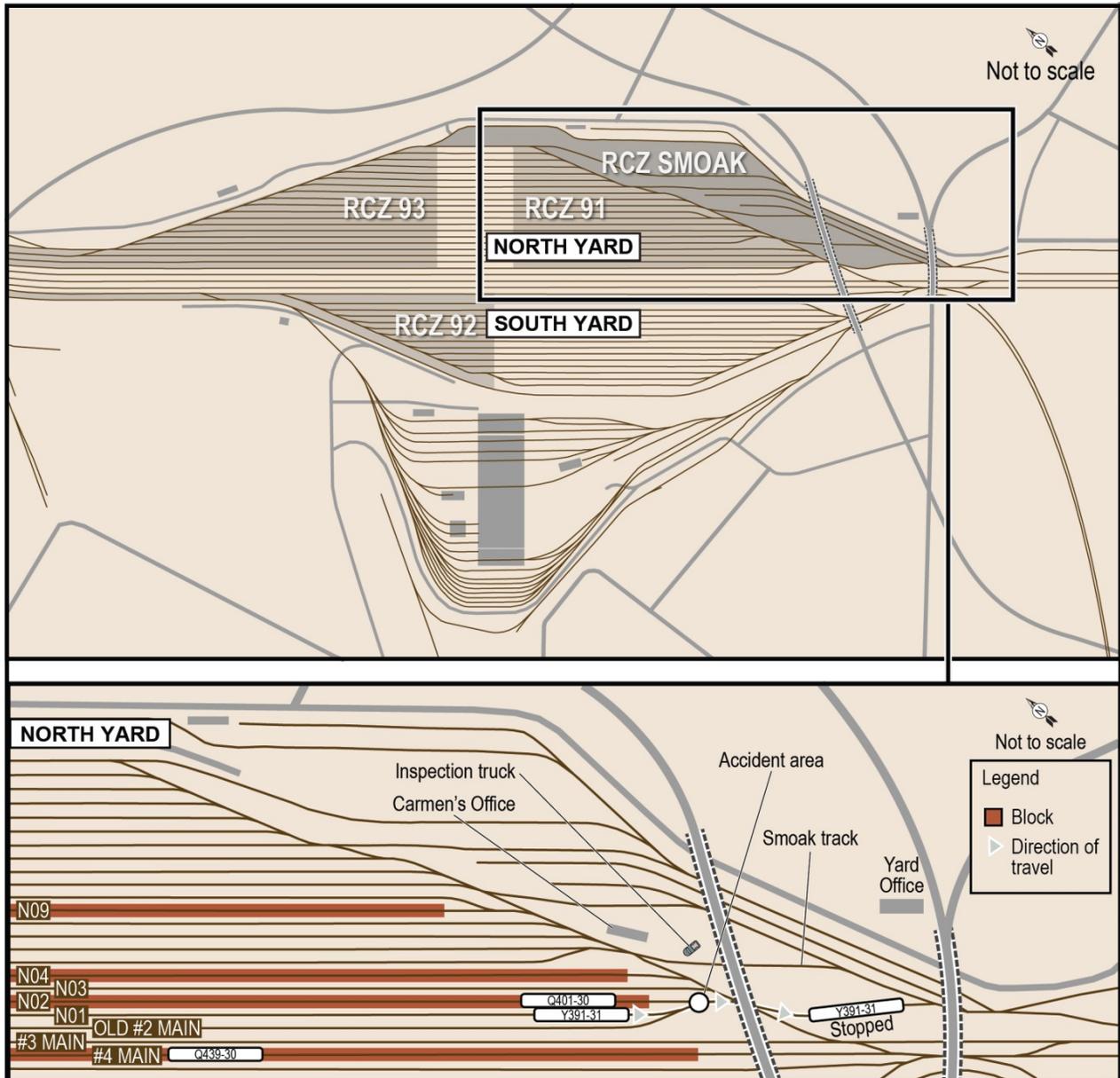
## The Accident

On April 1, 2015, about 2:51 a.m., CSX Transportation (CSX) train Y391-31, operating with a remote control locomotive (RCL), struck and killed a CSX employee (carman) who walked in front of it as it moved through the south end of yard switch N02, in remote control zone (RCZ) 91, of the Acca Yard in Richmond, Virginia.<sup>1</sup> (See figure 1.) The point of impact was estimated to be in the gage of the rails at the N02 switch points. About the time of the accident, the sky was clear with 10 miles visibility, temperature was 48°F, and wind was from the north at 22 miles per hour (mph) gusting up to 29 mph.

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<sup>1</sup> All times in this report are eastern daylight time.

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**Figure 1.** Acca Yard.

The carman (lead carman) worked alongside another carman (second carman), with whom he had worked for about 15 years. They reported for duty at the Acca Yard on March 31 at 11:00 p.m. The second carman said that the shift was busy, with routine duties, up until the time of the accident.

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The Y391-31 remote control operator (RCO), who was also a qualified conductor, also reported for work at the Acca Yard Office on March 31 at 11:00 p.m.<sup>2</sup> He described the work shift as normal before the accident and said that he had not experienced any equipment issues.

On April 1, about 2:30 a.m., after receiving instructions from the yardmaster to switch the cars in track N01, the RCO visually scanned the RCZ to ensure all hand throw switches were aligned correctly and that no obstructions were present.<sup>3</sup> The RCO then coupled the locomotive to the cars in track N01, connected air hoses between 5 cars, and began to pull the 33 cars of the train south from track N01. The RCO said he remained on the ground to check the car numbers as they went by against the numbers on the switch list. About 2:50 a.m., the second carman notified the yardmaster that the lead carman had been struck. The yardmaster then instructed the RCO to apply the brakes and stop the train. After he stopped the train, the RCO walked south toward the RCL and discovered that it had struck the carman.

## The Investigation

About 1:15 a.m., while the carmen were inspecting cars for an outbound train on track N04, the yardmaster radioed the lead carman and told him to release the air brakes on the cars in track N02 for eventual switching. After finishing their work on track N04, the two carmen intended to place blue signal protection on the south end of track N02.<sup>4</sup>

The weather had cooled before the carmen placed the blue signal protection on track N02, so the second carman went inside the carmen's building to put on his coveralls while the lead carman sat in an idling CSX truck parked adjacent to the tracks. After the second carman returned from the carmen's building, the lead carman began walking from the CSX truck to the N02 switch to apply the switch lock, while the second carman went to the end of track N04 to retrieve the blue signal and place it on the end of track N02.<sup>5</sup> While positioning the blue signal, the second carman saw the oncoming train on track N01, he turned and observed the lead carman walking toward the switch. The second carman told National Transportation Safety Board (NTSB) investigators that the lead carman was walking "irregular", as if he were "in a trance." Normally, the lead carman would stop before walking over a track. However, the second carman stated that in this instance, the lead carman did not slow his pace or stop before crossing over the tracks, nor did he turn his head to look for oncoming trains.<sup>6</sup>

The second carman stated, "Normally, there would be more movement in his body; he was not moving his face, his arms, his body. It was like in one fixed motion. There was no stopping.

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<sup>2</sup> An RCO is certified as an RCL engineer, in accordance with Title 49 *Code of Federal Regulations (CFR)* Part 240.

<sup>3</sup> Title 49 *CFR* 218.99(a)(3)(i) and *CSX Operating Rulebook*, "CSX RCZ Rule 902.3," effective January 1, 2014, require the RCO to make an initial "track is clear" determination before operating in an RCZ.

<sup>4</sup> *Blue signal protection* is used to protect employees working on tracks, particularly in areas that are not under dispatcher control. It signifies that a particular portion of track is closed to rail traffic. This is further described in 49 *CFR* Part 218, subpart B, and *CSX Operating Rulebook*, "CSX Rule Group 1101," effective January 1, 2014.

<sup>5</sup> A lock is applied to the switch stand so the switch points cannot be lined for movement into the track that is going to be occupied by the carmen. A blue signal banner is placed at the track entrance/exit to identify that carmen are present in the track.

<sup>6</sup> *CSX Safe Way*, "CSX General Safety Rule GS10: On or About Tracks," effective July 1, 2012, requires that employees stop and look in both directions before fouling or crossing a track.

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There was no intention. There was no sign to me, ‘oh, he’s going to stop now.’” In addition, the engineer of outbound train Q439-30, which was located on the main track, also briefly observed the lead carman walking toward the switch, and told NTSB investigators that the lead carman appeared “fixated on that switch.”

Following a re-enactment of the accident, investigators determined that the train could be seen for about 16 seconds before it reached the switch, and the strobe light on the train could first be seen at a distance about 6 seconds before that, or about 22 seconds before the train reached the switch.

During this time, the Y391-31 RCL and cars were pulling out of track N01. The lead carman stepped into the gage of the track and in front of the train as the RCL approached switch N02. The second carman stated that he saw the lead carman turn around and raise his arms just before he was struck.

CSX General Safety Rule GS-502.2 states “when an RCZ is active, permission from the RCO must be received and repeated before blue signal protection is established within the zone or fouling the track.”<sup>7</sup> On the night of the accident, the lead carman had previously contacted the RCO by radio twice for permission to enter the RCZ for work that was conducted on tracks N09 and N04, respectively. However, there was no record of either the lead carman or the second carman contacting the RCO to get permission to enter the active RCZ for track N02, as required by CSX rules. Furthermore, the engineer and conductor of train Q439-30 did not follow the rule to request permission from the RCO to enter an active RCZ before crossing it to get to their train that was stopped on the [#] 4 main track, as seen in figure 1.

The RCO of the accident train said that he had not experienced previous issues with carmen working in a track without first talking to him. However, the yardmaster trainee on duty at the time of the accident said that on two previous occasions when he worked as an RCO, the lead carman fouled the RCZ or was too close to the RCZ without his permission. The yardmaster trainee reported the incidents to management, but did not know if CSX took any action. There were no disciplinary actions noted on the lead carman’s personnel record for the last 10 years.

CSX General Safety Rule GS-3, “Job Briefing,” requires job briefings before specific work activities can proceed.<sup>8</sup> During an interview with NTSB investigators, the second carman reported that a briefing was held between the two carmen at the beginning of the shift.<sup>9</sup> The second carman told NTSB investigators that the lead carman would typically get permission from the RCO to enter an active RCZ, then communicate that information to him as part of an additional job briefing. He said that he and the lead carman “talked” as they were preparing to initiate blue signal protection on track N02, but he was unaware if the lead carman had received permission to enter

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<sup>7</sup> *CSX Operating Rulebook*, “General Safety Rule 502.2: Other than Main, Signaled or Siding Tracks,” effective January 1, 2014.

<sup>8</sup> *System Safety Bulletin 004*, “CSX General Safety Rule GS-3: Job Briefing,” effective September 1, 2013, requires a job briefing before beginning a work activity and when the work activity changes. The briefing should include the sequence of job steps: identify, eliminate, contain, or communicate all potential hazards related to the job; and ensure understanding of the planned sequence of events.

<sup>9</sup> There was no documentation of any job briefing discussions between the two carmen on the day of the accident.

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the RCZ. A thorough job briefing would have included a discussion about having track authority to enter the RCZ. Furthermore, an additional job briefing would have provided an opportunity for the second carman to recognize the lead carman appeared impaired. The second carman had a duty to request help or initiate “a good faith challenge” regarding not getting authority prior to entering the RCZ.<sup>10</sup>

The lead carman, aged 54, was hired by CSX on September 11, 1981. The CSX general car foreman, who had been responsible for car maintenance at the Acca Yard for about 2 years prior to the accident, stated that the lead carman was a good employee who had never experienced a serious injury while on duty. He further said that in his 2 years working at this yard, he had not received any complaints about the lead carman’s performance.

On February 24, 2015, the lead carman satisfactorily completed the CSX “Qualified Mechanical Inspection” training program. He had also completed other safety-related training and/or testing at CSX in 2015: (1) “Mechanical – Safety Rules Training CBT,” which included training on job briefings; and (2) “Mechanical – Blue Signal Protection 2015 Annual,” which included training and testing on RCZs.

Investigators were unable to construct a 72-hour sleep/wake history of the lead carman.<sup>11</sup> The day of the accident was his third consecutive day working after being off duty for his normal 2 days off. Prior to his 2 days off, he had worked 5 consecutive days. His on-duty times were from 11:00 p.m. to 7:00 a.m. The commute time from his residence to the train yard was about 1 hour. Although the lead carman’s work and commute schedules allowed for him to be properly rested, investigators were unable to reconstruct his sleep routine during the days leading up to the accident. As a result, fatigue could not be ruled out as a factor in this accident.

The lead carman’s personal cell phone was recovered in the train yard near the location where he had been struck. The cell phone was found turned on.<sup>12</sup> Cell phone records indicated that the last incoming or outgoing call or text message was made on March 31, 2015, at 12:06 p.m., 11 hours before the lead carman’s shift started and almost 15 hours before the accident.

## RCL Switching Operations

During conventional switching operations, a locomotive engineer in the locomotive cab operating the train should remain vigilant for people or objects that may be occupying the track. If the locomotive engineer observes people or equipment on or near the track, he or she is required to sound the bell and horn to warn that the train is approaching, and to attempt to stop the train if

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<sup>10</sup> Title 49 *CFR* 218.97(a) states in part, “...An employee shall inform the railroad or employer whenever the employee makes a good faith determination that the employee has been directed to either take actions that would violate [Federal Railroad Administration] FRA regulations regarding the handling of equipment, switches, and fixed derails as required by this subpart, or to take actions that would violate the railroad’s operating rules implementing the requirements of this subpart.”

<sup>11</sup> The lead carman lived by himself. NTSB investigators could not locate friends or relatives who were knowledgeable of his daily activities.

<sup>12</sup> Title 49 *CFR* 220.303 and “CSX General Safety Rule GS-28.3: Personal Electronic and Electrical Devices,” effective June 28, 2012, required that the cell phone be turned off.

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the track is not clear.<sup>13</sup> This option, however, is often not available to RCOs, who may not be in a position to observe or warn workers of a moving train during switching movements in an RCZ.

Federal Railroad Administration (FRA) regulations define an RCZ as:

...one or more tracks within defined limits designated in the timetable special instructions, or other railroad publication, within which remote control locomotives, under certain circumstances specified in this part, may be operated without an employee assigned to protect the pull-out end of the remote control movement, i.e., the end on which the locomotive is located.<sup>14</sup>

The regulations generally consider all RCL movements as shoving or pushing movements that require point protection.<sup>15</sup> However, point protection was not required within the RCZ by federal regulations or by CSX rules because it was considered to be an exception under Title 49 *Code of Federal Regulations (CFR)* 218.99(c) and (d) because the locomotive was in the lead, or the pull-out end of the movement, and unattended. Although the RCO was not able to observe the lead end of the train as the RCL pulled the train away from him in the RCZ, he was in compliance with FRA regulations and CSX rules. Under normal circumstances, the RCO would have been aware if a person was near the track because that person would have asked permission to enter or foul the RCZ, as required by CSX rules.

## Medical Summary

The NTSB investigation into possible medical issues leading to this accident was limited by the inability to identify and obtain personal medical records for the lead carman. CSX had limited medical records for the lead carman. His initial date of employment was September 11, 1981, and the person who he reported as his physician on his pre-employment physical had retired. The lead carman lived alone; the NTSB contacted relatives and friends, but they did not know the name of his physician. In addition, NTSB investigators could not locate a local pharmacy that had filled prescriptions for him and the insurance company thought to have provided health insurance had no record of him as a client.

## Medical Conditions

Although recent medical records for the 54 year-old lead carman could not be found, an autopsy revealed he weighed 349 pounds. Medical records from a 1981 pre-employment physical

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<sup>13</sup> *CSX Operating Rulebook*, “CSX General Safety Rule 203.1: Locomotive Bell and Horn,” effective January 1, 2014, states that the locomotive bell must be rung before moving a locomotive that has been stopped for 1 minute or more, and while: (1) approaching persons on or around the track structure, and (2) approaching and passing roadway workers identified by white or orange hard hats.

<sup>14</sup> Title 49 *CFR* 218.95.

<sup>15</sup> According to 49 *CFR* 218.99(b)(3)(i): “*Point protection*. When rolling equipment or a lite locomotive consist is shoved or pushed, point protection shall be provided by a crewmember or other qualified employee by: (i) Visually determining that the track is clear. The determination that the track is clear may be made with the aid of monitored cameras or other technological means, provided that it and the procedures for use provide an equivalent level of protection to that of a direct visual determination by a crewmember or other qualified employee properly positioned to make the observation as prescribed in this section and appendix D to this part.”

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had found him to be 6'1" tall. In addition, he had coronary artery disease, evidence of hypertensive heart and kidney disease, and an enlarged liver. According to his CSX medical records, in 2003, the lead carman had documented severe bilateral hearing loss, but there was no evidence of later testing.<sup>16</sup> Although coworkers reported to NTSB investigators that they believed the lead carman had diabetes, the NTSB could not confirm this report.

In the months leading up to the accident, the lead carman was observed by coworkers as being out of breath after short walks. His hypertension was either untreated or he was using a medication that was not identified by the Federal Aviation Administration Bioaeronautical Research Sciences Laboratory toxicology tests.<sup>17</sup> Although it is possible the lead carman was having acute symptoms from his cardiac disease, such as chest pain or shortness of breath, whether or not this was related to his behavior immediately prior to the accident could not be determined from the available evidence.

The lead carman's immediate supervisor did not take exception to his ability to do his work effectively. The NTSB concludes that this investigation was unable to determine whether or not the lead carman's possible medical conditions, treatment, or lack thereof contributed to this accident.

### Toxicology Findings

Postaccident toxicology testing was performed in two separate laboratories and identified about 10 nanogram/milliliter (ng/ml) levels of tetrahydrocannabinol (THC), the psychoactive chemical in marijuana, as well as 15-23 ng/ml of the main metabolite (THC carboxylic acid) in pooled cavity blood. In addition, the THC carboxylic level in his urine was 280 ng/ml. THC, the psychoactive chemical in marijuana, has mood altering effects including inducing euphoria and relaxation. It can have negative effects on motor behavior, perception, cognition, memory, and learning. In addition, it can impair concentration, attention, hand-eye coordination, retention time, and tracking. Interpreting postmortem blood results for marijuana and determining impairment is complex. Long-term, regular users store THC in body tissues and it leaks back into the bloodstream; THC may be quantifiable in the blood of healthy daily users after 27 days of abstinence.<sup>18</sup> This is because THC and its metabolites are lipophilic.<sup>19</sup> Investigators were unable to determine whether the lead carman was a long-term, regular user of marijuana; however, it is a possibility, based upon his testing positive for marijuana on three previous occasions. In addition, THC and its metabolites undergo postmortem redistribution (can move back into blood from

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<sup>16</sup> Bilateral hearing loss is determined by measuring hearing sensitivity with a 60 A-weighted decibel (dBA) threshold of hearing in one ear and a 95 dBA threshold of hearing in the other ear. The test is not actually measuring hearing loss; but rather, it is measuring hearing sensitivity.

<sup>17</sup> In accidents investigated by the NTSB, specimens are sent to the Federal Aviation Administration Bioaeronautical Research Sciences Laboratory for extensive drug and alcohol testing.

<sup>18</sup> Mateus M. Bergamaschi, Erin L. Karschner, Robert S. Goodwin, Karl B. Scheidweiler, Jussi Hirvonen, Regina H.C. Queiroz, and Marilyn A. Huestis, "Impact of Prolonged Cannabinoid Excretion in Chronic Daily Cannabis Smokers' Blood on Per Se Drugged Driving Laws," *Clinical Chemistry* 59, no. 3 (2013): 519-526.

<sup>19</sup> *Lipophilic* means fat soluble.

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storage sites in fat, the liver, and the lungs after death). For THC, this movement may increase the measured level by 1-3 times (0-200%).<sup>20</sup>

The lead carman in this accident was reported to have appeared normal and have had normal conversations with his long-term coworkers for the first 4 hours of their shift. His coworkers reported a change in his behavior just prior to the accident that they described as an unsteady walk with no change in his stride as he approached the tracks. The lead carman did not look both ways before crossing over the tracks as he normally did, which was a requirement. This acute change in behavior is not consistent with late effects of marijuana. After smoking or ingesting marijuana, THC levels rise rapidly and then decline while the levels of the primary inactive metabolite rise after a delay. Peak effects typically occur within 30 minutes and most wear off within 3-5 hours of smoking; new effects do not develop later.<sup>21</sup> The lead carman's postaccident toxicology testing identified 10 ng/ml of THC and 23 ng/ml of the main metabolite of THC. Urine levels of the main metabolite were at 280 ng/ml—more than 10 times higher. Given the relative ratios of these two substances in the lead carman's postmortem blood, level of metabolite much higher than the THC level, and the large amount of metabolite in the urine, it is very unlikely that he smoked or ingested THC during his work shift. The NTSB concludes that although tests indicate the lead carman had used marijuana at some point prior to the accident, the extent to which he may have been impaired by its effects at the time of the accident could not be determined.

Since the lead carman had been inside an idling truck for a significant amount of time prior to the accident, his blood was tested for potential carbon monoxide poisoning. The results showed that the level of carbon monoxide in his blood was less than 10 percent. Therefore, carbon monoxide had no significant effect on his physical condition prior to the accident.

## CSX Drug Policy

According to the lead carman's CSX drug-testing records, he had tested positive for marijuana use on employer-required "return from furlough" urine drug tests in 1986, 1988, and 1990. Each time, he was assessed as being "not dependent" on marijuana, retested with a single negative result, and returned to work.<sup>22</sup> Rules in place at the time did not require him to undergo additional follow-up testing. Further, because railroad carmen are not considered safety-sensitive employees, they were not covered either at that time or currently by the FRA drug and alcohol testing rule, 49 *CFR* Part 219 – *Control of Alcohol and Drug Use*, they were not subject to random testing.

In a telephone interview, the CSX chief medical officer described its drug policy and what would happen now if an employee of that railroad had a positive drug screen for any reason, including on return from furlough. If an employee was evaluated and deemed "nondependent" by

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<sup>20</sup> (a) M.G. Holland, D.M. Schwoppe, R. Stoppacher, S.B. Gillen, and M.A. Huestis, "Postmortem redistribution of  $\Delta^9$ -tetrahydrocannabinol (THC), 11-hydroxy-THC (11-OH-THC), and 11-nor-9-carboxy-THC (THCCOOH)," *Forensic Science International* 212, nos. 1-3 (2011): 247-251. (b) N.P. Lemos, E.A. Ingle, "Cannabinoids in postmortem toxicology," *J Anal Toxicol.* 35, no. 7 (2011): 394-401.

<sup>21</sup> National Highway Traffic Safety Administration, "[Drugs and Human Performance Fact Sheets. Cannabis/Marijuana](#)," accessed May 10, 2017.

<sup>22</sup> *Drug dependence* is defined as having tolerance to a drug's effects and physical symptoms when the drug is no longer used.

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a reliable substance abuse professional, CSX would accept that decision and would require the employee to participate in the recommended treatment program prior to returning to work. The employee would also be required to participate in a follow-up testing program. Regardless of the diagnosis, should a CSX employee have a second positive test within 5 years of the original one, he or she would be terminated. Under current CSX rules, the lead carman would have been terminated from his position following his second positive drug test.

The CSX chief medical officer also said that its current random-testing policy for nonsafety-sensitive employees is dependent upon what is permitted by collective bargaining agreements. The mechanical department, which includes the carmen positions, did not have random testing outside of regulatory requirements for the FRA and the applicable requirements for the Federal Motor Carrier Safety Administration. Through a negotiated agreement, the maintenance-of-way (MOW) department initiated a random drug-testing program starting about a year ago. This drug-testing policy was developed in anticipation of new FRA regulatory requirements that went into effect on June 12, 2016, for MOW personnel.<sup>23</sup> The CSX management random drug-testing program is based upon having direct involvement in train movement or direct supervision of safety-sensitive personnel. Carmen, such as the employee who died in this accident, are not subject to random drug testing under CSX policy, which follows corporate/human resource directives and is not part of the collective bargaining agreement.

## Previous NTSB Investigations in Which Drug and Alcohol Use Was a Factor

The NTSB believes that carmen should be classified as working in safety-sensitive positions and should be subject to random and postaccident drug and alcohol testing.<sup>24</sup> Their fitness for duty is necessary to ensure quality passenger-car or freight-car inspections and repairs. The cars that they inspect and repair could carry passengers, train crewmembers, and hazardous materials. The safety of the traveling public, train crewmembers, and the community at large is dependent upon employee fitness for duty.

On January 9, 2007, two Massachusetts Bay Transportation Authority (MBTA) MOW employees were killed near Woburn, Massachusetts. The presence of illicit drugs was discovered in postaccident drug testing that is required after an accident involving a fatality.<sup>25</sup>

At the time, MOW workers were not designated as safety-sensitive employees and, therefore, were excluded from regular mandatory drug testing. However, 49 *CFR* 209.33(b)(2) states that that safety-sensitive employees include railroad employees or agents who “inspect,

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<sup>23</sup> Final Rule, “Control of Alcohol and Drug Use: Coverage of Maintenance of Way (MOW) Employees and Retrospective Regulatory Review-Based Amendments,” published in *Federal Register* 79, no. 112 (June 10, 2016): 37894.

<sup>24</sup> NTSB letter dated September 26, 2014, in response to the FRA Notice of Proposed Rulemaking, “Control of Alcohol and Drug Use: Coverage of Maintenance of Way Employees, Retrospective Regulatory Review-Based Amendments (RRR),” published in *Federal Register* 79, no. 144 (July 28, 2014): 43830.

<sup>25</sup> National Transportation Safety Board, *Collision of Massachusetts Bay Transportation Authority Train 322 and Track Maintenance Equipment near Woburn, Massachusetts, January 9, 2007*, [RAR-08/01](#) (Washington, DC: National Transportation Safety Board, 2008).

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repair or maintain locomotives, passenger cars, and freight cars.” As a result of that investigation, the NTSB made the following recommendation to the FRA:

Revise the definition of covered employee under 49 *Code of Federal Regulations* Part 219 for purposes of Congressionally mandated alcohol and controlled substances testing programs to encompass all employees and agents performing safety-sensitive functions, as described in 49 *Code of Federal Regulations* 209.301 and 209.303. (R-08-07)

On January 27, 2015, the FRA responded to the NTSB by stating that:<sup>26</sup>

As discussed in FRA’s July 2014 NPRM, FRA believes that individuals who perform the safety-sensitive functions listed in § 209.303 (other than the performance of MOW activities) should not be added to the scope of Part 219. These individuals do not typically experience the same type of safety risks as individuals who perform MOW activities because they generally do not work on or around a railroad’s track or roadbed. For example, individuals who inspect, repair, or maintain locomotives, passenger cars, and freight cars, as described in § 209.303(b)(2), generally perform these functions in locomotive or car repair facilities subject to Blue Flag Protection. See Title 49 *CFR* Part 218, Subpart B. Similarly, individuals who conduct training and testing of employees required by FRA safety regulations, as described in § 209.303(b)(3), may conduct such training without ever approaching a railroad track or roadbed. Furthermore, FRA notes that Section 412 of the RSIA authorizes FRA to expand its drug and alcohol testing program only to cover those employees who perform MOW activities. By including in the proposed definition of MOW activities the operation of fouling equipment, and the obtaining or granting of on-track authority, the proposed regulations would cover the maintenance and communications functions (e.g., the installation of cable or masts) listed in 49 *CFR* § 209.303, that employees would perform on or around a railroad’s track or roadbed, thus adding approximately 32,000 MOW employees and contractors to the scope of Part 219. Finally, FRA’s PAT testing data does not support the expansion of Part 219’s scope beyond that of individuals who perform MOW activities. As with MOW employees, § 219.201(a)(3) requires the PAT testing of any fatally injured on-duty railroad employee or contractor, including individuals who perform the other functions listed in § 209.303. To date, however, among the individuals who perform functions listed in § 209.303, only those who perform MOW activities have post-mortem test results indicating a higher use of drugs or alcohol than those of currently covered safety-sensitive employees. FRA will revisit the issue of coverage for individuals who perform other § 209.303 functions if their rate of positive post-mortem PAT test results should rise in the future.

The NTSB disagreed with this response and classified this safety recommendation as “Open—Unacceptable Response.”

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<sup>26</sup> Former FRA Administrator letter to the NTSB, January 27, 2015.

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In this accident, the NTSB was unable to determine if the lead carman's use of marijuana contributed to the accident. However, the fact that a carman was using marijuana and is not subject to random drug tests could have safety implications as they repair, inspect, and maintain locomotives, passenger cars, and freight cars. The NTSB concludes that carmen should be classified as working in safety-sensitive positions and should be subject to random and postaccident drug and alcohol testing. Therefore, the NTSB reiterates Safety Recommendation R-08-07 to the FRA.

### **Probable Cause**

The National Transportation Safety Board determines that the probable cause of the accident was the CSX Transportation lead carman's failure to use safe practices for walking in the train yard when he moved into the path of train Y391-31 for unknown reasons. Contributing to the accident was the failure of the two carmen to conduct a thorough job briefing before starting a new assignment.

### **Reiterated Recommendation**

The National Transportation Safety Board reiterates the following safety recommendation:

#### **To the Federal Railroad Administration:**

Revise the definition of "covered employee" under 49 *Code of Federal Regulations* Part 219 for purposes of Congressionally mandated alcohol and controlled substances testing programs to encompass all employees and agents performing safety-sensitive functions, as described in 49 *Code of Federal Regulations* 209.301 and 209.303. (R-08-07)

For more details about this accident, visit [www.nts.gov/investigations/dms.html](http://www.nts.gov/investigations/dms.html) and search for NTSB accident identification **DCA15FR006**.

### **BY THE NATIONAL TRANSPORTATION SAFETY BOARD**

**ROBERT L. SUMWALT, III**  
Acting Chairman

**EARL F. WEENER**  
Member

**CHRISTOPHER A. HART**  
Member

**T. BELLA DINH-ZARR**  
Member

**Adopted: June 20, 2017**

## Board Member Statement

**Member Earl F. Weener filed the following concurring statement on June 8, 2017. Acting Chairman Robert L. Sumwalt, III, and Members Christopher A. Hart and T. Bella Dinh-Zarr joined in this statement.**

I found the facts and circumstances of this accident very disturbing. An apparently well-qualified carman with years of experience walked, according to a coworker who had known him for over a decade, as if in a “trance” or “medicated” directly into the path of an oncoming train. While the carman’s toxicological results showed a potentially impairing amount of THC [tetrahydrocannabinol] in his blood, no witness saw him smoking marijuana in the several hours before the accident. What strikes me, are the number of news stories I have seen recently about very potent, edible marijuana products and the ease with which a safety-sensitive employee might ingest them at the workplace. Because of the slower-acting effects of ingested marijuana and its tendency to cause relatively lower THC levels in the blood, toxicology results may appear dissimilar to those where a person has smoked marijuana.<sup>1</sup> It is impossible to know exactly when or how the marijuana in this case was taken, but an on-duty employee with any amount of potentially impairing drugs in his or her system is cause for concern.

For the safety of transportation workers and the traveling public, I am pleased that the NTSB continues to consider the important issue of marijuana impairment and its possibly devastating impact on transportation safety. I am encouraged by tools such as hair testing that can help investigators detect long-term use of marijuana and by emerging studies that will help investigators and transportation employers interpret both pre- and post-mortem toxicology results. The most important steps remain identifying the extent of the problem and addressing it. I strongly support this report’s call for drug testing for safety-sensitive employees.

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The NTSB has authority to investigate and establish the facts, circumstances, and cause or probable cause of a railroad accident in which there is a fatality or substantial property damage, or that involves a passenger train. (Title 49 *United States Code (USC)* Section 1131 - *General authority*)

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. 49 *USC* 1154(b).

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<sup>1</sup> National Highway Traffic Safety Administration, “[Drugs and Human Performance Fact Sheets. Cannabis/Marijuana](#),” accessed June 7, 2017.