U.S. Department of Transportation
Federal Railroad Administration

Federal Railroad Administration, Office of Railroad Safety

Accident Investigation Summary Report CFE-2023-11

Housatonic Railroad (HRRC) – Contractor Fatality
Ashley Falls, Massachusetts
August 4, 2023

1. Executive Summary

On August 4, 2023, an accident occurred along the Berkshire Line operated by the Housatonic Railroad (HRRC) in Great Barrington, Massachusetts, resulting in the death of a laborer employed by The Middlesex Corporation (XMDD). The employee, who had been working on a Massachusetts Department of Transportation (MDOT)-funded rail infrastructure upgrade project, was involved in track maintenance when the incident took place.

At approximately 9:10 a.m., EST, Machine 1, a Quad Drill, which was ahead of Machine 2, a Lagger, experienced mechanical issues and was taken back to the yard for repairs. During this time, the decedent, using a gas-powered leaf blower, and another worker began clearing debris from the track to prevent damage to the machinery upon its return. After the repairs, Machine 1 returned to the worksite in reverse, but the operator did not see the decedent in the gage (the area between the rails) and struck him. The decedent was likely unable to hear the approaching machine due to the noise from the leaf blower he was using at the time.

The Federal Railroad Administration (FRA) investigation determined the accident was primarily caused by multiple failures in safety compliance, training, and supervision by both XMDD and HRRC. The operator of Machine 1 failed to follow critical safety procedures, and the lack of proper oversight allowed unsafe conditions to persist, ultimately leading to the death of a roadway worker.

2. Accident Sequence of Events

An employee of The Middlesex Corporation (XMDD), referred to as the decedent, began working as a laborer on June 5, 2023. His duties included general track work, operating handheld power tools, and using Roadway Maintenance Machines (RMMs). He was hired to support a rail infrastructure upgrade along the Berkshire Line, managed by the Housatonic Railroad (HRRC) and funded by the Massachusetts Department of Transportation (MDOT). The Berkshire Line stretches from the Massachusetts/Connecticut state line in Ashley Falls, Massachusetts, to Pittsfield, Massachusetts.

The Berkshire Line, operated by HRRC, runs north-south from Danbury, Connecticut, to Pittsfield, where it connects with the CSX Berkshire Line. The line has a maximum authorized speed of 40 miles per hour (MPH) and operates under a non-signaled Form D Controlled System (DCS).

The XMDD work crews were stationed at Middlesex Yard, their designated reporting location for this project. Middlesex Yard is located in Sheffield, Massachusetts, next to the HRRC Berkshire Line, with a rail spur connection at the Lanes Switch.

On the evening before the incident, the track between Milepost (MP) BL-50.0 and MP BL-59.0 was taken out of service by an HRRC supervisor. All movements within this area were required to operate at restricted speed per Northeast Operating Rules Advisory Committee (NORAC) Rule 133, and any track car moves in reverse were limited to a maximum speed of 10 mph per NORAC Rule 815.

At around 4:30 a.m., EST, on August 4, 2023, the HRRC Roadway Worker in Charge (RWIC) held an On-Track Safety briefing at Middlesex Yard, attended by approximately 28 people, including HRRC management, XMDD management, and laborers, including the decedent. The briefing covered safety provisions and the day's bridgework plan. Following the On-Track Safety briefing, XMDD held a separate "Daily Huddle" job briefing, emphasizing bridge worker safety and fall protection. The team was divided into two groups: one focused on bridgework and the other on drilling and lagging. At no time were qualified personnel identified to oversee the operation of a mainline switch, which resulted in unsupervised and untrained XMDD employees operating a mainline switch.

The bridge group, including the RWIC and XMDD's Foreman, Supervisor, and laborers, headed to the Village of Ashley Falls Bridge to work on bridge deck rehabilitation. The drill and lag group stayed at Middlesex Yard to switch out RMMs and access the necessary equipment, including Machine 1 (Quad Drill) and Machine 2 (Lagger), before heading to their work site.

Both machines were initially set up facing south, but after being set on the main track, the four-man crew, including the decedent, traveled north about 1.5 miles near MP BL-58.90. The decedent operated Machine 2, while another worker (RW2) operated Machine 1, which was pushing a Nolan cart loaded with tools.

The drill and lag crew communicated primarily via cell phones, with no direct communication with the XMDD Foreman or RWIC about the switch position or OTS updates. Once at the work site, the crew began drilling holes in the crosstie timbers and installing lag bolt fasteners.

Around 9:10 a.m., Machine 1 experienced a mechanical issue with one of its drill heads. RW2 contacted the XMDD Supervisor, who advised him to reach out to the XMDD Mechanic. Unable to reach the mechanic, RW2 decided to take Machine 1 back to the yard for repairs. RW4, who needed to use the bathroom, accompanied him. Before leaving, RW2 disconnected the Nolan pushcart, which was loaded with tools and drinks.

The decedent, who had been operating Machine 2, remained at the work site with RW3. While

waiting for Machine 1 to return, operating within the gage, they began clearing stone off the tie plates using a handheld leaf blower and a screwdriver to prepare for the next round of drilling. At approximately 10:00 a.m., after repairs were completed, RW2 returned Machine 1 to the work site, traveling in reverse at approximately 15 MPH. RW2 did not see the decedent in the gage and accidentally struck him. It is likely that the decedent did not hear the approaching machine due to the noise from the gas-powered leaf blower he was using.

RW2, operating Machine 1, struck the decedent at approximately 10:05 a.m., traveling about 70 feet following the strike before coming to a stop. The decedent fell between the rails after being struck, and Machine 1 rolled over him, stopping just past his position. Machine 1 also impacted the Nolan pushcart, which was damaged and pushed several feet.

Prior to the incident, RW3, who was using a screwdriver to prep the ties, had observed Machine 1 approaching from about a 1/2 mile away but failed to warn the decedent. RW3 was able to get out of the way before being injured.

Emergency services, including EMS, police, and representatives from HRRC, XMDD, and MDOT, were dispatched to the scene. The decedent, severely injured, was placed on the pushcart and transported by EMS personnel to a private grade crossing, where he was then airlifted to Baystate Medical Center in Springfield, Massachusetts. The decedent succumbed to his injuries shortly after.

3. INVESTIGATION AND ANALYSIS

The FRA, National Transportation Safety Board (NTSB), XMDD, and HRCC investigated the fatal railroad accident. The analysis focused on several key areas, including toxicology, fatigue, track protection, operating practices, equipment condition, and human performance.

Toxicological Testing

The accident required post-accident toxicological testing per FRA regulations (49 Code of Federal Regulations (CFR) part 219, subpart C). Tests were performed on RW2, RW4, and the decedent, with all results coming back negative. However, RW3, who played a significant role in the incident, was not tested as required by XMDD. RW3 observed Machine 1 approaching from about 1/2 mile away but failed to warn the decedent in time, which contributed to the severity of the accident. The lack of toxicology testing by XMDD on RW3 left the potential influence of drugs or alcohol undetermined.

Fatigue Analysis

Fatigue levels of all workers involved were assessed by FRA using the FAID Quantum Tool, which indicated high levels of fatigue. FAID scores for RW2, RW3, and the decedent were between 92 and 99. Despite these fatigue scores, FRA determined there was no evidence that fatigue impacted the actions of any of the employees. Therefore, fatigue was ruled out as a significant contributor to the incident.

Roadway Worker Protection
The accident involved failures in roadway worker protection protocols. After the workers arrived for their shift, two separate workgroups were formed with the RWIC accompanying the bridgework group. Additionally, RW2 and RW3 did not properly brief with the decedent on safety procedures thus, while decedent was engaged in clearing the track, he likely had his back turned when Machine 1 approached. With the only RWIC accompanying the bridgework group, HRRC and XMDD failed to supervise the second workgroup containing the decedent adequately, and no qualified person was present to implement on-track safety procedures. This led to a lack of separation between the decedent and RW3, and RW2 in the machine, which ultimately contributed to the fatal accident.

Rule Compliance
RW2 did not comply with NORAC Rule 133.D, which requires restricted speed operation so that the machine can be stopped within half the range of vision. Machine 1 was found to be traveling at approximately 15 MPH at the time of impact, exceeding the 10-MPH limit when moving in reverse. This lack of compliance with safety regulations contributed to the fatality.

In addition, HRRC also failed to provide qualified personnel to oversee the operation of a mainline switch, leaving untrained XMDD employees to operate this switch unsupervised. XMDD employees should not have operated the switch without proper qualification.

Training and Oversight
Both XMDD and HRRC failed in their responsibilities to ensure that workers were properly trained and qualified for their roles. RW2 did not complete the necessary on-the-job training for operating roadway maintenance machines. Furthermore, neither organization had compliant oversight programs, leaving workers unsupervised and without proper classification of their safety-related job categories. These training and oversight failures significantly contributed to the unsafe working conditions and the incident.

4. CONCLUSION

The FRA investigation determined the accident was primarily caused by multiple failures in safety compliance, training, and supervision by both XMDD and HRRC. The operator of Machine 1 failed to follow critical safety procedures, and the lack of proper oversight allowed unsafe conditions to persist, ultimately leading to the death of a roadway worker. Furthermore, RW3, who had observed Machine 1 approaching from about 1/2 mile away but failed to warn the decedent in time, also played a critical role in the cause of the accident.