

NATIONAL TRANSPORTATION SAFETY BOARD
Office of Railroad, Pipeline and Hazardous Materials Investigations
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San Francisco – RRD21LR015

System Safety - Factual
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1. Train Operator

Work History

BART hired the train operator on 7/15/2019. BART training records indicated a variety of training activities between his hire date and the accident, including, but not limited to:¹

- New Hire Orientation (7/15/2019)
- New Hire System Security Awareness (10/1/2019)
- Personal Protection Equipment (10/1/2019)
- Emergency Action Plan (10/1/2019)
- Train Operator Certification – 131 (7/15/2019 – 11/1/2019)
- T/O Skills Tune-Up (3/4/2020)
- Effects and Consequences of Drug Abuse (7/12/2021)
- T/O Recertification – AM (7/12/2021 – 7/16/2021)

At the time of the accident, the train operator had not yet had a ride check with a supervisor in 2021. BART did not provide any evidence of any rule violations or disciplinary actions for the train operator.

¹ Document: Train Operator Training

Schedule

The train operator's hours of service in the days leading up to the accident are listed below:²

Date	Shift Start	Shift End	Hours Worked
9/13/2022	6:37 am	6:45 pm	12.11
9/12/2021	6:39 am	4:54 pm	10.26
9/11/2021	4:31 am	4:34 pm	12.05
9/10/2021	4:40 am	2:32 pm	9.87
9/9/2021	4:19 am	3:03 pm	10.73
9/8/2021	5:35 am	3:43 pm	10.12
9/3/2021	6:20 am	6:36 pm	12.26
9/2/2021	10:18 am	6:36 pm	8.29
9/1/2021	6:20 am	6:30 pm	12.16
8/31/2021	6:41 am	6:33 pm	11.86
8/30/2021	6:26 am	6:31 pm	12.08
8/29/2021	6:44 am	5:00 pm	10.26
8/28/2021	7:35 am	8:50 pm	13.25
8/27/2021	5:19 am	2:32 pm	9.21
8/26/2021	5:03 am	3:22 pm	10.33

2. Interviews***Train Operator***

The interview transcript for the train operator will be made available on the public docket.³

The train operator described the procedure he follows as his train reaches a station. He said that the train stops automatically, and the doors open. Then he makes an announcement of what station it is. He then goes to the window of the cab and looks back and forward. He verifies that there are no obstructions in front of the train. Behind him, he verifies that the yellow safety strip is clear and that nothing is close to the train. He says that the train produces an audible alert, and a light flash by the door panel when it is acceptable for him to press the DOOR CLOSE button. After pressing the button, he visually verifies that the doors close, and the external trouble lights shut off. He keeps his hand near the EMERGENCY STOP button in case there is a concern. The train automatically starts to move, and he closes the window and returns to the operator's seat.

² Document: Train Operator Hours of Service

³ Document: Train Operator Interview

The train operator described his experience at the Powell Station at the time of the accident. He said that passenger traffic was light, which was typical of afternoons. He did not notice any unusual passenger activity. He said he conducted the lookback procedure and *“It was clear. There was nothing. There was nothing obstructing the yellow strip all the way back [by the] train.”* He said that the external trouble lights were not on when he departed the station. He proceeded to Montgomery station, then Embarcadero station, unaware that an accident had occurred. Upon reaching West Oakland station he *“was given a hold by central.”* He was instructed at that point to take the train out of service and remove all passengers.

The train operator described his overall health as good and indicated that he exercised regularly. He said that he followed a balanced diet and did not drink alcoholic beverages. Regarding the day of the accident, he said he was well rested and generally *“feeling great.”* He said that he had a short commute from home to work (about 13 minutes) and arrived around 6:45 am. He said that he usually went to sleep around 7:00 – 8:00 pm and awoke around 4:30 – 5:00 am. He generally slept well and had no sleep disorders. He described himself as an *“early riser,”* indicating that he preferred *“the early shift.”* He indicated that generally, upon returning home from work, he would eat dinner and go to sleep.

The train operator said that his last eye examination had been in 2019 as a requirement for employment with BART. He indicated that he had a pair of non-prescription glasses for reading but did not require prescription glasses. He described his vision as *“good.”* He indicated that he *“absolutely”* felt comfortable visually identifying objects along the entire length of the platform.

The train operator indicated that BART was currently experiencing a pandemic-related ridership issue such that more homeless people were using the system. He indicated that there were currently many people who *“cause a problem on our property.”* He said that he has friends that commute by train who often tell him about unpleasant experiences on the train. He indicated that it was common to see dogs in the system that did not appear to be service animals. He could not recall ever seeing a dog in the system with visible indications of being a service animal. He described a recent incident he had heard about wherein a dog got *“tangled up”* and *“got swept off the platform.”* Recently, he had seen a *“homeless gentleman”* riding with his dog sitting *“right there with him on the seat.”* He indicated that it was not permissible to verify if dogs are service animals. He said, *“we have no control over that.”*

The train operator was asked about potential safety enhancements to prevent future accidents. He indicated that enhanced lighting would help with visibility, as well as ensuring that the yellow strips at each station are *“new and bright.”* He also indicated that the use of platform doors would be helpful in reducing incidents. Additionally, he indicated that safety could be enhanced by stationing a BART employee on each platform. He said, *“I grew up in Asia and Japan specifically, and having a booth or having somebody on the platform it helps.”*

Station Agent

The interview transcript for the station agent will be made available on the public docket.⁴

The station agent said she had been employed by BART for “a little over two years.” She was working at the Powell Station at the time of the accident. At her booth, she had video displays of the elevator, the platform, and parts of the concourse. She said that it was a “super busy” station because it was downtown by a “huge mall.” She said that shortly after the accident, she received a phone call in her booth, and proceeded “down to the platform.” Her actions were primarily “crowd control.” She said that she “saw the body,” then “turned around” and focused her attention on moving patrons away from the accident scene.

The Station agent said that she makes safety announcements herself. Additionally, “*There are regular announcements that come through the PA from central. And if they see something, I think they play an announcement for us.*” The station agent indicated that she appreciated the enhanced lighting at the Powell Station. She said the “lighting is a lot better than it was,” and “the brighter it is, the easier” it is to visibly discern humans and objects.

The Station Agent indicated that BART provided her training wherein she was “instructed that people are only supposed to have service animals on BART.” Other animals were required to be “in a container, a carrier.” She said that it was common to see animals in the system. She said, “I’ve seen a lot of animals come through BART in carriers, rabbits, cats, bunnies... even a chicken.” She said she was not in the practice of asking passengers for proof that their animals are service animals, nor requiring passengers to leave the system because of an animal. However, she had asked people not to take their animals on the escalators.

The station agent indicated that “most of the time,” “everything is fine” with the animals in the system. She said that “safety concerns” are usually a result of “bad judgment on a human part.” However, she said that sometimes animals “can add to the situation.” For example, she discussed how she has observed humans running because they “want to be on time,” and their accompanying animals also being compelled to hurry. She said that it is “usually the human leading the situation,” engaging in unsafe behavior like running on an escalator. She described these unsafe behaviors as “safety things that people think are no big deal, and then it’s all of a sudden a [big] deal.”

⁴ Document: Station Agent Interview

3. Police Report

The BART police department completed an incident report.⁵ Multiple officers were involved with the investigation, and multiple witnesses were interviewed. One witness indicated that he had been a dating relationship with the decedent for about a year and a half. He said that they “camped” together on the corner of Eddy and Myrtle Street in San Francisco, near Van Ness Ave. He said that the dog that the decedent was with had been a gift to her from her deceased ex-husband. He said that the decedent and the dog rode the elevator down to the station platform together while he waited because all three of them would not fit together. He said that when he exited the elevator to the platform, he saw the decedent standing by one of the train car doors. The decedent was facing him (her back to the train) and the dog was on the train. The decedent pulled the leash, but the train doors closed, separating her from the dog. As the train departed the station, the decedent was dragged along the platform.

A different witness indicated that he saw the decedent and a male subject walking on Market Street around 3:00 pm. He said that there were arguing about the dog the decedent was walking. He never saw any physical contact between the two, but ‘kept an eye’ on the two due to the arguing.

4. Train Log

BART provided a summary of information logged from the accident train.⁶ The information below is a subset of this data:

- Train stopped at Powell Station (3:12:29 pm)
- Doors opened automatically (3:12:31 pm)
- Train Operator pressed the DOOR CLOSE button (3:12:51 pm)
- Doors closed (3:13:00 pm)
- Train departed from Powell Station (3:13:02 pm)

5. Cell Phone Usage

Investigators reviewed video of the train operator at the time of accident. He was not using a cell phone.

⁵ The BART police report will not be uploaded to the public docket.

⁶ Document: Train Log Summary

6. Medical

The medical factual report in the accident docket discusses the train operator's physical qualification and post-accident drug and alcohol testing, as well as the involved passenger's autopsy and toxicology results.

7. BART Training

BART provided NTSB with the training material for their "Lookback" procedure.⁷ The following is an excerpt:

Now that you have a release, you will close the doors using the DOOR CLOSE button at the platform side. Before closing the doors, ensure the platform is clear and that all passengers have boarded and off boarded safely. Check the trackway and platform in front of the train is clear. Once the side of the train is clear, close the doors by depressing the DOOR CLOSE button on the platform side while watching the platform. Watch that the amber trouble lights... go out. *(If one or more stay on, you may have a Door Open problem - we'll cover that later)*. Keep your hand over [the] stop button in case you need to stop the train in a hurry.

Watch the platform as [the] train begins to move. Ensure all passengers are still clear of the doors and side of the train. Check in front of [the] train again for obstacles or unusual conditions. Check back alongside of [the] train again before bringing [your] head inside and returning to your seat. **Note: This is the only time [the] Operator's head is extended out the cab window while the train is in motion.** Now return to your seat to watch the trackway ahead.

It will be unsettling at first to have the train move while you are not in your seat. However, it is very important to be watching the side of the train as it begins to move. There is no defined time to have your head out watching, or distance of... [train movement alongside] the platform. You need to keep it out long enough to ensure that no one is being dragged by the train. It is possible for thin items to be stuck in the doors and not cause a DOOR OPEN annunciator to light. The train can then move and drag whatever is stuck. There have been a few occurrences of train operators dragging a patron down the platform. Don't be one of them! Also, if you see anyone waving forcefully on the platform while you are doing your lookback, stop the train.

⁷ Document: ATO Doors Training

8. Chief Review

Compiled by: /s/_____

Date: March 28, 2022

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Approved by: /s/_____

Date: March 29, 2022

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