



WMSC Commissioner Brief: W-0232 – Evacuation for Life Safety Reasons, Improper Train Movement – Green Line – February 9, 2023

Prepared for Washington Metrorail Safety Commission meeting on August 8, 2023

Safety event summary:

Shaw-Howard U. Station was evacuated after a Train Operator reported what appeared to be smoke coming from their train as it entered the station. During the response to this emergency, a different Train Operator moved their train against the normal flow of traffic without required permission or protections against collision. The Rail Traffic Controller intended for the Train Operator to move in the normal direction of traffic.

Metrorail as an organization did not identify this improper train movement that created a risk of collision. The WMSC informed Metrorail of this improper movement and initiated the investigation of the improper movement.

The investigation demonstrated that Metrorail had certified this new Train Operator and other Train Operators despite those operators not completing Metrorail's documented safety requirements. The WMSC is conducting a more detailed review of train operator certification records.

Smoke report

As northbound Train 508 entered Shaw-Howard U. Station, what appeared to be smoke was visible in the tunnel and into the station at the rear of the train.

The Train Operator reported to the Radio Rail Traffic Controller that there was smoke at the rear of the train. The Rail Traffic Controller instructed the Train Operator to offload the train. A Rail Operations Control Center Assistant Operations Manager called for a D.C. Fire and EMS response. The Button Rail Traffic Controller called the Fan Desk in the Rail Operations Control Center to report the smoke, and the Fan Desk personnel activated station ventilation fans approximately 6 minutes after the smoke was reported by the Train Operator. Train service through the station was stopped. During this time, the Button Rail Traffic Controller contacted the Rail Operations Information Center Information Controller to have the Station Manager report to the platform. The Station Manager provided a radio check on Ops 3, the operations channel used in this part of the Green and Yellow lines, and reported smoke at the rear of the train and in the tunnel (Note: At the time of this event, Metrorail was not operating Yellow Line service due to a long-term construction project).

Metrorail used another train, which had been placed out of service, to conduct a track inspection from Columbia Heights Station to Mt. Vernon Sq. Station. The Train Operator did not identify any smoke. D.C. Fire and EMS observed smoke on the station platform. Metrorail personnel in the Rail Operations Control Center told the ROCC Fire Liaison that the event was a maintenance issue. The basis for this is not clear. The ROCC Fire Liaison told the Incident Commander that it was a maintenance issue. The Incident Commander confirmed with the team on the platform that smoke had dissipated, and D.C. Fire and EMS turned the scene over to Metro Transit Police Department personnel. Car Maintenance personnel later arrived at the station and concluded that there had not been a fire. Metrorail later moved the train, without passengers, to Greenbelt Rail Yard for further inspection.



During the response, Metrorail did not follow its emergency response command and control procedures. A member of the Office of Emergency Preparedness was assigned as “On-Scene Commander” as Metro Transit Police Department personnel left the scene, contrary to Metrorail’s requirement for Rail Transportation personnel to carry out this role.

Metrorail did not adequately inspect the tracks or interlocking in the area where the smoke was observed. Metrorail later identified (during subsequent, separate overnight work in the area after Metrorail had cleared the event scene) a fire extinguisher on the roadway in the tunnel outside the station platform that had discharged. The investigation determined that this was the source of what had been reported as smoke. The fire extinguisher did not show signs of having been struck by a train.

Improper Movement

While trains were turning back to remain out of the area evacuated for life safety reasons, the Train Operator of Train 503 moved against the normal flow of traffic without permission or protection following incomplete instructions and communications from the Radio Rail Traffic Controller.

The Rail Traffic Controller intended for the Train Operator of Train 503 at Georgia Ave.-Petworth Station to offload their train, move forward beyond the interlocking, then reverse ends (move to the rear of the train) and cross over to the opposite track to then go into service back toward Greenbelt Station. Instead, the Train Operator believed they were to reverse ends on the same track to return toward Greenbelt Station. The radio communications did not include 100% repeat back. The Rail Traffic Controller still acknowledged the operator’s transmission stating that they would be reversing ends and operating toward Greenbelt Station.

The Train Operator then reported to the Rail Traffic Controller that they had reversed ends and were prepared to move. The Rail Traffic Controller said that the Train Operator had a permissive block to clear the station, key down, and reverse ends. At that time, the Train Operator had already reversed ends. This is shown on the Rail Controllers’ digital control screens by an arrow indicating the end that the operator has keyed up on.

The Train Operator followed up stating that they had already reversed ends, and asked if they were supposed to verify a lunar (proceed) E05-06 signal, key down, and reverse again (Note: there is no signal at the end of the platform the Train Operator was keyed up on). The Rail Traffic Controller said affirmative, and further explained the direction was to cross through the Georgia Avenue interlocking.

The Train Operator did not know that the interlocking and the relevant signal were behind their train, not ahead of it, and the Rail Traffic Controller did not recognize that the Train Operator was already at the Greenbelt end of the train.

The Train Operator activated Stop and Proceed Mode to move without speed commands, and moved against the normal flow of traffic without permission or protection. The train reached the maximum speed of 15 mph allowed when using the Stop and Proceed Mode to move a train with zero speed commands.

The Rail Traffic Controllers noticed the improper movement and the Radio Rail Traffic Controller instructed the Train Operator to stop the train. The train stopped after moving 379 feet. The Rail Traffic Controller told the Train Operator they were keyed up on the wrong end.



This improper movement was not acted upon further by Metrorail. Metrorail allowed the train, Train Operator, Rail Traffic Controller, and other ROCC personnel to remain in service contrary to Metrorail policy.

The Rail Traffic Controller instructed the Train Operator to return to the other end of the train, move the train back through the station and past the interlocking, then cross over to the correct track to operate back toward Greenbelt Station.

The WMSC identified the improper movement through independent monitoring of Metrorail data and systems, and communicated to Metrorail the need to report the event and follow the necessary investigative steps. Metrorail informed the Train Operator the following day, and then conducted post-event drug and alcohol testing. The Train Operator and Rail Traffic Controller were in compliance with Metrorail's drug and alcohol policy.

Following the WMSC identifying this event, the Rail Traffic Controller described during the investigation distractions in the ROCC during the response to the emergency. The Rail Traffic Controller further described the close involvement of an Assistant Operations Manager during the event. The Assistant Operations Manager also did not report and address this improper movement.

Train Operator Certification Practices

The Train Operator failed their certification on January 9, 2023. The Train Operator failed troubleshooting exercises by not recycling the holding brake properly, not properly performing stop and proceed, not cutting out trucks properly, and exceeding time requirements to address a door issue. Metrorail certified the operator later that same day after providing alternative, replacement troubleshooting scenarios to complete (reset of emergency brake mushroom and reset a door control circuit breaker) that were recorded as "pass" at the required time. Metrorail's documented requirements state that a failure usually requires "extensive, formal retraining" following a failed certification. This operator did not receive any reinstruction and was provided with the retest opportunity on the same day. Rail Transportation Quality Assurance/Quality Control, which conducts Train Operator certification, stated that they do not ensure that personnel who fail their certification receive retraining by training department personnel. Rail Training, which conducts training for Train Operators and other Rail Transportation personnel, stated that they do not perform this retraining for all operators who fail specific areas during certification, but that Rail Transportation Quality Assurance/Quality Control may provide some information so that second attempts can be performed within days of a failure.

The Train Operator's certification records and associated Metrorail data also demonstrate that the Train Operator did not complete all requirements during the initial certification. Instead, Metrorail conducted the certification with two trainee Train Operators on board, one at each end of the train. This led to the trainee Train Operators each only being asked to demonstrate some (not all) of the steps required for certification. Some of the steps that were not conducted, according to the Train Operator's interview or records, included demonstration of environmental (EV) operation which is necessary to protect the health and safety of riders and personnel in emergencies such as smoke events in tunnels.

For both trainee Train Operators who were certified despite operating at opposite ends of the same train, Metrorail's certification documents showed the exact same times, each a round number, for each operator in multiple areas. The WMSC is further evaluating other Metrorail certification records and practices.



This Train Operator was a new operator who had been part of the training classes that Metrorail had shortened, contrary to its training requirements, and who Metrorail initially placed into service without ensuring they had completed required time operating a train with a training instructor and without conducting Metrorail's required hands-on training in rail yards.

Among other things, the Train Operator said in an interview that they had never completed a full reverse move without another train operator at the other end of the train to conduct parts of the movement. The Train Operator also explained that they were not familiar with the instructions being provided by the Rail Traffic Controllers before this improper movement.

The Train Operator also explained that as a new operator, even though they were certified, they required the Rail Controllers to slow down instructions to ensure they are understood.

Probable Cause:

The probable cause of the evacuation for life safety reasons was the discharge of a fire extinguisher.

The probable cause of this improper movement was Metrorail's insufficient and ineffective training and certification practices, including Metrorail's failure to carry out its documented safety training and certification practices and Metrorail's failure to perform the necessary safety assurance activities to ensure that these safety requirements are being met. This led to improper and incomplete communications, insufficient understanding of the physical characteristics of the rail system, and insufficient understanding of how to carry out basic tasks. Contributing to this event were inconsistencies in Metrorail's radio communications practices.

Corrective Actions:

Metrorail instructed the Rail Transportation Quality Assurance/Quality Control Officers to fill out all fields on certification practical exam documentation including the location of route selection boxes, not rounding times, not conducting certifications with double-ended operation (one train operator at each end), and ensuring that environmental system operations, route selector operations and turnback operations are completed.

Metrorail provided additional training for or held discussions with the Rail Operations Control Center Operations Manager, the Radio Rail Traffic Controller and the Train Operator.

Examples of other related open CAPs

- C-0049 – Metrorail's CAP to address the 2020 ROCC Audit finding that ROCC management contributes to a chaotic environment is scheduled for completion in December 2023.
- C-0162 – Metrorail has made progress on developing and is beginning to implement elements of this CAP to address the 2022 Emergency Management and Fire and Life Safety Programs Audit that Metrorail does not consistently follow the incident command system (ICS) structure and has procedures that do not comply with National Incident Management System (NIMS)/ICS requirements such as the use of plain language. Further, Metrorail's training requirements are insufficient to prepare personnel to respond to and/or manage emergencies within the NIMS/ICS framework. These deficiencies have contributed to ineffective and improper



emergency response and emergency management. Metrorail recently implemented changes to its emergency management procedures. The final completion date for this CAP is scheduled for January 2025.

- C-0181 – Metrorail's CAP to address the 2022 Rail Operations Audit finding that elements of Metrorail have a culture that accepts noncompliance with written operational rules, instructions, and manuals is scheduled for completion in October 2024.
- C-0182 – Metrorail's CAP to address the 2022 Rail Operations Audit finding that Metrorail does not effectively identify, track, communicate and address operational hazards as required by its Agency Safety Plan is scheduled for completion in June 2025.
- C-0183 – Metrorail's CAP to address the 2022 Rail Operations Audit finding that Metrorail creates safety risks by not requiring and conducting territory familiarization and physical characteristics training, and not assessing knowledge of physical characteristics prior to assigning operations personnel work on a line, in a terminal or in a yard is behind the original schedule after Metrorail did not take action for months after the initial approval of this CAP for implementation. The scheduled completion date is October 2024.
- C-0189 – Metrorail's CAP to address the 2022 Rail Operations Audit finding that Metrorail does not ensure personnel serving as on-the-job training instructors are effective and have specific training and direction on what to teach and how to assess their assigned students is scheduled for completion in July 2025.

WMSC staff observations:

The WMSC is conducting a more detailed review of train operator certification (including recertification) records and associated data. Metrorail designed these certification requirements to demonstrate the safety tasks required in an emergency, in normal operations, and in abnormal operations, because these are critical to the safety of personnel and riders.

Metrorail's failure to meet its train operator training requirements (as the WMSC identified and communicated to Metrorail in January 2023), deficiencies in Metrorail's train operator certification practices, and Metrorail's inadequate safety assurance and safety promotion practices to ensure an understanding of physical characteristics and the consistent use of proper radio communications protocol are examples of Metrorail's culture of noncompliance with written rules, procedures and manuals. Even if certification steps were completed, Metrorail's documented training requirements for hands-on yard and mainline demonstrate that performing a task once solely during certification does not provide the training necessary to provide assurance that tasks will be carried out safely and correctly when carrying passengers.

Further, Metrorail stated during this investigation that it is not providing the necessary resources for training personnel to properly train Train Operators who fail their certification. Instead, Metrorail stated that the group performing certification will assist those Train Operators.

Metrorail did not start work on physical characteristics and territory familiarization as specified in a Metrorail CAP proposal (C-0183) that had been approved for implementation for months after the Metrorail corrective action plan proposal was approved by the WMSC last year. This Metrorail decision delayed implementation of safety improvements. WMSC follow-up as part of regular CAP oversight activities ensured that Metrorail provided a revised timeline for this work and is beginning to develop such improvements.



Metrorail as an organization did not identify and address the improper train movement that created a risk of collision. The WMSC's independent oversight and monitoring identified this improper movement and ensured that it was investigated to provide for continuous safety improvement. Following the WMSC's identification of this safety event, and the WMSC communicating this to Metrorail, Metrorail provided a late notification to the WMSC.

The WMSC notes Metrorail leadership's commitment to implementing Just Culture principles. Documents in this investigation such as the Rail Transportation Managerial Investigation Report demonstrate that this is not in place. Metrorail management placed the operator into service without completing certification requirements and without physical characteristics knowledge, yet this managerial report placed responsibility on the Train Operator for the event. The Train Operator was not familiar with the instructions provided, and was not familiar with the territory. Further, Metrorail did not fully consider the role of ROCC personnel in the response.

The WMSC found in December 2019 that there was chaos and dysfunction in the Rail Operations Control Center during unplanned emergencies. From 2020 through late 2022 Metrorail made significant progress in the Rail Operations Control Center. However, as the WMSC has communicated to Metrorail, Metrorail has allowed staffing levels to deteriorate at the ROCC and risks the return of some prior issues. The WMSC acknowledges Metrorail's recent efforts, following the WMSC's focus on this issue, to begin to hire and train new personnel. The WMSC encourages Metrorail to continue its work, as committed to in Corrective Action Plans and other Metrorail safety commitments, to ensure that the Control Center is professionally managed and staffed.

The investigation could not determine based on the available evidence whether the fire extinguisher was deliberately discharged by an individual or whether the extinguisher discharged after falling to the roadway or otherwise being dislodged. There were no fire extinguishers missing from the involved train. Metrorail stores fire extinguishers in various locations including ancillary rooms, fire cabinets, and, in some areas, along the roadway.

Metrorail has an opportunity to improve emergency response by teaching its personnel how to use the buses to reach emergency locations. The 70 or 79 bus would have brought the assigned supervisor to the location of the emergency in a timely fashion.

During the emergency, there was a request made to the Radio Rail Traffic Controller by a regular work crew for track access. Metrorail should consider reminding personnel of the priorities and process during an emergency response.



Washington Metropolitan Area Transit Authority
Department of Safety (SAFE)
Office of Safety Investigations (OSI)

FINAL REPORT OF INVESTIGATION A&I E23089

Date of Event:	February 9, 2023
Type of Event:	A-4 Evacuation for Life Safety Reasons
Incident Time:	22:21 hours
Location:	Shaw Howard University Station
Time and How received by SAFE:	22:24 hours, Mission Assurance Coordinator (MAC)
WMSC Notification Time:	02:31 hours
Responding from Safety & Readiness:	OEP
Rail Vehicle:	Train ID 508 (3167-3166.3250-3251.3159-3158) Report of Smoke Event Train ID 503 (3125-3124.3278-3279.3055-3054) Improper Rail Vehicle Movement
Injuries:	No
Damage:	No
Emergency Responders:	DCFEMS, MTPD, RTRA, CMNT, and ERT
SMS I/A Number	20230223#106383

Shaw Howard Station – Evacuation for Life Safety Reasons

02/09/2023

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Abbreviations and Acronyms

AIMS	Advanced Information Management System
AOM	Assistant Operation Manager
CAP	Corrective Action Plan
CCTV	Closed-Circuit Television
CMNT	Office of Car Maintenance
CMOR	Office of Chief Mechanical Officer
COMR	Office of Radio Communications
DCFEMS	District of Columbia Fire and Emergency Services
IIT	Incident Investigation Team
MSRPH	Metrorail Safety Rules and Procedures Handbook
NOAA	National Oceanic and Atmospheric Administration
OEP	Office of Emergency Planning
OSC	On-Scene Commander
QA/QC	Quality Assurance Quality Control
RTRA	Office of Rail Transportation
ROCC	Rail Operations Control Center
RTC	Radio Traffic Controller
SAFE	Department of Safety
SMS	Safety Measurement System
VMS	Vehicle Monitoring System
WMATA	Washington Metropolitan Area Transit Authority
WMSC	Washington Metrorail Safety Commission

Washington Metropolitan Area Transit Authority
Department of Safety – Office of Safety Investigations

Executive Summary

Note that all times listed are approximate and may contain minor variations due to differences between systems of record.

On February 9, 2023, at 22:22 hours, the Train Operator of Train ID 508, operating towards Greenbelt Station, notified the Rail Operations Control Center (ROCC) Radio Rail Traffic Controller (RTC) that smoke was emitting from the rear of their train while servicing Shaw Howard University Station.

Customers were offloaded from Train ID 508 and subsequently evacuated from the station. The Radio RTC held all trains on approach to Shaw Howard University Station. Exhaust fans were activated at 22:28 hours. Four minutes after the initial report of smoke, the ROCC Assistant Operations Manager (AOM) requested emergency services from the District of Columbia Fire and Emergency Medical Services (DCFEMS). DCFEMS dispatched emergency services at 22:35 hours. DCFEMS arrived on-scene at 22:38 hours and established unified command at 7th and R street.

During the turnback of trains away from the station, the Train Operator of Train ID 503 made an improper rail vehicle movement at Georgia Avenue on Track 2. The Radio RTC initially gave Train ID 503 incomplete instructions to clear the interlocking E05-06 signal, key down, reverse ends and operate back towards Greenbelt Station. The Train Operator then reversed operating ends on the platform and asked the Radio RTC to verify the instructions. The Radio RTC then provided instructions to 503 to “key up on their downtown end and clear the Zero Six signal.” The Train Operator replied, “Roger,” and then entered Stop and Proceed Mode and operated against the normal traffic flow on track 2, moving in the direction of Greenbelt Station. Train ID 503 had no passengers aboard during the improper rail vehicle movement, and Train ID 504 was servicing Fort Totten Station on track 2.

The Radio RTC then instructed Train ID 503 to stop, reverse operating ends, and travel back towards the interlocking. They were then to clear the E05-06 Signal, cross over from Track 2 to Track 1 and proceed back towards Greenbelt on track 1. The Train Operator repeated and complied with these instructions without further incident and remained in service until the end of their shift. The next day, they were notified of the violation as the event was not immediately identified and reported.

In the area of the event, Train ID 702 completed a track inspection from Columbia Heights to Mount Vernon Square Station on Track 2 with no visible evidence of a smoke condition. DCFEMS identified a light haze on the platform limits and no odor of smoke or burning. CMNT personnel arrived on location and deemed the event a potential no dynamic brake condition. DCFEMS turned command over to MTPD and began departing Shaw Howard University Station at 23:00 hours.

An inspection of the tunnel area later found a discharged fire extinguisher on the roadway approximately 150 feet from the entrance of the Shaw Howard University Station platform.

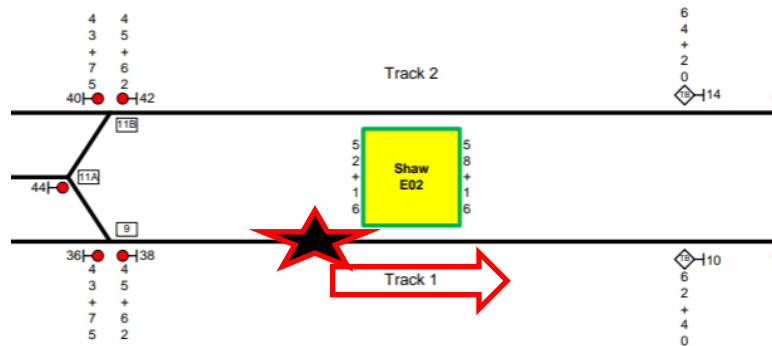
The probable cause of the Evacuation for Life Safety Reasons event at Shaw Howard Station was a discharged fire extinguisher outside of the platform limits, resulting in the appearance of a smoke condition in the station. The originating source of the fire extinguisher is also unknown. No missing fire extinguishers were identified from the incident consist.

The probable causes of the Improper Rail Vehicle Movement were inexperience and incomplete communications between the Train Operator and RTC. The Train Operator certified approximately 30 days prior to the event. The parties also failed to communicate using 100 percent repeat-back during the planned move to cross over from Track 2 and return to the Georgia Avenue platform on Track 1.

Incident Site

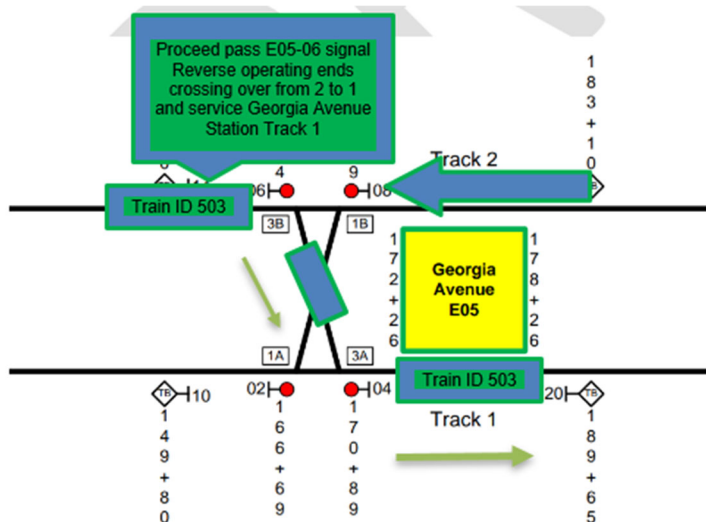
Shaw Howard University Station, Track 1 – Underground Station
Georgia Avenue Station, Track 2

Field Sketch/Schematics



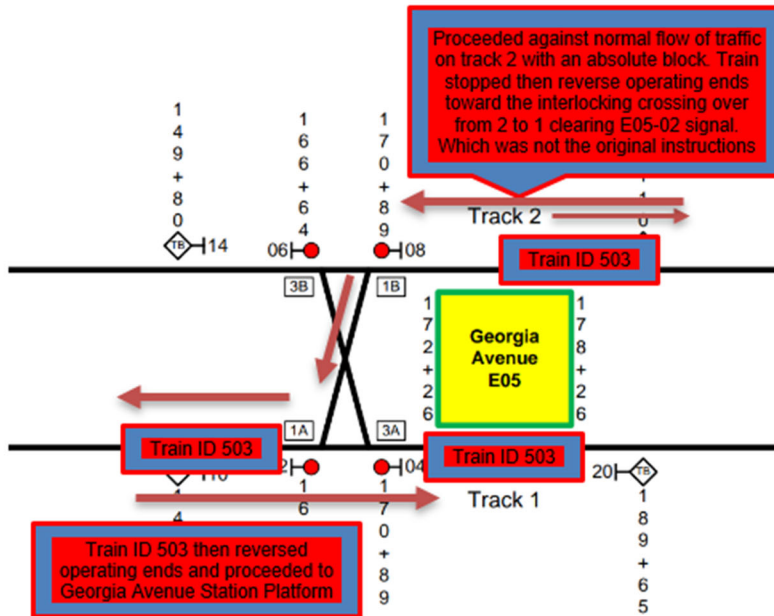
**Locations are approximate. Not to scale.*

Intended Move for Improper Rail Vehicle Movement Event



**Locations are approximate. Not to scale.*

Actual Move for Improper Rail Vehicle Movement Event



**Locations are approximate. Not to scale.*

Purpose and Scope

The purpose of this incident investigation and candid self-evaluation is to collect and analyze available facts, determine the probable cause(s) of the incident, identify contributing factors, and make recommendations to prevent a recurrence.

Investigation Methods

Upon receiving notification of the Evacuation for Life Safety Reasons at the Shaw Howard University Station on February 9, 2023, SAFE dispatched a cross-functional team to assess the scene and conduct the subsequent investigation. SAFE team members worked with relevant WMATA subject matter experts to review the incident's facts and data.

The investigative methodologies included the following:

- Site assessment
- Formal Interview – SAFE interviewed one individual as part of this investigation. The interview included persons present at, during, and after the incident, those directly involved in the response process. Representatives from the Washington Metrorail Safety Commission (WMSC) were present during the interview. SAFE interviewed the following individual:
 - Train Operator [Improper Rail Vehicle Movement]
- Informal Interviews – Collected through conversations with individuals during the investigation to provide background and supporting information. Written statements were reviewed from personnel present during the event.
 - Radio RTC
- Documentation Review – A collection of relevant work history information and process documentation contained in Metro systems of record. These records include:

- Metrorail Safety Rules and Procedures Handbook (MSRPH)
 - National Oceanic and Atmospheric Administration (NOAA)
 - The 30-Day Work History
 - RTRA QA/QC Certification Record
 - Training Records
 - ROC Report
 - RTRA Managerial Report
 - Office of Radio Communications (COMR) data
 - Office of Car Maintenance (CMNT) Maintenance records
- System Data Recording Review – A collection of information contained in Metro Data Recording Systems. This data includes:
 - Audio Recording System (ARS) playback, including OPS 3 Radio, Open MHz, and Phone.
 - Closed-Circuit Television (CCTV)
 - Office of Chief Mechanical Officer (CMOR) Incident Investigation Team (IIT)
 - District of Columbia Fire Emergency Medical Services (DCFEMS)
 - Advanced Information Management System (AIMS)

Investigation

Primary Event: Evacuation at Shaw Howard Station

On February 9, 2023, at 22:21 hours, Shaw Howard University Station's Closed-Circuit Television (CCTV) showed Train ID 508 entering the platform with light-colored smoke emitting from the tunnel on track 1.



Figure 1 - Smoke emitting from the tunnel on track 1 side, following the train as it enters the station .

Train ID 508's Train Operator notified the Radio RTC that smoke was emitting from the rear of their train while servicing Shaw Howard University Station.

At 22:23 hours, the Radio RTC instructed Train ID 508 to make announcements to their customers and offload their train, verify clear of customers, secure their cab, and provide a good radio check.

At 22:24 hours, the Radio RTC dispatched an RTRA Supervisor from Gallery Place to Shaw Howard University Station.

At 22:25 hours, an RTRA Supervisor at Shaw Howard University Station assumed On-Scene Commander (OSC) duties from the Train Operator. At 22:26 hours, ROCC AOM notified the DCFEMS of smoke in the station at Shaw Howard University Station. Exhaust fans were activated in Shaw Howard University Station at 22:28 hours.

At 22:29 hours, the ROCC suspended service between Columbia Heights and Shaw Howard University Stations. At 22:34:43 hours, the smoke dissipated after the activation of exhaust fans.



Figure 2 - Smoke dissipated to a light haze at 22:34:43 hours.

At 22:37 hours, Train ID 508's Train Operator reported their train was offloaded and clear of customers. CCTV showed DCFEMS enter the South Mezzanine entrance at approximately 22:39:47 hours.

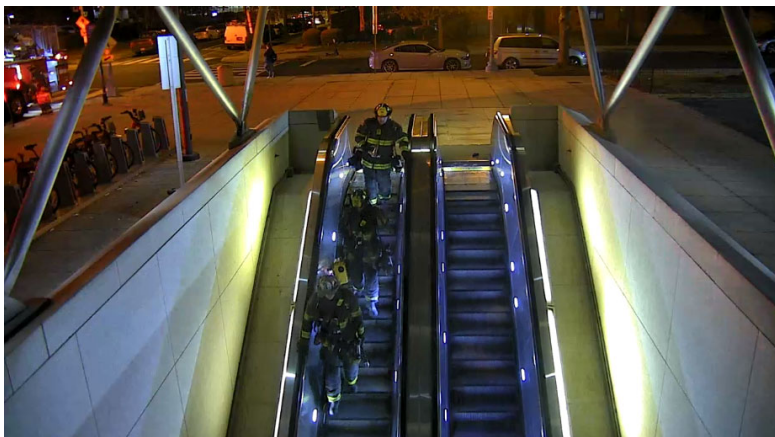


Figure 3 - DCFEMS entered South Mezzanine side of Shaw Howard University Station.

In response to the evacuation event, at 22:38 hours, Train ID 502 was offloaded, reblocked to Train ID 702 and instructed to perform a track inspection from Columbia Heights to Mount Vernon Square Station on Track 2.

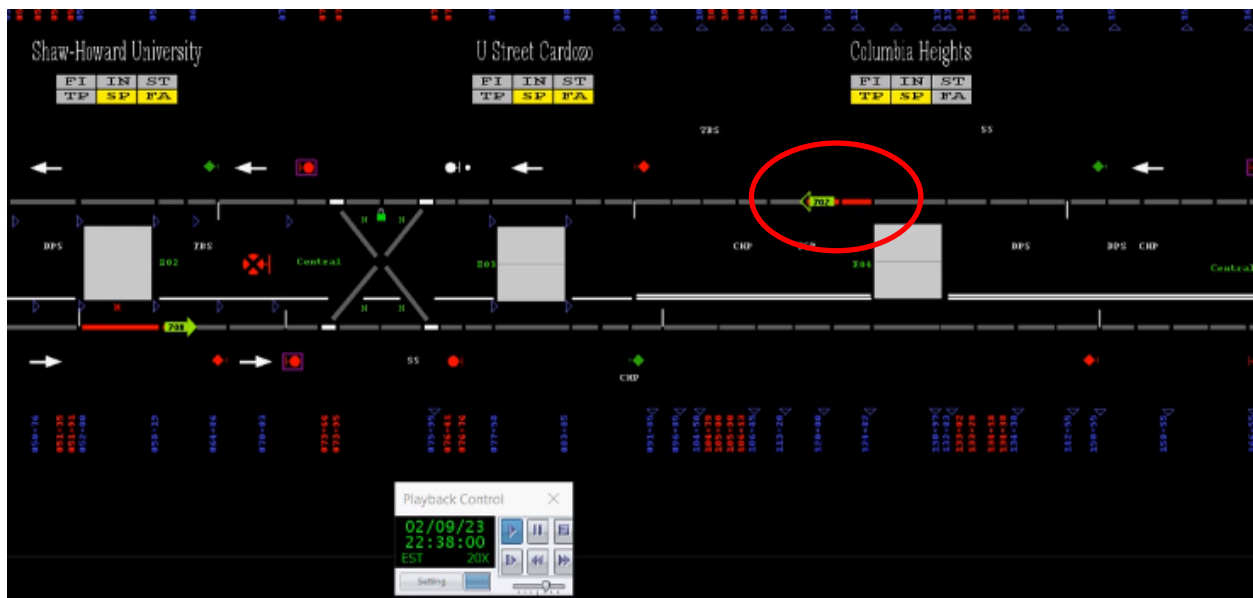


Figure 4 - Train ID 702 performing a track inspection.

At 22:45 hours, Train ID 702 completed a track inspection from Columbia Heights to Mount Vernon Square Station with no visible evidence of a smoke condition. DCFEMS identified a light haze on the platform limits and no signs of smoke or burning odor.

At 22:48 hours, MTPD closed station entrances at Shaw Howard University Station.

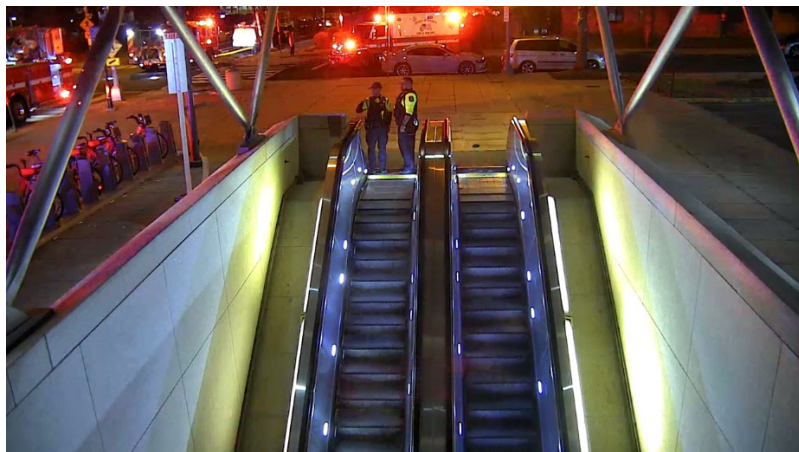


Figure 5 - MTPD at Shaw Howard Station after evacuation.

At 22:52 hours, the DCFEMS Incident Commander authorized single-tracking around the incident area. At 22:56 hours, the ROCC Fire Liaison Officer communicated to the DCFEMS Incident Commander that WMATA deemed the event a maintenance issue and they could clear the location when ready. At 22:57 hours, DCFEMS verified with the DCFEMS Recon team that the smoke had dissipated and turned the scene over to MTPD. DCFEMS began departing Shaw Howard University Station at 23:00 hours.

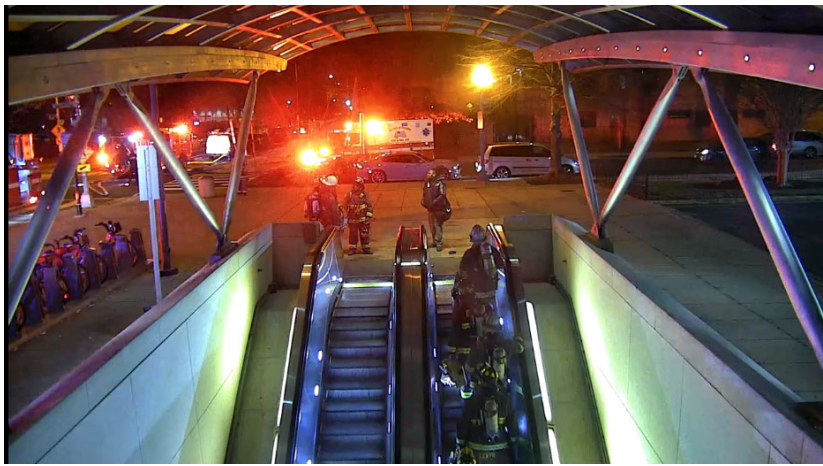


Figure 6 - DCFEMS departing Shaw Howard University Station.

The Radio RTC dispatched CMNT personnel to Shaw Howard University Station via Train upon approval of single tracking at 23:06 hours.



Figure 7 - Train ID 511 first train to single-tracking.

At 23:07 hours, CMNT personnel arrived on location and concurred that the event was a maintenance issue, which is described as a non-fire related event after conducting a ground walk-around on the affected consist.

At 23:20 hours, the MTPD OSC released Train ID 508 reblocked to Train ID 708 to move. MTPD turned OSC duties over to OEP at 23:21 hours.

AIMS playback showed Train ID 708 departed the incident area in direction of Greenbelt Yard at 23:27 hours. Normal service resumed.



Figure 8 - Normal Service resumed. Train ID 708 departed the incident location.

During night work operations, personnel discovered a spent fire extinguisher in the tunnel area at Chain Marker (CM) E1 045+50 on the roadway near the platform limits prior to entering Shaw Howard University Station. The fire extinguisher was not damaged, as though it was struck by a train.



Figure 9 - Fire Extinguisher near CM E01 045+50

Second Event: Improper Rail Vehicle Movement

During the smoke event at Shaw Howard Station, the Radio RTC instructed Train ID 503, located at Georgia Avenue Station on Track 2, to “offload their train, clear zero six signal, reverse ends, and go back to Greenbelt Station.” The Radio RTC gave incomplete instructions, and the Train Operator repeated back, “offload my train, reverse ends, and head back to Greenbelt.”

CMOR IIT data indicated that the Train Operator of Train ID 503 activated Stop and Proceed Mode on car 3054 at 22:39 hours and traveled 379 feet with a maximum speed of 15 MPH against the normal traffic flow.

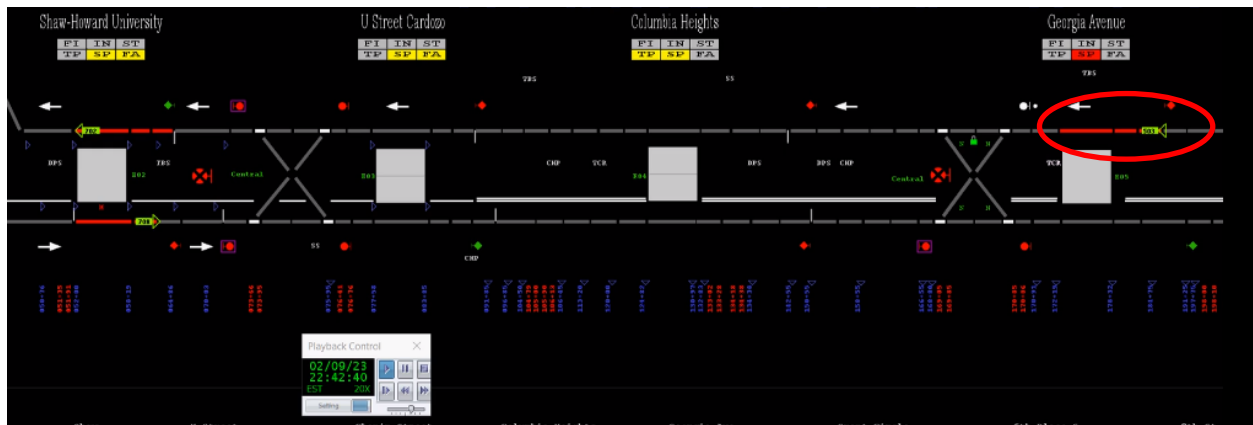


Figure 10 - Train ID 503 AIMs indicating traveling in the wrong direction.

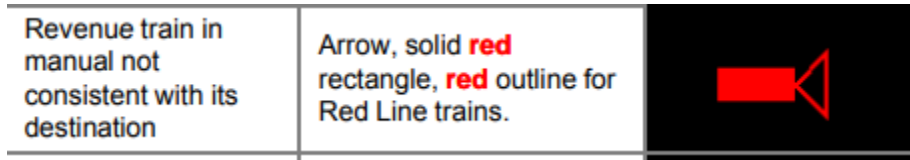


Figure 11 - Train Representation and Traffic details.

Train ID 503 did not notify the Radio RTC that they did not have speed commands. The Radio RTC instructed Train ID 503 to stop their train. According to the CMOR IIT report, Train ID 503 came to a complete stop at 22:40 hours. CCTV showed that the Operator of Train ID 503 returned to their original lead car and keyed up on with their headlights and marker lights illuminated.



Figure 12 - Train Operator of ID 503 keyed up on the incorrect end of their consist, facing against the normal flow of traffic.

Train ID 503 departed Georgia Avenue Station at 22:42 hours. A Lunar aspect can be seen on track 2.

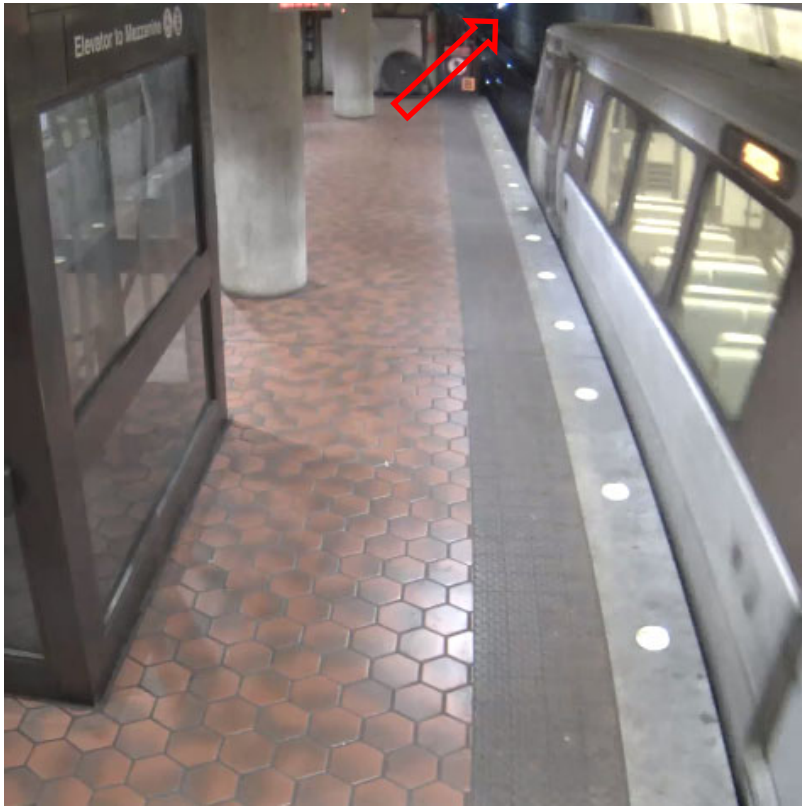


Figure 13 - Train ID 503 departing Georgia Avenue Station against traffic flow.

The Radio RTC then provided complete instructions to Train ID 503 to clear the E05-06 signal, crossing over from Track 2 to 1, key down, reverse operating ends, and proceed towards Greenbelt Station.

At 22:47 hours, AIMS Playback indicated Train ID 503 cleared the E05-02 signal and reversed ends on Track 1 towards Greenbelt Station.



Figure 14 - Train ID 503 crossing over from track 2 to 1 at 22:47 hours.

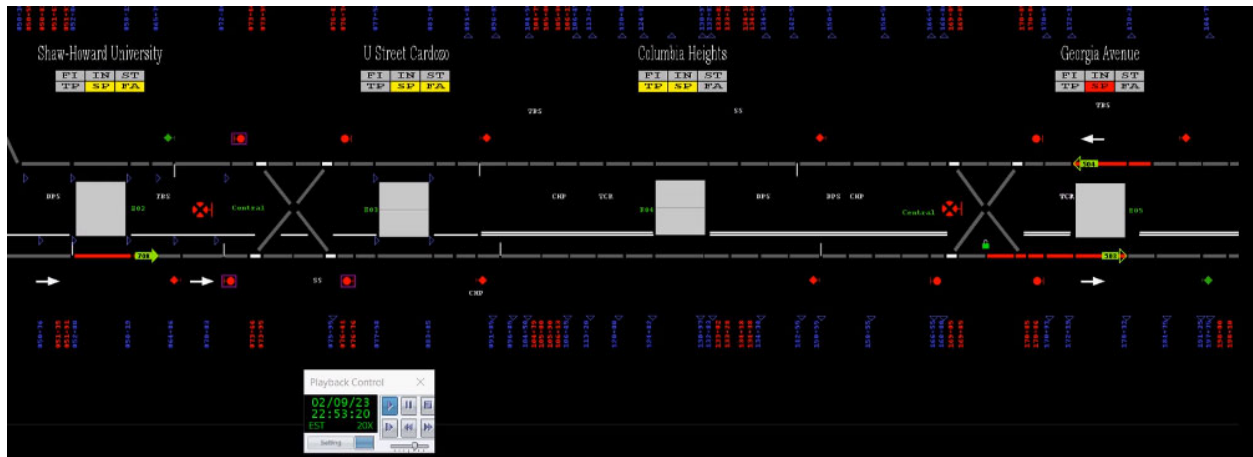


Figure 15 - Train ID 503 on the correct track headed back towards Greenbelt at 22:53 hours.

The incident was not promptly reported to the managerial staff by the RTCs as required by established procedures and policies, which resulted in a late notification to WMSC.

Chronological ARS Timeline

A review of the ARS playback, i.e., phone and radio communications, revealed the following timeline:

Time	Description
22:22:39 hours	<u>Train ID 508 Train Operator</u> : Notified Radio RTC smoke was emitting from the rear of their train. [Radio Ops 3]
22:23:09 hours	<u>Radio RTC</u> : Instructed Train ID 508 to make announcements to their customers and offload their train, verify clear of customers, secure their cab, and provide a good radio check. After verifying that the train was properly berthed at the 8-car marker location. [Radio Ops 3]
22:24:06 hours	<u>Radio RTC</u> : Instructed Train ID 503 to hold at Fort Totten Station platform [Lower level], which services the green and yellow line stations. [Radio Ops 3]
22:24:26 hours	<u>Radio RTC</u> : Dispatched an RTRA Supervisor from Gallery Place to Shaw Howard University Station. [Radio Ops 3]
22:25:13 hours	<u>Radio RTC</u> : Designated an RTRA Supervisor on location as the OSC. [Radio Ops 3]
22:25:30 hours	<u>Station Manager</u> : Reported smoke in the rear of the train and the tunnel. The Station Manager further stated that customers were offloaded. [Radio Ops 3]
22:25:57 hours	<u>Button RTC</u> : Called MOC and requested fans be activated in exhaust due to smoke at Shaw Howard Station. [Phone]
22:26:34 hours	<u>Station Manager</u> : Notified Radio RTC and reported smoke in the tunnel. [Radio Ops 3]
22:26:43 hours	<u>ROCC AOM</u> : Called DCFEMS and reported smoke at Shaw Howard University Station with the appropriate address. [Phone]
22:26:44 hours	<u>Train ID 508 Train Operator</u> : Notified the Radio RTC that the train was offloaded and clear of customers. [Radio Ops 3]
22:27:07 hours	<u>Radio RTC</u> : Instructed Train ID 508 to return to their operating car. [Radio Ops 3]
22:28:26 hours	Exhaust fans were activated in Shaw Howard University Station [AIMs Event Log]

Time	Description
22:29:00 hours	Train service suspended between Columbia Heights and Shaw Howard University Stations. [AIMS playback]
22:31:18 hours 22:31:48 hours	<u>Train ID 503 Train Operator</u> : Requested a permissive block to Georgia Avenue Station 8-car maker. <u>Radio RTC</u> : Gave Train ID 503 permission to Georgia Avenue Station and instructed them to hold. They advised that the Echo zero eight signal is red. <u>Train ID 503 Train Operator</u> : Confirmed radio transmission. <u>Radio RTC</u> : Instructed Train ID 503 to offload their train, clear zero six signal, reverse ends, and return to Greenbelt Station. <u>Train ID 503 Train Operator</u> : "Copy that, offload my train, reverse ends, and head back to Greenbelt over." [Radio Ops 3]
22:31:58 hours	<u>Radio RTC</u> : Responded, "Central out." [Radio Ops 3] <i>Note: 100 percent repeat back not enforced on prior transmission.</i>
22:32:41 hours	<u>Radio RTC</u> : Made announcements via Ops 3 of an emergency at Shaw Howard University. Trains were turning around at Mount Vernon Square and Georgia avenue. [Radio Ops 3]
22:34:44 hours	<u>Radio RTC</u> : Instructed RTRA Supervisor previously at Gallery Place, now located at Mount Vernon Square Station, to exit the station, and they will send MTPD to assist with transport to Shaw Howard University Station. [Radio Ops 3]
22:35:13 hours 22:35:28 hours 22:36:03 hours	<u>DCFEMS dispatch</u> : Dispatched a full complement of services to Shaw Howard University Station for reports of smoke on track 2. [Open MHz]
22:36:06 hours 22:36:42 hours	<u>Radio RTC</u> : Instructed Train ID 502, which was offloaded and clear of customers, to perform a track inspection from Columbia Heights to Mount Vernon Square. [Radio Ops 3] <u>Train ID 502 Train Operator</u> : Responded, "I copy your message perform a track inspection from Georgia Avenue to Mount Vernon Square." <u>Radio RTC</u> : Responded, "affirmative." Then instructed Train ID 502 to reblock train ID to 702. <u>Train ID 502 Train Operator</u> : Confirmed transmission. [Radio Ops 3]
22:36:51 hours	<u>DCFEMS Battalion 6 Chief</u> : Contacted Fire Liaison Officer for a condition update. <u>Fire Liaison Officer</u> : Initial report of smoke coming from the rear of Train ID 508 on track 1. CCTV shows a light haze visible on track 2 side. Customers are being evacuated. Reported Light haze [Open MHz]
22:37:05 hours	<u>Train ID 503 Train Operator</u> : Notified the Radio RTC that they reversed operating ends, keyed up their train, and offloaded their train. <u>Radio RTC</u> : Instructed Train ID 503 to stand by. [Radio Ops 3]
22:38:32 hours	<u>Fire Liaison Officer</u> : Notified Battalion 6 that third rail power was still energized throughout the station. [Open MHz]
22:38:46 hours 22:38:58 hours	<u>Radio RTC</u> : Contacted Train ID 503 and instructed them to notify when they are clear of customers. <u>Train ID 503 Train Operator</u> : Notified the Radio RTC that they were clear of customers. <u>Radio RTC</u> : "That is a good copy; you have a permissive block to clear echo zero five-zero six-signal . Key down and reverse ends." [Radio Ops 3]
22:38:54 hours	<u>Engine 4</u> : Notified Battalion 6 that they were on scene at Shaw Howard University

Time	Description
22:39:15 hours	Radio RTC received a continuous request from a TRST unit for GOTRS rights activation. They were advised that an emergency was announced on Ops 3 and that no request would be granted while an emergency was in progress. [Radio Ops 3]
22:39:18 hours	DCFEMS established command at Shaw Howard University Station and reported nothing evident at the mezzanine level near the escalators.
22:39:41 hours	<u>DCFEMS Battalion 6 Chief:</u> Arrived on scene at Shaw Howard University Station and assumed command. Battalion 6 assigned tower 3 and Engine 4 as recon groups.
22:39:47 hours	DCFEMS entered the South Mezzanine side of Shaw Howard University Station.
22:41:26 hours 22:41:58 hours	<u>Train ID 503 Train Operator:</u> "From your previous instructions, I reversed ends already. You want me to verify lunar at Echo zero five zero six (E05 – 06) signal key down and reverse again over?" <u>Radio RTC:</u> "Affirmative, I need you to clear Echo zero five zero six at Georgia Avenue and cross you over at the Georgia Avenue interlocking going back into service towards Greenbelt over." <u>Train ID 503 Train Operator:</u> Asked the Radio RTC to repeat the message; radio communication was unclear. <u>Radio RTC:</u> Instructed Train ID 503 to key up on their downtown end and clear the Zero Six signal. <u>Train ID 503 Train Operator:</u> "Roger that." <u>Radio RTC:</u> "Good copy, Central Out." [Radio Ops 3]
22:42:08 hours	<u>Radio RTC:</u> Contacted Train ID 708 Train Operator and asked if they still have smoke emitting from the rear of their train and the tunnel. <u>Train ID 708 Train Operator:</u> Reported, still cloudy, and looks like it is going away. <u>Radio RTC:</u> Called Station Manager and asked about the station's conditions. Whether they still observed smoke from the tunnel locations. [Radio Ops 3]
22:42:35 hours	<u>Radio RTC:</u> Instructed Train ID 503 to stop their train. <u>Train ID 503 Train Operator:</u> Responded, train stopped. [Radio Ops 3]
22:42:57 hours 22:43:33 hours	<u>Radio RTC:</u> Reinstructed Train ID 503 at Georgia Avenue Station to key up on their L'Enfant Plaza and clear the 06 signal at Georgia Avenue, "you are keyed up on the wrong end." <u>Train ID 503 Train Operator:</u> Responded, "Roger, that key up on my L'Enfant Plaza end clear the 06 signal over." <u>Radio RTC:</u> Responded, "Train ID 503. Key up on your downtown end and clear Echo Zero Five Zero Six signal." <u>Train ID 503 Train Operator:</u> "Key up on my downtown and clear Zero Five Zero Six signal." [Radio Ops 3]
22:43:57 hours	RTRA Supervisor from Mount Vernon Square arrived at Shaw Howard University Station. [Radio Ops 3]
22:44:14 hours	<u>Fire Liaison Officer:</u> Notified Battalion 6 CMNT was en route, and WMATA believed the issue was a car-related issue, not a track issue. [Open MHz]
22:44:49 hours	<u>DCFEMS Battalion 6 Chief:</u> Communicated with to confirm the train was evacuated. <u>Fire Liaison Officer:</u> Confirmed that the station and train were evacuated. [Open MHz]
22:45:15 hours	<u>Train ID 702 Train Operator:</u> Reported good track inspection from Georgia Avenue to Mount Vernon Square Stations on Track 2. [Radio Ops 3]

Time	Description
22:46:26 hours	<u>DCFEMS Recon</u> : Reported smoke appeared to dissipate, and no odor was present. [Open MHz]
22:46:50 hours 22:47:17 hours	<u>Train ID 503 Train Operator</u> : Reported they cleared Echo Zero Five Zero Six signal. <u>Radio RTC</u> : Clear Echo Zero Five Zero two signal, permissive block to the Turnback, and I will let you know when you are clear. <u>Train ID 503 Train Operator</u> : "Roger that, permissive block to the turnback, you will let me know when I am clear." <u>Radio RTC</u> : "Copy, Central out." [Radio Ops 3]
22:48:37 hours	Special Ops notified Battalion 6 command secondary entrance clear no haze. DCFEMS safety notified Battalion 6 command that they were sending MTPD and ERT to the command post at 7 th and R street. [Open MHz]
22:51:30 hours	<u>Radio RTC</u> : Instructed Train ID 503 to clear Echo Zero Five Zero two, properly berth at the 8-car marker service station and continue. <u>Train ID 503 Train Operator</u> : Confirmed the transmission. [Radio Ops 3]
22:52:06 hours	Special Ops notified Battalion 6 Command WMATA could single track on track 2. No smoke was generated from the train. Still light haze of smoke. [Open MHz]
22:56:52 hours	<u>Fire Liaison Officer</u> : Reported to Battalion 6 Command WMATA deemed this incident a maintenance issue, and DCFEMS could clear the scene. [Open MHz]
22:57:49 hours	DCFEMS cleared the scene and turned the command over to MTPD after verifying with the DCFEMS Recon team that the smoke had dissipated, and the scene was clear. [Open MHz]
22:59:10 hours	<u>Radio RTC</u> : Dispatched CMNT personnel to Shaw Howard University from Mount Vernon Square. [Radio Ops 3]
23:00:00 hours	DCFEMS began departing Shaw Howard University Station. [CCTV]
23:07:54 hours	CMNT personnel arrived at Shaw Howard University Station. The Radio RTC instructed them to inspect the train due to a report of smoke in the tunnel and on the train. [Radio Ops 3]
23:17:24 hours	CMNT personnel reported no signs of smoke or damage to the train good brakes off. [Radio Ops 3]
23:18:30 hours	<u>Radio RTC</u> : instructed CMNT to board the incident train and ride the train to the yard [Radio Ops 3]
23:20:55 hours	RTRA Supervisor reported on-scene commander released the train to be moved. [Radio Ops 3]
23:21:31 hours	MTPD turned on-scene commander duties over to OEP Safety.
23:25:39 hours	<u>Radio RTC</u> : Gave Train ID 508 permission to alight to Greenbelt yard, and normal service resumed. [Radio Ops 3]

****Note:** Times above may vary from other systems' timelines based on clock settings and reporting sources.

Office of Chief Mechanical Officer (CMOR) Incident Investigation Team (IIT)

Adopted from CMOR IIT report with minor grammatical and formatting edits.

Summary of Improper Rail Vehicle Movement Georgia Avenue Station

“CMOR IIT downloaded and analyzed Vehicle Monitoring System (VMS) data and that determined no Train Faults or problems were detected. Train operation was within design specifications. All VMS Time Stamps have been adjusted to Car 3125.

Train ID 503 arrived at Georgia Ave (E05-2) at 22:29:00 hours, at a speed of 12 MPH, and stopped 5 feet short of 8-Car Marker. The Train was commanded to Open using the **Left** Door Button. The Door Check Relay was detected, and doors opened at 22:30:20 hours. Car 3125 was Keyed Down at 22:32:15 hours, **reversed** operating Ends, and Car 3054 was Key Up at 22:34:59 hours. Train ID 503 was placed in Stop & Proceed Mode at 22:39:54 hours.

Train ID 503 began moving toward Greenbelt Station at 22:40:00 hours and achieved a Maximum Speed of 15 MPH. Train ID 503 stopped at 22:40:28 hours and traveled 379 feet. Car 3054 was Key Down at 22:41:14 hours, the train reversed operating ends, and Car 3125 was Keyed Up at 22:43:12 hours. Train ID 503 moved towards Columbia Heights at 22:43:31 hours, achieved a maximum speed of 8 MPH, and traveled 83 feet. Train ID 503 detected both Limiting and regulated speed commands were 28 MPH. Train ID 503 moved toward Columbia Heights at 22:44:11 hours, achieved a maximum speed of 6 MPH, and moved 1,410 feet before stopping at 22:45:17 hours.

At 22:44:11 hours, AIMS Executive Traffic Display playback showed Train ID 503 had a Lunar at Signal and # 8, Interlock Switch # 1 was set for a Divergent Move. Train ID 503 crossing from Track 2 to Track 1. Train ID 503 entered Stop and Proceed Mode at 22:45:10 hours. Train ID 503 moved toward Columbia Heights at 22:45:23 hours, achieving a maximum speed of 14 MPH. Train ID 503 traveled 334 Ft before stopping at 22:45:45.

Train ID 503 entered Stop and Proceed Mode at 22:45:47 hours and moved toward Columbia Heights at 22:45:51 hours, achieving a maximum speed of 3 MPH and traveled 8 feet. Car 3125 was Keyed Down at 22:46:07 hours. Car 3054 was Keyed Up at 22:49:28 hours and began moving toward Greenbelt Station at 22:50:07 hours. Train ID 504 moved 1,606 feet and stopped 5 Ft short of the 8-Car Marker on Track 1 at 22:51:11. The Left Door Open button was pressed at 22:51:28 hours, commanding the Left Doors to Open. The Door Check Relay detected that the Doors opened at 22:51:28 hours. The Train continued toward Greenbelt Yard.”

Time	Description
22:29:00 hours	Train ID 503 entered Georgia Ave Station at 12 MPH in B4.
22:30:15 hours	Train ID 503 stopped at Georgia Ave Station on Track 2; 5 feet short of the 8 Car Marker.
22:30:20 hours	Car 3125 Left Door Open button was pressed.
22:30:20 hours	Car 3125 Door Check Relay indicates the Doors are open.
22:31:52 hours	Car 312 Left Door Close was pressed.
22:32:00 hours	Car 3125 Door Check Relay indicates the Doors are closed.
22:32:15 hours	Car 3125 was Keyed Down.
	NOTE: Time Correction between Cars 3125 and Car 3054 is -0.0007110. All time shown below has been corrected to Car 3125 VMS Time.
22:34:59 hours	Car 3054 was Keyed Up.
22:39:54 hours	Car 3054 entered Stop and Proceed Mode. (Speed Commands are 0 MPH)

22:34:59 hours	Car 3054 began to move in Reverse Direction toward Greenbelt & the 8-Car Marker.
22:40:28 hours	Car 3054 Stopped after traveling 379 feet with a maximum speed of 15 MPH.
22:41:14 hours	Car 3054 was Keyed Down.
22:43:12 hours	Car 3125 was Keyed Up.
22:43:31 hours	Car 3125 began to move toward Columbia Heights.
22:43:40 hours	Car 3125 Stopped after traveling 83 feet with a maximum speed of 8 MPH.
22:44:11 hours	Car 3125 began to move. (Speed Commands are both 28 MPH. Train Wayside Communication (TWC) ID is 152. Track 1)
22:45:17 hours	Car 3125 Stopped after traveling 1410 feet at a maximum speed of 6 MPH. Based on the AIMS Executive Traffic Display playback of this Incident, Train ID 503 passed Lunar Signal 8 with Switch 1 in the Divergent position. Reference AIMS Graphics below.
22:45:10 hours	Car 3125 entered Stop and Proceed Mode.
22:45:23 hours	Car 3125 begins to move toward Columbia Heights.
22:45:45 hours	Car 3125 Stopped after traveling 334 feet at a maximum speed of 14 MPH. (No Speed Commands)
22:45:47 hours	Car 3125 entered Stop and Proceed Mode.
22:45:51 hours	Car 3125 began to move.
22:45:54 hours	Car 3125 Stopped after traveling 9 feet at a maximum speed of 3 MPH.
22:46:07 hours	Car 3125 Keys Down. (Train ID 503 is now on Track 1 and has passed Switch # 1.)
22:49:28 hours	Car 3054 was Keyed Up. (Switch # 1 was normalized for a straight-through move, and Signal #2 was Lunar.)
22:50:07 hours	Car 3054 began to move toward Greenbelt Station on Track 1.

****Note:** Times above may vary from other systems' timelines based on clock settings and reporting sources.

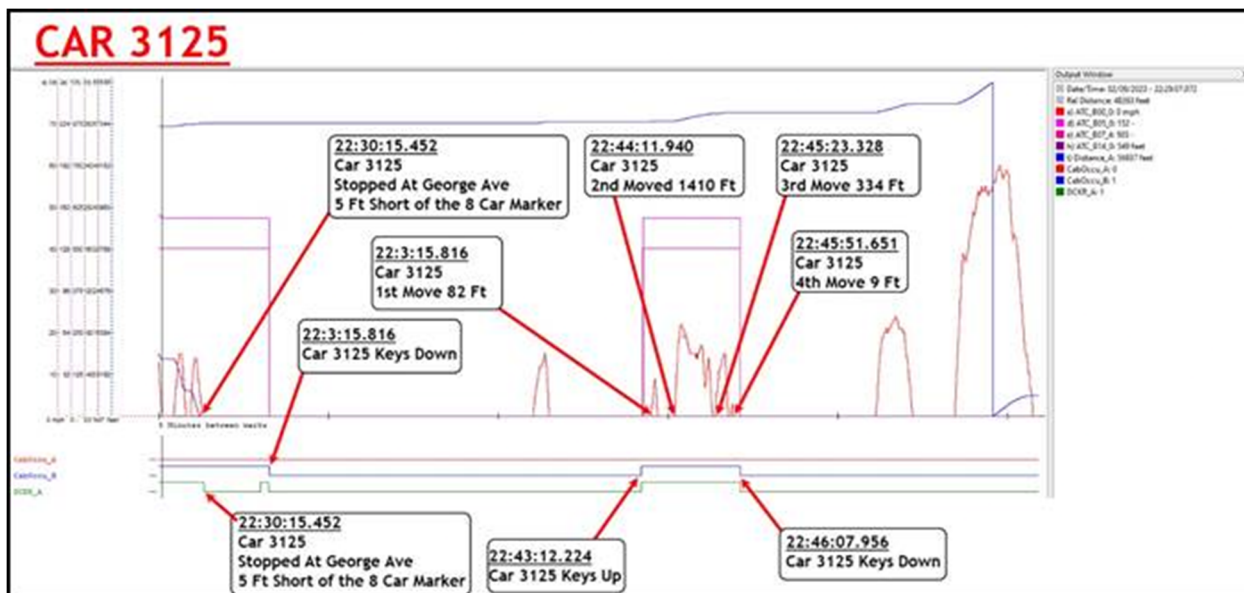


Figure 16 VMS Data Car 3125 Graphic at Georgia Avenue Track 2.

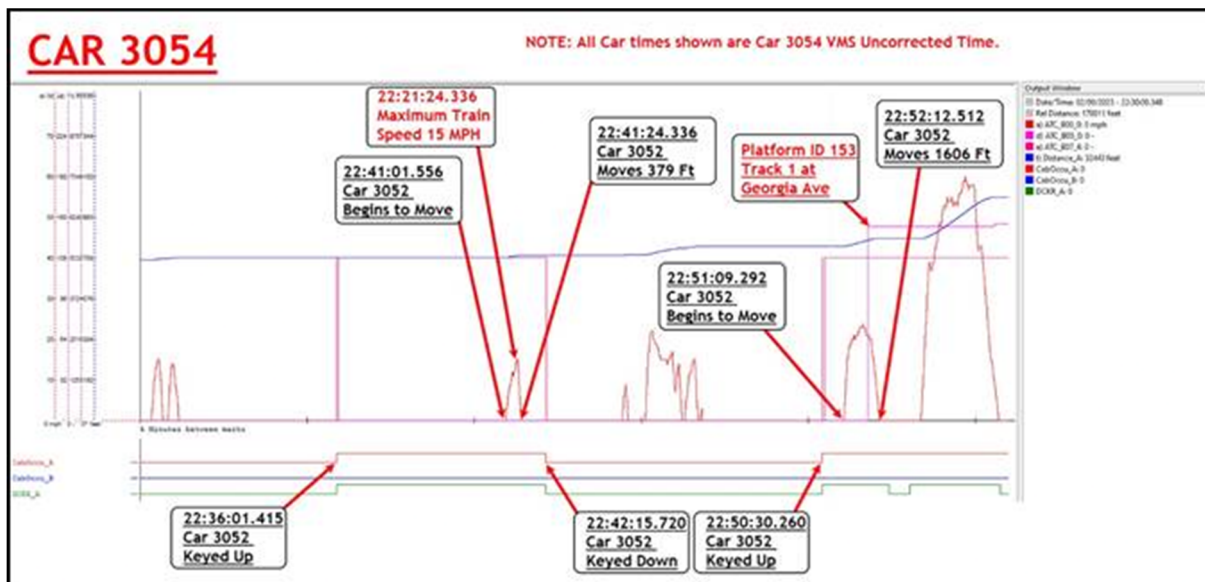


Figure 17 - VMS Data Car 3054 Graphic at Georgia Avenue

Office of Rail Transportation (RTRA)

RTRA investigated the Improper Rail Vehicle Movement and determined the Train Operator failed to follow the instructions of the Radio RTC and the Train Operator moved against the normal flow of traffic without permission violating Operating Rule 3.79. [Appendix C.](#)

Office of Car Maintenance (CMNT)

CMNT technicians conducted an undercar and exterior inspection of the incident consist Train ID 503) and did not observe any damage on the rail vehicles.

Office of Radio Communications (COMR)

COMR conducted comprehensive radio checks and reported that no issues were found at this location.

Office of Rail Transportation Quality Assurance and Quality Control Group (RTRA QA/QC)

The Train Operator's Certification paperwork showed that they failed with QL-3 rating on January 9, 2023.

A review of the RTRA QA/QC operations manual notes: "Corrective action for QL-3¹ is more extensive and rigorous than for QL-2. Quality Level 3 grades will usually require extensive, formal retraining by Rail Training. If the employee's performance is so poor that, in the judgment of the Examiner, continuation of the practical exam would be hazardous to employees or property, the Examiner may suspend the exam at any time, and corrective action will be assigned at that point. Normally, however, even after a QL-3 performance in a task category, the examination shall

¹ Employee is permitted to operate a Class I vehicle only when accompanied by Line Platform Instructor, Training Instructor, QC Officer, or Rail Supervisor. Prescribed retraining must be completed within the specified time limit, and the Operator must be retested only in those subcategories where other than a QL-1 was assigned. However, in cases where the Operator receives less than QL-1 in six or more subcategories (any combination of QL-2 and QL-3 grades), the individual must retake the entire practical exam.

continue, so that all substandard areas can be identified, and corrective action can be assigned at one time. The time limit for QL-3 corrective action may be longer than for QL-2 but generally should not exceed 10 days. The exact time may have to be negotiated with the Rail Training Branch.”

The RTRA QA/QC manual has the authority to negotiate time with the Rail Training Branch (ROQT); however, there is no indication in the employees’ record that they underwent reinstruction with ROQT after failing to qualify on their first attempt. SAFE reviewed a sample of 17 other QL-3-rated Train Operators. Only the incident operator underwent recertification on the same day (January 9, 2023) of their QL-3 failure. The Train Operator ranked QL-1 in all categories except for Troubleshooting, where the train operator failed four categories:

1. Failed to recycle holding brake properly
2. Did not perform stop and proceed
3. Failed to cut out trucks properly
4. Exceeding the time limit of one minute.

Based on the RTRA QA/QC operations guide, the Student Operator did not receive less than QL-1 in six or more subcategories (any combination of QL-2 and QL-3 grades), which did not require the Student Operator to retake the entire Practical Exam. A review of the Student Operator retake test showed a focus on troubleshooting procedures. [Appendix B.](#)

RTRA QA/QC provided the following responses regarding the training and certification processes.

1. “There is no specific rule prohibiting reattempting certification on the same day.
2. The candidate is not required to return to ROQT before undergoing their second attempt. They will be provided a refresher in the area(s) where a QL-3 was assessed if they request one. This refresher can be provided by the division or ROQT.
3. RTRA QA/QC standard practice has been to certify (practical) one operator at a time.”

Applicable Rules and Procedures

MSRPH 1.46: General Rules - Employees shall not permit unnecessary conversation, reading, lounging, or any other action or condition of mind to divert their attention from the safe and efficient performance of duty.

MSRPH 1.79: General Rules - Personnel shall not take any action until they are positive that all radio transmissions or receptions are heard, fully understood, and acknowledged. Individual radio transmissions shall, at all times, be repeated by the receiver so the transmitter can confirm the message was received completely and by the intended receiver. Whenever the transmitter has completed their transmission and is turning the airtime over to the receiving party for acknowledgment or reply, they are to end their communication with the word “over.”

MSRPH 1.79.3: General Rules under Legacy Trains - Operators shall contact ROCC or terminal supervisor anytime the train loses speed commands and comes to a stop, even within the platform limits. Before moving the train, a permissive or absolute block must be established.

MSRPH 3.22: Operating Rules - Mode 2 - Level 2 is the normal operating mode in yards. On the mainline, vehicles shall not be operated in Mode 2-Level 2 unless specifically authorized by ROCC to "operate in Mode 2 with zero speed commands", except as stated in 3.79. Operators shall move vehicles in either P1 or P2 while moving in the yards or with zero speed commands on the mainline unless directed otherwise by the Interlocking Operator in the yard or by ROCC while on the mainline.

Interview and Written Statement Findings

As part of the investigation launched into the event, SAFE interviewed the Train Operator and Radio RTC. The interviews identified the following key findings associated with this event. Findings detailed below include reported information from involved personnel and may conflict with other data sources contained in the report.

Train Operator

The Train Operator noted that the Radio RTC never mentioned traversing through an interlocking during the initial instructions. The Train Operator has never completed a full reverse move without being double-ended (a train operator on both ends to expedite the movement).

The Train Operator was never involved in an emergency on the mainline. The Train Operator gave a clear understanding of the stop-and-proceed rules and procedure process.

The Train Operator said there is difficulty giving 100 percent repeat when you are unfamiliar with what you are being told. The training discussed the need to continue communicating with ROCC until you give them 100 percent repeat back.

The Train Operator believed they communicated well because the Radio RTC should have instructed them to hold and repeat the instructions correctly. The Train Operator stated that the training duration was short. There were inconsistencies with getting trains during training. They normally went over the book in the classroom when trains were not available.

The Train Operator said their class was supposed to graduate in March; however, they graduated in January. The Train Operator said that during certification, they did not use the route selector box or operate the EV.

The Train Operator said two people were being certified as they were certified. The Train Operator and the other student operator used the route selector box leaving the yard. The Train Operator reported it was done during the training but not during the certification. The Train Operator provided an understanding and explanation of the EV and route selector usage.² These requirements must be demonstrated in order to be certified.

The Train Operator mentioned that if the Radio RTC knew they were a new operator, then they could have given clear instructions and slowed things down to ensure they understood. [Appendix A](#).

Radio RTC (Written Statement)

The Radio RTC stated, "First, I would like to say that at no time during this incident of smoke being reported in the tunnel at Shaw Howard University station was I overwhelmed, nor was I confused regarding the proper steps to take or what to say while operating the radio controller position."

² Note that the Train Operator's certification documents show that they successfully passed the EV shutdown section of their certification. AIMS screen verification determined that the Train Operator did use the route selector upon departure of Grosvenor Station.

My actions are my own regardless of any distractions on the control floor. However, the invasion of my personal space and clicking of buttons on the radio controller console while I was on the radio controller console were contributing factors to my oversight, which were inappropriate given the severity of the incident and the preference for social distancing. The Radio RTC noted the Assistant Operations Manager (Rail 3) was assisting with the incident through screen review. "But again, it is my responsibility, regardless of internal distractions, to execute my duties as a controller."

Train ID 503 was instructed to offload their passengers on track two at Georgia Avenue station and that they would clear the Georgia Avenue 06 signal to key down, reverse ends and ride back to Greenbelt station in service.

Train ID 503 contacted central control to notify me that they were clear of customers and were going to the 06 signal and towards Greenbelt station. Train 503 called back for clarity, saying they were already keyed up and ready to move to Greenbelt. I responded by telling Train ID 503 that he was going to clear the Georgia Avenue 06 signal, key down, and reverse ends.

Train ID 503 responded by saying, "Roger." At this point, train 503 track two Georgia Avenue moved their train on track two away from the Georgia Avenue interlocking towards Fort Totten station track two against the traffic flow. I cannot remember if the train moved completely off of the platform or not.

I then told Train ID 503 to stop their train and that they were keyed up on the wrong end. I then told Train ID 503 to key up on the L'Enfant Plaza at the end of the train. Once Train ID 503 confirmed they were keyed up on the L'Enfant Plaza end of the train, I instructed Train ID 503 to clear the Georgia Avenue 06 signal to key down and reverse ends. Train ID 503 did not give me 100% repeat back, and I did not enforce that repeat back requirement."

Weather

On February 9, 2023, at the time of the incident, NOAA recorded the temperature as 69° F, with Mostly Cloudy, and winds at 0 mph. Shaw Howard University Station is an underground station and is not exposed to outside elements. Weather was not a contributing factor in this incident (Weather source: NOAA) – Location: Washington, DC.

Human Factors

Evidence of Fatigue:

Train Operator

SAFE examined signs and symptoms of fatigue that may have been present during the incident. No video of the involved person was available to ascertain whether signs of fatigue were present. The Train Operator reported feeling Fully Alert at the time of the incident. The Train Operator reported experiencing no symptoms of fatigue in the time leading up to the incident.

Fatigue Risk

Train Operator

SAFE evaluated incident data for fatigue risk factors. Risk factors for fatigue were present. The incident time of day did not suggest an increased risk of fatigue-related impairment. The Train Operator reported keeping a regular sleep schedule in the days leading up to the incident. The

Train Operator worked evenings in the days leading up to the incident. The employee was awake for 13.7 hours at the time of the incident. The Train Operator reported 8 of sleep in the 24 hours preceding the incident. The off-duty period was 16.13 hours which provides an opportunity for 7-9 hours of sleep. This was a comparable amount to the employee's usual workday sleep durations. The employee reported no issues with sleep.

Evidence of Fatigue

Radio RTC

SAFE examined signs and symptoms of fatigue that may have been present at the time of the incident. No video of the involved person was available to ascertain whether signs of fatigue were present. The Radio RTC reported feeling fully alert at the time of the incident. The Radio RTC reported experiencing no symptoms of fatigue in the time leading up to the incident.

Fatigue Risk

Radio RTC

SAFE evaluated incident data for fatigue risk factors. No significant risk was identified. The incident time of day did not suggest an increased risk of fatigue-related impairment. The Radio RTC reported keeping a regular sleep schedule in the days leading up to the incident. The Radio RTC worked midnight [21:45 hours – 0600 hours] in the days leading up to the incident. The Radio RTC was awake for 7.7 hours at the time of the incident. The employee reported 8 hours of sleep in the 24 hours preceding the incident. The off-duty period was 87.5 hours which provides an opportunity for 7-9 hours of sleep. This was a comparable amount of the employee's usual workday sleep durations. The employee reported no issues with sleep.

Post-Incident Toxicology Testing

WMATA's Drug and Alcohol Program determined that the Train Operator and Radio RTC were in compliance with the Drug and Alcohol Policy and Testing Program 7.7.3/6.

Work History

Train Operator

The Train Operator was hired as a Bus Operator on November 2, 2005. The Train Operator has held two positions, including Bus Operator and Train Operator. The Train Operator has not had any safety incidents or violations as a Train Operator.

Radio RTC

The Radio RTC was hired as a Rail Traffic Controller on August 16, 2021. The Radio RTC has held only one position at WMATA. The Radio RTC was previously an Air Traffic Controller in the Navy.

Certifications

Train Operator

The Train Operator's first certification was January 9, 2023, with a QL-3 on their first attempt [failed qualification]. The Train Operator failed to initiate stop and proceed during certification testing.

The Train Operator passed their practical on the second attempt on January 9, 2023, and passed their MSRPH written exam. The Train Operator is an RWP Level 2 and is in compliance until December 1, 2023.

Radio RTC

The Radio RTC first certified March 22, 2022, and passed all exams associated with the RTC training program. The Radio RTC is an RWP Level 2 and is in compliance until December 1, 2023.

Findings

- Six minutes passed between the Train Operator's report of smoke and the activation of exhaust fans.
- Train ID 503 Train Operator and Radio RTC did not perform 100% repeat-back during communications.
- Train ID 503 Train Operator entered stop and proceed mode without notifying the Radio RTC.
- The Train Operator was certified 30 days before this event and failed certification [QL3] on their first attempt and was allowed to undergo a second attempt, which they passed, the same day.
- Track rights were being requested during an emergency, increasing radio traffic communication.
- RTRA QA/QC performed a certification with two Train Operators aboard based on certification paperwork.

Immediate Mitigation to Prevent Recurrence

- Lessons Learned developed for Moving against the flow of Traffic
- Train Operator received reinstruction and Supervisor ride-along for 30 days.
- Radio RTC reviewed the incident with the on-duty Operations Manager and received a documented conversation.
- Due to resource constraints ROQT is unable to perform all retraining, when Train Operators receive a QL-3 in specific topics during recertification. RTRA QA/QC has trained specific personnel to assist in providing said training in those specific areas to ensure second attempts are performed in a timely manner

Probable Cause Statements

The probable cause of the Evacuation for Life Safety Reasons event at Shaw Howard Station was an unidentified party discharging a fire extinguisher outside of the platform limits, resulting in the appearance of a smoke condition in the station. The source of the fire extinguisher is also unknown as of the time of this report. No missing fire extinguishers were identified from the incident consist.

The probable causes of the Improper Rail Vehicle Movement were inexperience and incomplete communications between the Train Operator and RTC. The Train Operator certified

approximately 30 days prior to the event. The parties also failed to communicate using 100 percent repeat-back during the planned move to cross over from Track 2 and return to the Georgia Avenue platform on Track 1.

Recommended Corrective Actions

Corrective Action Code	Description	Responsible Party	Estimated Completion Date
106383_SAFE CAPS_RTRA_ 001	(RC-1, CF-1) Office of Rail Transportation The operator is required to attend Re-Instruction Training with ROQT on February 25, 2023.	RTRA SRC	Completed
106383_SAFE CAPS_RTRA_ 002	All RTRA QA/QC Officers have been retrained to ensure all fields are complete on the job proficiency evaluation to include “location of route selection boxes”, no rounding of times and no double-ended of train operations to ensure the FTA mandate of EV, route selector operations, and turnback processes are completed	RTRA SRC	Completed
106383_SAFE CAPS_ROCC_ 001	(CF-2) Office of Rail Operations Control Center revisited the incident with the on-duty Operations Manager and received a documented conversation.	ROCC SRC	Completed

Appendices

Appendix A – Interview Summaries and Written Statements

Train Operator

The narrative(s) below summarizes the interview statements made by the involved personnel. As such, times and details may conflict with the data contained in systems of record.

The Train Operator was hired as a Bus Operator on November 2, 2005. The Train Operator has held one position prior to Train Operator; Bus Operator. The Train Operator was first certified on January 9, 2023. The Train Operator has had no rail incidents during their 30-day tenure. The Train Operator's last train certification was on January 9, 2023, with a QL-3. The Train Operator underwent re-certification on the same day with a pass rating.

Before the Train Operator began their shift, they had lunch. The Train Operator was on their last round trip before the incident occurred. The Train Operator does not wear corrective lenses.

The Train Operator stated that before the emergency, they were at West Hyattsville Station and later received instructions to proceed to Fort Totten Station and hold. The Radio RTC later gave a permissive block down to Georgia Avenue Station. The Radio RTC instructed them to offload passengers, key down their train and reverse ends, then clear the E05-06 signal per their recollection.

As the Train Operator got to the opposite end, headed towards Greenbelt, the Radio RTC contacted them again. The Train Operator assumed they were the same instructions. The Train Operator needed clarification on whether the Radio RTC was giving new instructions or the same instruction. The Train Operator inquired if they were the same instructions. The Train Operator noted they did not get a yes or no, just a repeat of instructions. The Train Operator assumed they were under the original instructions given.

The Train Operator keyed up on the opposite end of their train and headed back towards Greenbelt on track 2. The Train Operator mentioned they heard smoke in the tunnel towards Shaw Howard. University Station. The Train Operator believed they were doing the right thing and was under the impression that the Radio RTC did not want them to go that way due to smoke. The Train Operator noted to stop and proceed on their console. The Radio RTC told them to clear a signal and assumed that was their permission. The Train Operator initiated a stop and proceed and began to move the train. The Radio RTC instructed the Train Operator to stop their train and instructed to change operating ends headed towards L'Enfant Plaza, the original end they started on. The Radio RTC instructed the Train Operator clear another signal, go through an interlocking, going on to track 1. The Train Operator stated they were put in service at Georgia Avenue Station. The Train Operator continued to Greenbelt Station. The Train Operator was not contacted the rest of the night. The next morning the Train Operator received notification of the Improper Rail Vehicle Movement.

The Train Operator mentioned the following during the investigator questioning phase:
The Train Operator noted the Radio RTC never mentioned traversing through an interlocking during the initial instructions. The Train Operator has never completed a full reverse move without being double-ended (a train operator on both ends to expedite the movement.)

The Train Operator was never involved in an emergency on the mainline. The Train Operator gave a clear understanding of the stop-and-proceed rules and procedure process.

The Train Operator said there is difficulty giving 100 percent repeat when you are unfamiliar with what you are being told. The training discussed the need to continue communicating with ROCC until you give them 100 percent repeat back.

The Train Operator believed they communicated well because the Radio RTC should have instructed them to hold and repeat the instructions correctly. The Train Operator stated that the Training duration was short. There were inconsistencies with getting trains during training. They normally went over the book and classroom when trains were not available.

The Train Operator said their class was supposed to graduate in March; however, they graduated in January. The Train Operator said that during certification, they did not use the route selector box or operate the EV.

The Train Operator said two people were being certified as they were certified. The Train Operator and the other student operator used the route selector box leaving the yard. The Train Operator report it was done during the training but not during the certification. The Train Operator provided an understanding and explanation of the EV and route selector usage.

The Train Operator mentioned if the Radio RTC knew they were new operator, then they could have given clear instructions and slowed things down to ensure they understood.

Radio RTC (Written Statement)

"The incident in question occurred on February 9, 2023, between the hours of 22:00 hours and 23:00 hours. It was brought to my attention by the ROCC AOM that I was being taken out of service. The AOM further explained the reason, which brings me to the subject of Train ID 503. First, I would like to say that at no time during this incident of smoke being reported in the tunnel at Shaw Howard University station was I overwhelmed, nor was I confused regarding the proper steps to take or what to say while operating the radio controller position.

My actions are my own regardless of any distractions on the control floor. However, the invasion of my personnel space and clicking of buttons on the radio controller console while I was on the radio controller console were contributing factors to my oversight, which were inappropriate given the severity of the incident and the preference for social distancing. But again, it is my responsibility, regardless of internal distractions, to execute my duties as a controller.

With that being said, due to the incident of smoke in the tunnel at Shaw Howard University station, trains were being turned around at Georgia Avenue Station and Mount Vernon Square Station. Train ID 503 was instructed to offload their passengers on track two at Georgia Avenue station and that they would clear the Georgia Avenue 06 signal to key down, reverse ends and ride back to Greenbelt station in service.

Announcements were made on OPS 3 that, due to an emergency and trains would be turned around at Mount Vernon Square Station and Georgia Avenue station. Train ID 503 contacted central control to notify me that they were clear of customers and were going to the 06 signal and towards Greenbelt station. Train 503 called back for clarity, saying they were already keyed up and ready to move to Greenbelt. I responded by telling Train ID 503 that he was going the Clear the Georgia avenue 06 signal, key down, and reverse ends.

Train ID 503 responded by saying, "Roger." At this point, train 503 track two Georgia Avenue moved their train on track two away from the Georgia avenue interlocking towards Fort Totten station track two against the traffic flow. I cannot remember if the train moved completely off of the platform or not. I then told Train ID 503 to stop their train and that they were keyed up on the

wrong end. I then told Train ID 503 to key up on the L'Enfant Plaza at the end of the train. Once Train ID 503 confirmed they were keyed up on the L'Enfant Plaza end of the train, I instructed Train ID 503 to clear the Georgia Avenue 06 signal to key down and reverse ends. Train ID 503 did not give me 100% repeat back, and I did not enforce that repeat back requirement."

Appendix B – RTRA QA/QC Certification



TRAIN OPERATOR AND ROAD SUPERVISOR JOB TASK PROFICIENCY EVALUATION



Name: [REDACTED]	Emp. No: [REDACTED]	Division: <i>Training</i>	Date: <i>1-9-23</i>
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Reason for Certification: *Please place a check in an area below.*

☒ Certification: Student ☐ Pre-certification: Student ☐ Division Request ☐ Re-Certification ☐ Return to Duty ☐ Other _____

Exam Administered	Score	Date Taken	Equipment (current/working condition)	Yes	No
MSRPH version #: <i>88</i> % <i>12-6-22</i>			MSRPH	<input checked="" type="checkbox"/>	<input type="checkbox"/>
TVOIM/TOIM <i>93</i> % <i>12-9-22</i>			Perm/Temp/Special Orders	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Supervisor Combination %			Troubleshooting Guide	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Practical attempt #: <i>1</i> QL- <i>3</i> <i>1-9-23</i>			Flashlight	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Safety Vest	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Footwear	<input checked="" type="checkbox"/>	<input type="checkbox"/>
			Identification (One Badge, RWP)	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Comments:

Troubleshooting #1 - failed to properly recycle holding brake, did not perform stop & proceed, failed to do trucks properly.

Troubleshooting #2 - exceeded time allotted by 1 min.

Signatures:	Date:
Employee: [REDACTED]	<i>1-9/2023</i>
Examiner: [REDACTED]	<i>1-9-2023</i>

RTRA-005-01-00

TRAIN OPERATOR AND ROAD SUPERVISOR JOB TASK PROFICIENCY EVALUATION

Page 1

Attachment 1 – RTRA QA/QC training documentation for QL-3 page 1 of 4.

Incident Date: 02/09/2023 Time: 22:21 hours
Final Report – Evacuation for Life Safety Reasons
E23088

Drafted By: SAFE 704 04/08/2023
Reviewed By: SAFE 71 – 04/10/2023
Approved By: SAFE 71 – 04/10/2023

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TRAIN OPERATOR AND ROAD SUPERVISOR JOB TASK PROFICIENCY EVALUATION (continuation sheet)

Emp No.:

Date: 1-9-2023

CATEGORIES / SUBCATEGORIES	QUALITY LEVEL	REMARKS (Remarks are required for a quality level score of 2 or 3)
I. Preparation for Service	1	Cars Used: 7456x7453
1. Exterior Inspection	1	Truck # 7456 Car Barrier 7456 Retra 7453
2. Interior Inspection - Trailing Cab	1	Radio #18 7456
3. Interior Inspection - Each Car	1	Emergency Brake Board 7456 Horn # 7453
4. Interior Inspection - Oper. Cab	1	Under Interlocking No Sel 7452
5. Rolling Test / Rolling Brake Test	1	
		Time Allotted: 35:00 / Actual Time: 34:00
II. Mainline Operation	1	
6. Communications	1	
7. Door Oper. & Station Stopping	1	
8. Use of Horn	1	
9. Speed Adherence/Manual Oper.	1	
10. Turn Back Moves	1	Location: Grosvenor Time Allotted: 02:00 / Actual Time: 01:00
11. Manual Route Selection	1	Location:
12. EV Shutoff	1	Time Allotted: 00:30 (1:00) / Actual Time: 00:30
III. Yard Operation	1	
13. Communications	1	
14. Yard Movements	1	
15. Coupling	1	Time Allotted: 08:00 (12) / Actual Time: 07:00 Cars Used: 7457 + 7453
16. Uncoupling	1	Time Allotted: 05:00 (7.5) / Actual Time: 05:00 Cars Used: < 7452 > 7472
17. Isolation (Self-Recovery)	1	Time Allotted: 15:00 (22.5) / Actual Time: 10:00 Cars Used: 7456x7453x7472x7357
18. Manual Switch Operation	1	Switch # 83
IV. Miscellaneous	3	
19. Recovery Train Operation	1	Time Allotted: 12:00 (18) / Actual Time: 10:00 Cars Used: 7472 + 7452
20. Troubleshooting	#1 3	Stuck Holding Brake 7453 Car Use 7456x7453x7472x7357
	#2 2	Fix door open 7453 6min

RTRA-305-01-00

TRAIN OPERATOR AND ROAD SUPERVISOR JOB TASK PROFICIENCY EVALUATION

Page 2

Attachment 1 – RTRA QA/QC training documentation for QL-3 page 2 of 4.

Incident Date: 02/09/2023 Time: 22:21 hours
Final Report – Evacuation for Life Safety Reasons
E23088

Drafted By: SAFE 704 04/08/2023
Reviewed By: SAFE 71 – 04/10/2023
Approved By: SAFE 71 – 04/10/2023

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TRAIN OPERATOR AND ROAD SUPERVISOR JOB TASK PROFICIENCY EVALUATION



Name:	[Redacted]	Emp.No.:	[Redacted]	Division:	Training	Date:	1-9-2023
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Reason for Certification: Please place a check in an area below.

<input checked="" type="checkbox"/> Certification: Student	<input type="checkbox"/> Pre-certification: Student	<input type="checkbox"/> Division Request	<input type="checkbox"/> Re-Certification	<input type="checkbox"/> Return to Duty	<input type="checkbox"/> Other
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Exam Administered	Score	Date Taken	Equipment (current/working condition)	Yes	No
MSRPH version #:	88 %	12-9-22	MSRPH	✓	
TVOIM/TOIM	93 %	12-9-22	Perm/Temp/Special Orders	✓	
Supervisor Combination	N/A %	N/A	Troubleshooting Guide	✓	
Practical attempt #: 2nd	QL PASS	1-9-2023	Flashlight	✓	
			Safety Vest	✓	
			Footwear	✓	
			Identification (One Badge, RWP)	✓	

Comments

2nd attempt trouble shooting.
Total.

Signatures:	Date:
Employee: [Redacted]	1/9/2023
Examiner: [Redacted]	1/9/2023

RTRA-906-01-00

TRAIN OPERATOR AND ROAD SUPERVISOR JOB TASK PROFICIENCY EVALUATION

Page 1

Attachment 1 – RTRA QA/QC training documentation for QL-3 page 3 of 4.

Incident Date: 02/09/2023 Time: 22:21 hours
Final Report – Evacuation for Life Safety Reasons
E23088

Drafted By: SAFE 704 04/08/2023
Reviewed By: SAFE 71 – 04/10/2023
Approved By: SAFE 71 – 04/10/2023

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TRAIN OPERATOR AND ROAD SUPERVISOR JOB TASK PROFICIENCY EVALUATION (continuation sheet)

Emp No.:

Date:

1/9/2023

CATEGORIES / SUBCATEGORIES	QUALITY LEVEL	REMARKS (Remarks are required for a quality level score of 2 or 3)
I. Preparation for Service		
1. Exterior Inspection	N/A	Cars Used:
2. Interior Inspection - Trailing Cab		
3. Interior Inspection - Each Car	A	
4. Interior Inspection - Oper. Cab		
5. Rolling Test / Rolling Brake Test		Time Allotted: 35:00 / Actual Time: :
II. Mainline Operation		
6. Communications	N/A	
7. Door Oper. & Station Stopping		
8. Use of Horn		
9. Speed Adherence/Manual Oper.	A	Location: Time Allotted: 02:00 / Actual Time: :
10. Turn Back Moves		Location: Time Allotted: 00:30 (1:00) / Actual Time: :
11. Manual Route Selection		
12. EV Shutoff		
III. Yard Operation		
13. Communications	N/A	
14. Yard Movements		
15. Coupling		Time Allotted: 08:00 (12) / Actual Time: : Cars Used: +
16. Uncoupling	A	Time Allotted: 05:00 (7.5) / Actual Time: : Cars Used: < >
17. Isolation (Self-Recovery)		Time Allotted: 15:00 (22.5) / Actual Time: : Cars Used:
18. Manual Switch Operation		
IV. Miscellaneous		
19. Recovery Train Operation	N/A	Time Allotted: 12:00 (18) / Actual Time: : Cars Used: +
20. Troubleshooting	Pass	
1) BIE Masbroom lead cars, no reset (1) 1:12		
2) Door Control c/b right side triggered no reset (1) 1:10		

RTRA-806-01-00

TRAIN OPERATOR AND ROAD SUPERVISOR JOB TASK PROFICIENCY EVALUATION

Page 2

Attachment 1 – RTRA QA/QC training documentation for QL-3 page 4 of 4.

Incident Date: 02/09/2023 Time: 22:21 hours
Final Report – Evacuation for Life Safety Reasons
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Drafted By: SAFE 704 04/08/2023
Reviewed By: SAFE 71 – 04/10/2023
Approved By: SAFE 71 – 04/10/2023

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Appendix C – Office of Rail Transportation Investigative Report



Washington Metropolitan Area Transit Authority



Office of Rail Transportation: Managerial Incident Investigation Report

Incident Status: **FINAL**

GENERAL INCIDENT INFORMATION

Incident Type:	Improper Rail Vehicle Movement	Delay (Minutes):	20 minutes
Incident Date:	Thursday, February 09, 2023	Vehicles Involved:	3125*3278*3055
Incident Time:	10:42 PM	First Reported By:	Train Operator [REDACTED]
Location:	Georgia Ave Track #2		

BRIEF DESCRIPTION:

At approximately 10:42 pm, ROCC received a report of a Train Operator moving the train against the normal flow of traffic without permission at Georgia Ave Station, Track #2. All appropriate personnel were notified.
Incident Level – A2

Key Employees Involved & Employee Statements:

Train Operator [REDACTED] Operator [REDACTED] was interviewed by Superintendent [REDACTED] on February 10, 2023, during the interview, Train Operator [REDACTED] stated the following:

"Was given instruction by Central to offload, key down and reverse ends at Georgia Ave due to smoke detection at Shaw. I was asked by Central again was I keyed up on reverse end because I was being sent back to Greenbelt. I asked was these the same instructions as before. I believe they repeated the instructions as if they were the same and I had already reversed ends. I took them tell me to past the signal as permission to proceed. The signal I believe was E06-02."

Post Incident Testing & Employee History:

Operator [REDACTED] was removed from service for Post Incident Testing by RTRA Supervisor [REDACTED]
Operator [REDACTED] has been a WMATA employee since September 14, 2015.
Operator [REDACTED] has been on the Rail since January 15, 2023
Operator [REDACTED] certified as a Train Operator January 9, 2023. (QL-2)
Operator [REDACTED] had 1 Safety Violation in the past three (3) years,
[REDACTED]



Washington Metropolitan Area Transit Authority



Office of Rail Transportation: Managerial Incident Investigation Report

SIGNIFICANT INCIDENT TIMELINE:

- You contacted ROCC, "Central Train ID 503, can I get a block to the 8-car marker Georgia Ave, over?"
- ROCC Controller contacted you, "Sure Permissive Block to Georgia Ave 2, 8-car marker after servicing hold, E05-08 signal is red. How you copy over?"
- Your response, "Copy that E05-08 signal is red, holding at Georgia Ave over."
- ROCC Controller, "Affirm. 503 I need you to offload your train, I'm going to have you clear the 06 signal and reverse ends your will be going back to Greenbelt, over."
- Your response to ROCC, "Copy that. Offload my train going back to Greenbelt reverse ends over."
- ROCC Controller, "Good copy over."
- Your response, "Central this is 503 keyed up, reversed ends verified all clear of customers over."
- ROCC response, "Copy 503."
- Your response, "503 standing by Central over." (Transmission was jumbled)
- ROCC Controller, "That's a good copy Train 503, you have a Permissive Block to clear E05-06 signal. Key down and reverse, over."
- Your response, "Central this is 503 from your previous instructions, I reverse ends already. You want me to verify a lunar at E05-06 key down and reverse again, over."
- ROCC response, "Affirmative. I need you to clear the 06 signal at Georgia Ave I'm going to cross you over at the Georgia Ave Interlocking going back in service to Greenbelt over."
- Your response, "503 repeat you were broken up over."
- ROCC Controller, "Train 503 key up on your downtown end and clear the 06 signal, how copy over."
- Your response, "Roger that."
- ROCC Controller, "Good copy Central out."
- ROCC Controller, "Train 503 stop your train over."
- No response from 503.
- ROCC Controller, "Train 503 stop your train over."
- Your response, "Train stopped over."
- ROCC Controller, "Train 503 at Georgia Ave, I need you to key up on your L'Enfant Plaza end, you are going to clear the 06 signal at Georgia Ave. You keyed up on the wrong end over."
- Your response, "Roger that, key up on my L'Enfant Plaza end and clear the 06 signal over."
- ROCC Controller, "503 operator key up on your downtown end you're going to clear Echo 05-06 signal."
- Your response, "Keying up on my downtown end to clear the E05-06 signal over."

SIGNIFICANT FINDINGS & PENDING ISSUES:

1. Based on the information provided it is alleged the train operator failed to follow the directions of the ROCC Controller.
2. Train ID moved the train against the normal flow of traffic without permission violating OR 3.79.



Washington Metropolitan Area Transit Authority

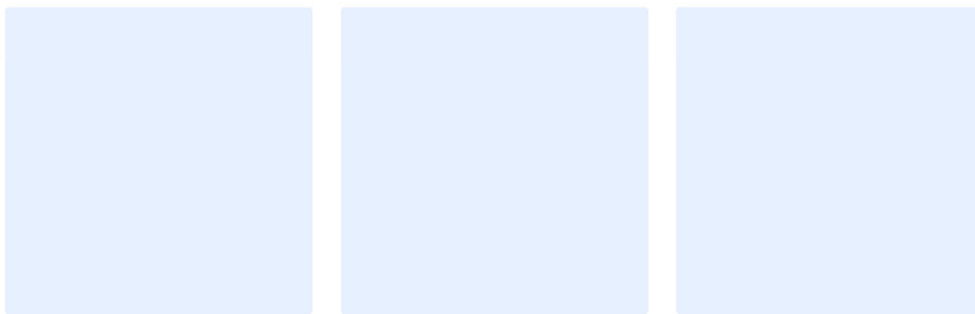


Office of Rail Transportation: Managerial Incident Investigation Report

CORRECTIVE ACTIONS:

Investigation was finalized and determined the train operator failed to provide 100 % repeat backs and failed to follow the directions of the ROCC Controller.

INCIDENT PHOTOS: ATTACH ANY SIGNIFICANT PHOTOS BASED ON THE INITIAL INCIDENT INVESTIGATION.



Report Prepared
by:

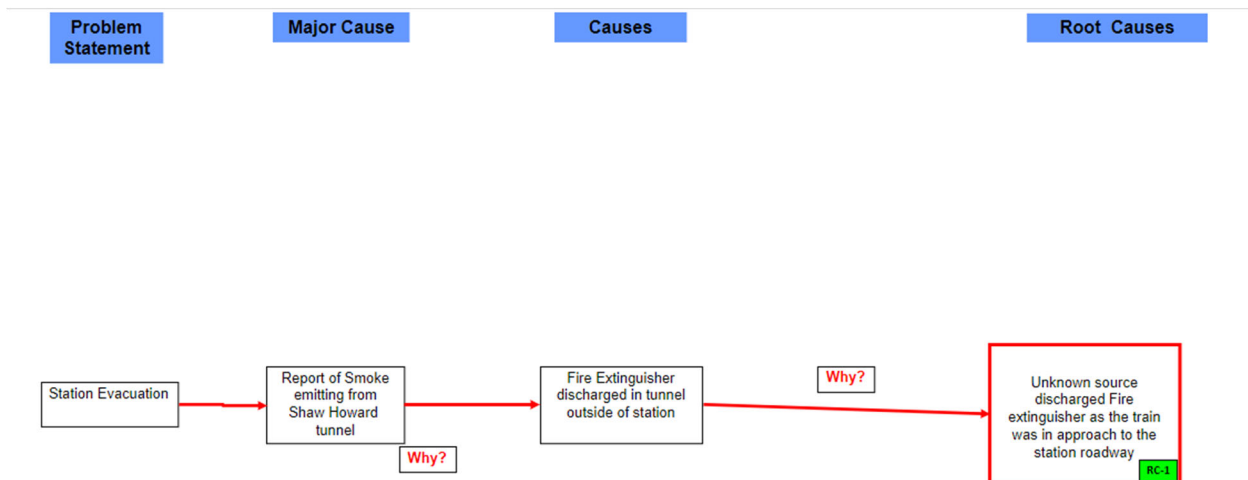
Superintendent

2/17/2023

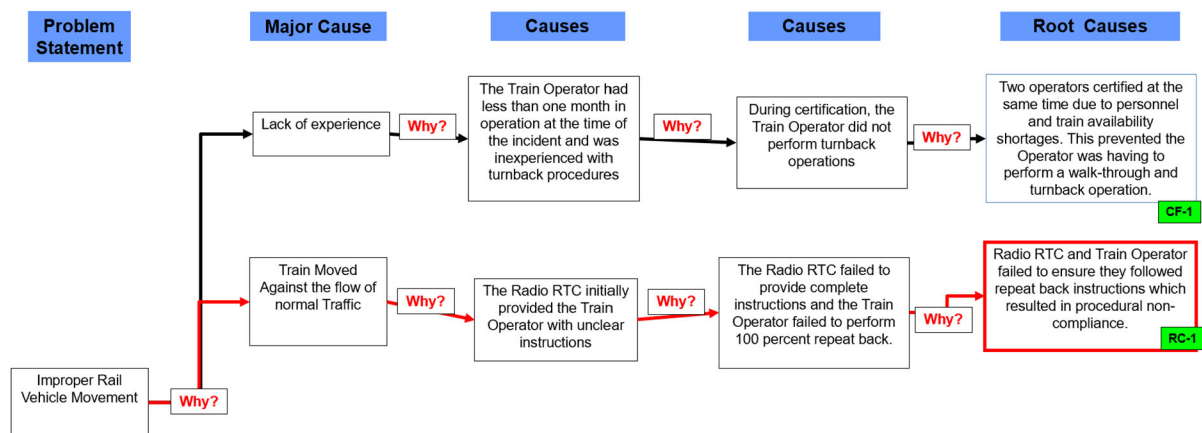
Report Reviewed
by:



Appendix D– Why-Tree Analysis



Root Cause Analysis



Root Cause Analysis



Incident Date: 02/09/2023 Time: 22:21 hours
 Final Report – Evacuation for Life Safety Reasons
 E23088

Drafted By: SAFE 704 04/08/2023
 Reviewed By: SAFE 71 – 04/10/2023
 Approved By: SAFE 71 – 04/10/2023

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