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WMSC Commissioner Brief: W-0116 – Evacuation, Runaway Train – Near Rhode Island Ave Station – March 26, 2021

Prepared for Washington Metrorail Safety Commission meeting on October 26, 2021

Safety event summary:

The WMSC identified and ensured that Metrorail reported and investigated a runaway train and customer evacuation event near Rhode Island Ave Station that occurred on March 26, 2021. The customer evacuations and runaway train were communicated over the radio in real time, and later communicated by the WMSC to Metrorail, but Metrorail did not acknowledge the customer self-evacuations until prompted by the WMSC, and Metrorail did not acknowledge the runaway train with a notification to the WMSC and the Federal Transit Administration until April 8 after continued oversight and communications from the WMSC related to the WMSC's independent observations and the requirements of the WMSC Program Standard.

During this event, Metrorail did not properly establish and follow the incident command structure (ICS), and, when incident command was established, assigned multiple responsibilities to a single Rail Transportation (RTRA) Supervisor who was eventually assigned to be "on-scene commander", (possibly) forward liaison, recovery train operator, to verify third rail power status, to provide updates to the ROCC, to lead incident planning, and to participate in a hot wash that occurred before the event was resolved.

The event began when a Red Line train departing Rhode Island Ave Station toward Brookland Station experienced automatic emergency braking, known as Brakes-In-Emergency, at 3:36 p.m. with the front of the train approximately 1,033 feet outside of the Rhode Island Ave Station. The rear of the train was approximately 433 feet from the station platform. The Train Operator attempted to troubleshoot the issue. The Rail Operations Control Center (ROCC) Radio Controller observed that the train had stopped for several minutes, and contacted the Train Operator for information at 3:42 p.m. The Train Operator reported the emergency braking and that the Train Control Display showed a stuck holding brake on the fifth and sixth cars of the train. A Car Maintenance (CMNT) mechanic was dropped off from a train on the adjacent track at 3:53 p.m. to assist, just before the Train Operator reported that they were cutting trucks out on the fifth and sixth cars and would return to the operating cab to activate power knockout. After power knockout was activated between 4:00 p.m. and 4:12 p.m., the train was still unable to move.

There were extremely limited communications with passengers on the train from the time it stopped until close to the time that customers were evacuated. This contributed to customers' lack of trust in information that was later provided and to frustrations related to the extended time that customers were held on the train.

The fifth and sixth cars of the train, which were displaying the stuck holding brake faults, had in fact lost power due to a tripped circuit breaker that had overheated. This also disabled the public address systems in these cars and prevented the public address systems from functioning in other trailing cars even if announcements had been made. Additional communications challenges to customers onboard the train occurred later when third-rail power was de-energized during a second customer self-evacuation. The investigation later determined that the initial tripped battery system circuit breaker created train control network faults on car 7303, which prevented the system from communicating the specific nature of the failure to the train's network because the system that reports the status of this breaker is powered by this breaker. This led to the incorrect information on the train control display (TCD) on the lead car of the train and prevented the fault from being tracked by the Vehicle Monitoring and Diagnostic System. Further testing demonstrated

that the system was overheating, had a loose connection and the circuit breaker needed to be replaced. Metrorail had not previously included these in inspection procedures. Metrorail inspected the same circuit breaker on four other married pairs and found offset torque markings on one of the four. The long list of faults on the TCD, beyond just the "stuck holding brake" fault that was communicated on the TCD and to the CMNT Desk via the Fleetwise software system, should have been an indication that the actual issue was not related to the holding brake. The battery on these cars had been replaced approximately three months earlier.

Metrorail did not fully communicate about this event in real time with the jurisdictional Fire Liaison in the ROCC. The Fire Liaison received a phone call from a WMATA Office of Emergency Management (OEM) employee at 3:52 p.m. where each stated they were not aware of the situation. The Fire Liaison stated they would speak with the ROCC Assistant Superintendent.

At approximately 4:17 p.m., one customer self-evacuated onto the roadway and walked to the Rhode Island Ave Station platform. A Rail Transportation (RTRA) Supervisor on the platform reported this to the ROCC. Power was not de-energized. This person later explained that they were getting too hot on the train.

At 4:18 p.m., CMNT stated that a recovery train would be needed. At 4:32 p.m., the RTRA Supervisor requested permission for the recovery train, Train 123 which had been stopped at the Rhode Island Ave Station platform, to proceed. Around that time, a second customer self-evacuated from the disabled train and walked to the platform. The ROCC did de-energize third rail power at that time, but only on the track the train was on, not on both sides of the interlocking. The ROCC did not respond to a question from the operator of a train single-tracking through the area on the other track, moving away from the location of the disabled train, as to whether that train should hold until the customer was confirmed to be safely on the platform.

Only at this time did the ROCC designate the RTRA Supervisor as On-Scene Commander, which is contrary to Metrorail procedures when MTPD personnel are on scene, and which should have occurred earlier. MTPD's incident report stated that they assumed on-scene command at 4:04 p.m., however, if this did occur, it was not communicated to other Metrorail personnel. WMATA did not clearly designate an incident commander. This contributed to confusion related to response and evacuation plans.

At approximately 4:57 p.m., the first 911 call was made in this event. A passenger on the disabled train told the District of Columbia Office of Unified Communications (OUC) that they were stuck on a Red Line train. This call was transferred to the Metro Transit Police Department (MTPD), and the Fire Liaison Officer in the ROCC contacted a fire liaison at OUC to report the need for a response to a stranded train at Rhode Island Ave Station. After learning about this immobilized train at 3:52PM, the Fire Liaison is heard on a recording telling a WMATA Office of Emergency Management (OEM) staff that they were going to speak with the ROCC Assistant Superintendent. At 4:38 p.m., the Fire Liaison stated that they had prompted the ROCC to call 911 earlier, but Metrorail had decided not to make that call. Metrorail did not clearly communicate the nature and location of the incident to D.C. Fire and Emergency Medical Services (FEMS) or to OUC.

According to MTPD, MTPD personnel did not respond to and board Train 122 until approximately 5:00 p.m. This was 80 minutes after the first report that the train was immobile at 3:36PM. For part of this event, the investigation identified

that two MTPD officers were parked under the bridge on which the train was sitting and were shouting up to the train operator. Those officers left the scene without communicating with incident command.

At 5:01 p.m., the ROCC restored third rail power without required power restoration warning announcements. At 5:03 p.m., MTPD requested an ambulance for a customer on the disabled train. At 5:12 p.m., the appropriate D.C. Fire and Emergency Medical Services (FEMS) response was dispatched for an elevated rescue. No elevated rescue was conducted.

At 5:07 p.m., the ROCC instructed Train 123 to act as a recovery train by proceeding to no closer than 10 feet of the disabled train, Train 122. The RTRA Supervisor responded with a different movement plan, stating they would proceed to within two feet of the train to allow customers to exit onto the recovery train. Metrorail close-in procedures require stopping at 10 feet then two feet from the other train. During this process, the RTRA Supervisor, who had stepped in to operate Train 123 due to that Train Operator not being comfortable performing such a move, inadvertently coupled Train 123 to the disabled train. The RTRA Supervisor activated the uncouple switch with the expectation that the train would be moved from the trailing end back to the station to bring customers to the platform. That move did not occur because the trailing end of the recovery train was still within the platform limits, so the remaining customers on the disabled train walked through the recovery train to the rear of that train where they were able to exit directly to the platform. The trains were not mechanically coupled, but the couplers were physically touching each other. The RTRA Supervisor communicated this to a CMNT mechanic. At 5:30 p.m. CMNT contacted the ROCC, outside the chain of command established by the designation of an “on-scene commander” and stated that the trains were coupled. The ROCC Button Controller also earlier deferred to decision making from CMNT personnel rather than the on-scene commander related to the use and movement of the recovery train.

After the customers had exited, while Metrorail was preparing to move the trains to a rail yard, Train 122 rolled, not under the control of an operator, for nearly one minute (This event meets the definition of a runaway train as established by the FTA and included in the WMSC Program Standard: a train that is no longer under the control of a driver regardless of whether the operator is physically on the vehicle at the time). The movement at 5:39 p.m. occurred after CMNT cut out (removed brake application on) the final truck of Train 122. The rear truck was cut back in approximately 31 seconds after train movement began. The train stopped 57 seconds after the movement began. The train rolled 137 feet down an approximately 1.72% grade. The CMNT Road Mechanic who was assigned to be in the middle of the consist as the brake person in case of emergency stated that they did not realize that the train was moving. Another CMNT Road Mechanic who was on the train noticed the train moving and cut the trucks back in to stop the runaway train.

The runaway train was reported over the radio by a train operator, the CMNT mechanic who cut the trucks in, and the RTRA Supervisor, but Metrorail did not stop to investigate the event. Instead, Metrorail proceeded with recovery efforts. Initial written incident reports from CMNT personnel and initial data reviews by the Chief Mechanical Officer’s Incident Investigation Team did not include any information related to the runaway train. Only the RTRA Supervisor included the runaway train event in their incident report.

Throughout the event, radio communications were inconsistent, with some transmissions that were unclear due to low audio transmission quality. The RTRA Supervisor and MTPD personnel stated that the communications were problematic. The WMATA radio Communications personnel who conducted evaluations of these reports stated that a

combination of radio system “glitches, user error, declining battery power, and the radio channels being busy” likely contributed to these difficulties experienced by the RTRA Supervisor and MTPD Personnel on scene. This included the need to repeat directions or questions multiple times. The RTRA Supervisor also expressed concerns related to the timeliness of the ROCC acknowledging their transmissions during this event.

The Metro Transit Police Department (MTPD) distracted other Metrorail personnel from performing their duties. MTPD directed the RTRA Supervisor to participate in a hot wash while the incident was still being resolved. MTPD did not allow the RTRA Supervisor to leave the hot wash to address the runaway train, and stated that the RTRA Supervisor’s continuing response to an ongoing event was somehow uncooperative. MTPD did not realize that the train had rolled away while they were attempting to conduct a hot wash prior to the resolution of the event.

During the event, MTPD utilized an MTPD radio channel for communication rather than communicating directly with the ROCC using the Emergency Trip Station (ETS) box to communicate with controllers related to the status of third rail power as specified by Metrorail procedures. MTPD also did not assign an individual to the ETS box for direct communication with the ROCC throughout the incident, and did not work closely with the RTRA Supervisor designated as on-scene commander to ensure situational awareness throughout the event as required under Metrorail procedures.

Review of the ROCC Radio Controller’s training records demonstrated difficulties multitasking and paying attention to detail, which were also exhibited during this event. The controller had been certified for approximately six months. The controller had failed their first certification tests due to not completing the simulations as required, including the 7000 Series Isolation Procedures for Self-Recovery. The second opportunity to certify did not include this simulation that had been previously failed, but retained the two other simulations that the controller had passed on the initial attempt. Controllers who do not pass on their second attempt are dropped from the training program. Another controller opted to relieve the Radio Controller toward the end of this event.

Metrorail did not conduct any of the post-event toxicology testing for this event that is required by Metrorail policy.

Probable Cause:

The probable cause of the initial disabled train was Metrorail’s inadequate maintenance and monitoring practices to identify and proactively mitigate installation and operational issues related to the battery system circuit breaker on 7000 Series cars.

The probable cause of the runaway train was Metrorail’s inadequate communication, insufficient processes related to coupling and train handling, and not establishing effective incident command with appropriate supporting personnel.

The probable cause of the customer self-evacuations was Metrorail’s inadequate communication, lack of effective troubleshooting, lack of urgency, lack of response of support personnel including MTPD to the disabled train, and lack of focus on the customers’ perspective on the event. Aspects of the inadequate communication included a lack of backup communication systems or awareness of the loss of communication systems to the two cars with the tripped battery system circuit breaker.

Also contributing to the overall outcome and duration of the event was Metrorail’s failure to follow incident command protocols and Metrorail’s SOP 1A, and failure to prioritize customer safety.

Corrective Actions:

Metrorail developed a service bulletin related to procedures for checking battery system circuit breaker terminal bolts. Metrorail conducted fleet inspections during regular periodic inspections, with findings to be submitted for further action. As of October 1, 2021, 738 of the 748 7000 Series railcars had been inspected. 110 of the 738 cars inspected had at least one loose lug. Metrorail stated it tightened a total of 206 lugs on those 110 cars.

Metrorail plans to include checking and resetting circuit breakers in the 7000 Series troubleshooting guide.

Metrorail is considering providing direct railcar troubleshooting from CMNT personnel rather than through ROCC personnel during the time that road mechanics have not yet reached the train's location.

Metrorail conducted a Failure Mode, Effects & Criticality Analysis (FMECA) to determine the impacts of load shedding during emergency events and mitigate high hazard findings to ensure continued communication with customers. (This emerged from WMSC questions related to public address and other communication system functionality during events where power is de-energized)

Metrorail is evaluating methods to move RTRA Supervisors to the scene of an event more quickly.

Metrorail is developing a "playbook" for service disruptions.

Metrorail instituted a reverse stretch train handling procedure to confirm proper coupling prior to further movement.

Metrorail conducted a review of the ROCC RTRA Quality Assurance/Quality Control Group Standard Operating Procedure to identify any gaps in the certification process such as the handling of a failed simulation test.

Metrorail has assigned 911 call responsibilities in the ROCC to the entity (ROCC, ROIC, MOC) that receives the initial information.

Metrorail provided additional training and instruction, including to rail controllers on recovery operations and physical track characteristics such as track grade.

WMSC staff observations:

Metrorail management did not identify or act upon the reports of this runaway train, demonstrating a lack of supervisory oversight and lack of urgency to identify safety events, to determine why safety events occur, and to take all necessary steps to reduce the risk of this event and the other safety issues identified during the response happening again.

This investigation identified multiple training, supervisory oversight and other deficiencies, including deficiencies in compliance with emergency response procedures.

In relation to the ROCC, increasing numbers of controllers is a significant positive step, but it is important to ensure that each is fully trained to perform and is capable of performing their duties. CMNT personnel did not recognize the type of fault or other indications of the true cause of the initial disabled train, and treated the issue as simply a stuck holding brake. MTPD personnel continue to have differing understandings of expectations from their supervision, and otherwise do not respond to events in conformance with procedures. The inadequate MTPD response to board the train and the associated challenges in this event are similar to other events such as the October 2020 train pull-apart near Union Station. In this case, MTPD did not wait for the event to be resolved before insisting on conducting a hot wash, which created additional challenges related to the response. The hot wash identified some key points, but did not identify that

electronic public address announcements were not possible to the trailing portion of the train due to the power failure, and that MTPD could have provided communication by responding to the train.

Metrorail's radio Communications Department downplayed radio communications problems during this event, including those reported by the RTRA Supervisor and by MTPD. As in multiple other reports, this is not an investigative resolution to this issue, but rather is speculation about issues, without any effort to examine and address root causes or offer effective alternatives. If there are battery issues, system malfunctions, outages and dead spots for an important safety system such as the radio network, those need to be identified and addressed.

The conflict between the RTRA Supervisor's statement about what was said related to whether the train was coupled or not, the train operator's description of this conversation, and the CMNT description of this conversation could have been definitively addressed if WMATA had implemented NTSB recommended audio recording devices in operating cabs. The WMSC provided this recommendation to WMATA as part of the recent Railcar Audit. The conversation's nature also could have been captured by existing inward facing cameras if the evidence had been obtained in a timely manner following the event. The mixed understanding of the conversation that did occur suggests a failure to communicate using plain language in terms that all three of these individuals could understand in the same way.

Following this event, after the WMSC required Metrorail to properly identify, report and investigate the event, Metrorail issued and widely distributed a memorandum with incorrect statements, including that WMATA Safety Department employees initially identified this event, and that the event was reported in compliance with reporting requirements.

As part of that immediate response, Metrorail implemented, with no prior planning, hazard analysis or other related steps, an "Incident Management Official" (IMO) in the Rail Operations Control Center. This investigation report prepared by WMATA describes the IMO as having the role of coordinating incident response and assisting the fire liaison; however, WMATA has also offered various other explanations for the position and its responsibilities. Metrorail also moved some aspects of the Office of Emergency Management (OEM) from reporting to MTPD to reporting to the Safety Department. These items are among those being considered more fully in the Emergency Management and Fire & Life Safety Audit, which is being finalized.

In 2020, Metrorail created what it refers to as a third-party safety official (TPSO) in the ROCC who was intended to monitor the safe restoration of power. Restoring power safely is a ROCC responsibility, that is soon expected to include the input of an expanded Power Desk. As demonstrated in this event and in separate events identified by the WMSC in January and February 2021, these TPSOs do not intervene as Metrorail has described they should when power restoration procedures that are in place to assure the safety of workers, riders and first responders are not complied with.

Staff recommendation: Adopt final report.

Washington Metro Area Transit Authority
Department of Safety and Environmental Management (SAFE)

FINAL REPORT OF INVESTIGATION A&I E21123

Date of Event:	3/26/2021
Type of Event:	A-6 (a) Runaway Train: A Class 1 vehicle in motion that is not under the control of an operator regardless of whether the operator is physically on the vehicle at the time.
Incident Time:	1739 hours.
Location:	Rhode Island Avenue Station, Track 1
Time and How received by SAFE:	Upon investigation discovery of a customer evacuation, reported earlier as an I-5 event.
WMSC Notification Time:	April 8, 2021; 1439 *(Initially reported as an O-25 event on 3/26/21 at 1801 hours*)
Rail Vehicle:	Train ID 122 L-7446.7447.7295.7294.**7302.7203**.7385.7384-T
Injuries:	None
Damage:	None
Emergency Responders:	RTRA, CMNT, MTPD and DCFEMS
SMS I/A Number	20210409#92716

Rhode Island Avenue Station – Runaway Train

March 26, 2021

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Abbreviations and Acronyms

AIMS	Advanced Information Management System
ARS	Audio Recording System
BCO	Brake Cylinder Cutout
BIE	Brakes in Emergency
CAP	Corrective Action Plan
C/B	Circuit Breaker
CMNT	Office of Car Maintenance
CMOR	Office of Chief Mechanical Officer
DCFEMS	District of Columbia Fire and Emergency Medical Services
DECO	Department of Engineering Design and Construction
ELO	Emergency Medical Liaison Officer
EM	Emergency Management
EMS	Emergency Medical Services
ER	Event Recorder
FLO	Fire Liaison Officer
FT	Foul Time
IIT	Incident Investigation Team
I/A	Incidents/Accidents
IMO	Incident Management Official
MSRPH	Metrorail Safety Rules and Procedures Handbook
MTPD	Metro Transit Police Department
NOAA	National Oceanic and Atmospheric Administration
OSC	On-scene Commander
OEM	Office of Emergency Management
OUC	Office of Unified Command
PKO	Power Knockout
RIO	Remote Input / Output
ROCC	Rail Operations Control Center
ROQT	Rail Operations Quality Training
RTC	Rail Traffic Controller
RTRA	Office of Rail Transportation
SAFE	Department of Safety and Environmental Management
SMNT	Office of System Maintenance
SOGR	State of Good Repair
SMS	Safety Measurement System
TCD	Train Control Display
TCN	Train Control Network
TPSO	Third Party Safety Official
VMDS	Vehicle Monitoring and Diagnostic System
WMATA	Washington Metropolitan Area Transit Authority
WMSC	Washington Metrorail Safety Commission
WSAD	Warning and Strobe Alarm Device

FINAL REPORT OF INVESTIGATION A&I E21123
Executive Summary

On Friday, March 26, 2021, at 1536 hours, Red Line Train ID 122 Train Operator entered Rhode Island Avenue Station in the Brookland Station's direction. At 1537 hours, Train ID 122 Train Operator serviced and departed Rhode Island Avenue Station and experienced a stuck holding and Brakes-In-Emergency (BIE) condition approximately 1033 feet outside of the Rhode Island Avenue Station platform limits. The Train Operator attempted to troubleshoot the issue prior to contacting the ROCC regarding the event.

Initial Incident

At 1542 hours, the Radio Rail Traffic Controller (RTC) observed via Advanced Information Management System (AIMS) that Train ID 122 [L 7446.7447.7295.7294.7302.7203.7385.7384-T] Track 1 Rhode Island Avenue Station experienced difficulties departing Rhode Island Avenue in the Brookland Station's direction. The Train Operator reported their Train Control Display (TCD) screen showed a BIE condition and a stuck holding brake on cars 7302 and 7303. The Radio RTC instructed the Train Operator to respond to cars 7302 and 7303 and release the cars' holding brakes. The Office of Car Maintenance (CMNT) personnel arrived on the scene at 1553 hours via Train ID 116. The Rail Operations Control Center (ROCC) granted the CMNT Road Mechanic 1 Foul Time (FT) to disembark Train ID 116 and board Train ID 122 to assist. After CMNT personnel aboard attempted multiple troubleshooting efforts unrelated to the underlying cause to move Train ID 122, the Train still was unable to move. The Train Operator reported making announcements to customers during the event as they performed troubleshooting and received instructions from the RTC. As noted below, additional personnel arrived and boarded the train to assist. Metro Transit Police Department (MTPD) personnel arrived at approximately 1555 hours and established a Command Post. A Rail Transportation (RTRA) Supervisor arrived on scene and reported to the Command Post to assist with troubleshooting via the radio.

First Customer Self Evacuation (35 minutes into the incident)

Based on Audio Recording System (ARS) playback, at approximately 1617 hours, the RTRA Supervisor reported that a customer exited the disabled consist and was on the roadway, walking in the direction of Rhode Island Avenue Station. At 1618 hours, CMNT personnel stated the need to perform a recovery. The RTRA Supervisor informed the ROCC that the customer had safely arrived at the Rhode Island Avenue platform after being in the roadway for approximately 90 seconds. The ROCC did not de-energize third rail power for the first customer on the roadway.

Initial Recovery Effort (50 minutes into the incident)

At 1632 hours, the RTRA Supervisor on the platform contacted the Radio RTC and requested permission to utilize Train ID 123 as a recovery train to recover Train ID 122. At approximately 1634 hours, the Radio RTC contacted the Train Operator on Train ID 123 and gave the Train Operator a permissive block of no closer than 10 feet of Train ID 122. The Train Operator on Train ID 123 reported they could not move their train due to observing a second customer on the roadway.

Second Customer Self Evacuation (54 minutes into the incident)

At 1636 hours, ROCC de-energized third rail power at Chain Marker (CM) B1 166+00. At 16:40 hours, the RTRA Supervisor confirmed that third rail power was de-energized at Chain Marker (CM) B1 166+00. The RTRA Supervisor also stated they confirmed that the second customer had arrived at the platform without injury. At 1642 hours, MTPD requested a headcount of the customers aboard the train and the Radio RTC appointed the RTRA Supervisor as the On-Scene Commander (OSC).

Emergency Response (75 minutes into the incident)

According to the Office of Unified Command (OUC), at 1657 hours, a pregnant passenger aboard the disabled train notified DC 911 they were en route to the hospital and were stuck on a Red Line Train. The District of Columbia Fire and Emergency Medical Services (DCFEMS) 911 call dispatcher transferred the call to Metro Transit Police Department (MTPD). At 16:59:22 hours, the ROCC Fire Liaison Officer (FLO) notified DCFEMS FLO at OUC via phone and reported:

"I need an assignment for a stranded train at Rhode Island Avenue Station. I got one requesting EMS, and a train stuck a couple of hundred feet from the platform on an elevated structure. 109 customers onboard, one person requesting EMS right now, and they are in the process of moving the train back to the platform right now."

At 17:01:04 hours (per AIMS), the ROCC restored third rail power on Track 1 Rhode Island to allow Train ID 123 to perform the recovery. The RTC did not make power restoration announcements before re-energizing third rail power. At 17:03:30 hours, MTPD contacted DCFEMS OUC and requested an ambulance to Rhode Island Avenue Station for a woman who was 12 weeks pregnant onboard the disabled train. At 17:03:36 hours, the ROCC FLO contacted the OUC and notified them of two people on the train requesting medical assistance, which was a mixed report.

At 17:04:38 hours, DCFEMS Medical Local requested an Obstetrician (OB) at Rhode Island Avenue Station. Ambulance 6 was dispatched. ROCC FLO then called the DCFEMS FLO and said, “They just dispatched an ambulance for an OB. The train is not at the station; it’s on the tracks.” According to the DCFEMS FLO, they just reported to work and received the event updates from the ROCC FLO. At 17:05:30 hours, the RTRA Supervisor radioed ROCC and noted, “Transit wants that train; they say someone’s injured on the train.” The Radio RTC did not respond to the RTRA Supervisor’s radio transmission.

At approximately 1707 hours, the Radio RTC instructed Train ID 123 to proceed to no closer than 10 feet of Train ID 122 under a permissive block. The On-scene Commander (OSC) notified the Radio RTC they were going to proceed to no closer than two feet of Train ID 123 to allow the customers to exit Train ID 122 and board Train ID 123. At 1717 hours, the Train Operator aboard Train ID 122 reported their train was clear of all customers. A total of 109 customers were safely escorted to the platform without incident.

During the above-described evacuation activities, the DCFEMS Fire Special Ops Battalion Chief contacted the ROCC FLO at 1711 hours. The ROCC FLO reported:

“*A disabled train just passed Rhode Island Avenue Station, Track 1 for about an hour. ROCC attempted to do a couple of different things; they are in the process of moving a recovery train to the disabled train and couple to it, then bring it back to the platform. A couple of different (injury) reports, one with anxiety, a patient with a laceration, and a pregnant female. I do not know how*

many exact patients. It sounds like you guys will not have to go to the roadway. I think they will be able to move the train back, and it may just be basically an EMS call."

At 17:12:37 hours, the DCFEMS dispatched "Local Alarm Engine 26, Battalion Chief Spec Ops, Squad 1, Squad 3, EMS7, Medic 24, Ambulance 12, and Safety Battalion Chief. Respond for Metro Elevated Rescue at Rhode Island Avenue Station Tac Channel 0B7."

Runaway Event (117 minutes into the incident)

Based on the Vehicle Monitoring and Diagnostic System (VMDS) data, the RTRA Supervisor, now serving as the recovery Train Operator of Train ID 123, accidentally coupled to the disabled Train (Train ID 122) while on approach before the final evacuation strategy described above. This occurred before CMNT personnel cut out trucks on the disabled consist. The recovery Train Operator activated the uncouple switch [on lead car 7438]. According to the recovery Train Operator [who was the original RTRA Supervisor and On-Scene Commander (OSC)], they uncoupled Train ID 123 from Train ID 122 because the initial plan was to move the train back to the platform limits to evacuate the customers. This move did not occur as the trailing rail cars were still within the platform limits, allowing MTPD Officers to board and evacuate the customers directly to the platform without moving the recovery train.

The following rail car key sequence occurred by the RTRA Supervisor, now serving as the recovery Train Operator. This sequence was followed to confirm the trains were uncoupled.

1. Keyed down the console on car 7438 (recovery train);
2. The Operator moved to the disabled train and keyed it up and back down;
3. The Operator then returned to the recovery train and keyed it back up.

At 17:39:14 hours, VMDS data detected motion from the disabled train after CMNT personnel cut out the last truck. The VMDS data shows the rear truck was cut back in within 31 seconds after the VMDS detected train movement. The disabled train came to a complete stop after traveling 137 feet, 57 seconds after the initial movement detection. The Train Operator of the recovery train then re-coupled to the disabled train, and CMNT personnel cut all trucks back out. RTRA personnel subsequently transported the affected consist to Shady Grove Yard for post-incident investigation without further incident.

Initial Runaway Reporting

During the event, ROCC re-blocked (i.e., renumbered) the disabled train ID from 122 to 722 and the recovery train ID from 123 to 724.

While attempting to recover the disabled train, Train ID 724 was not coupled properly to Train ID 722 before cutting trucks out in the disabled consist, resulting in the disabled train rolling 137 feet during the recovery processes. The original recovery Train Operator, CMNT Mechanic 2, and RTRA Supervisor communicated via radio that the train rolled. The CMNT Road Mechanic noted trucks had to be cut back in because the train was rolling free. Additionally, the original recovery Train Operator specified via radio that the disabled train (Train ID 722) moved away from the stationary recovery train (Train ID 724). The RTRA Supervisor informed the Radio RTC Train ID 724 and Train ID 722 were not coupled after the runaway train event. No injuries were reported as a result of this event.

Railcar post-incident investigation

The Office of Chief Mechanical Officer (CMOR) Incident Investigation Team (IIT) analyzed the VMDS. CMOR IIT determined Car 7303 Battery System Circuit Breaker (C/B) tripped, disabling the train that led to a two-customer self-evacuation to the Rhode Island Avenue Station platform and controlled re-blocked rescue train evacuation of 109 customers.

Probable Cause

The initial probable cause of the incident was that the Battery System C/B in Car 7303 tripped, disabling Train ID 122, which did not relay status information to the Train Console Display (TCD) console that a C/B was tripped in the respective car due to the system circuit configuration. The TCD faults display would reflect a dead/dark car (total power loss), which would trigger the BIE and apply the holding brake. The holding brake would not release unless the Battery System C/B condition was resolved and subsequently indicated as a stuck holding brake.

Train ID 122 Train Operator indicated there were no C/B's tripped on their lead car to the Radio RTC. Upon becoming aware of the initial issue, ROCC began troubleshooting efforts with RTRA personnel and later with CMNT Road Mechanic personnel for the initially reported stuck holding brake condition. The extended troubleshooting effort, lack of support personnel and customer communication led to two customer self-evacuations to the Rhode Island Avenue Station platform and a controlled evacuation of 109 customers to the rescue train [Train ID 724].

Contributing Factors

Announcements were not broadcasted on the failure cars [7302-7303] as a result of losing battery power when the Battery System C/B in Train ID 122 tripped. The Train Operator spent significant time walking through the 8-car consist to update customers, providing a headcount to ROCC, and troubleshooting the train; these activities further contributed to the two-customer self-evacuation event.

Although it was initially reported to the Radio RTC that there were no C/Bs tripped, CMOR IIT post-incident inspection revealed the battery system circuit breaker was in a tripped state.

MTPD did not respond to the train as called for by procedures and by Metrorail's own commitments following other events such as the October 2020 pull-apart; the lack of a correct emergency response support dispatch to the disabled train further contributed to the self-evacuation. DCFEMS received notification of a stranded train on an elevated structure with "a pregnant passenger aboard requesting EMS… from a train stranded [1000] feet outside the platform limits." However, DCFEMS did not dispatch a full complement of support until 15 minutes later, after the ROCC FLO contacted OUC FLO and corrected a dispatch for an ambulance. This dispatch occurred six minutes prior to the customers being safely evacuated to the platform.

The RTRA Supervisor accidentally coupled and then advertently uncoupled the incident train to the disabled train while preparing to evacuate customers without notifying the Radio RTC of their actions. During the recovery of the disabled train, the CMNT Road Mechanic did not verify that the recovery train, Train ID 724 was coupled to Train ID 722 before cutting out the trucks in the disabled consist, resulting in the disabled train rolling 137 feet during the recovery processes. The trains were on a section of track with a designed grade of -1.72% for 44 feet, which contributed to the disabled train rolling after the trucks were cut out.

The trains appeared to be coupled because the uncoupled recovery train was positioned behind the disabled train on the downgrade. The proximity switch on the front coupler indicated a rail vehicle was present, leading CMNT Road Mechanic 2 to believe the trains were coupled due to

the TCD indicating a coupled condition. The RTRA Supervisor communicated with the CMNT Road Mechanic that the trains needed to be coupled and verified before cutting trucks. This verification was not performed based on the TCD screen indication noted above.

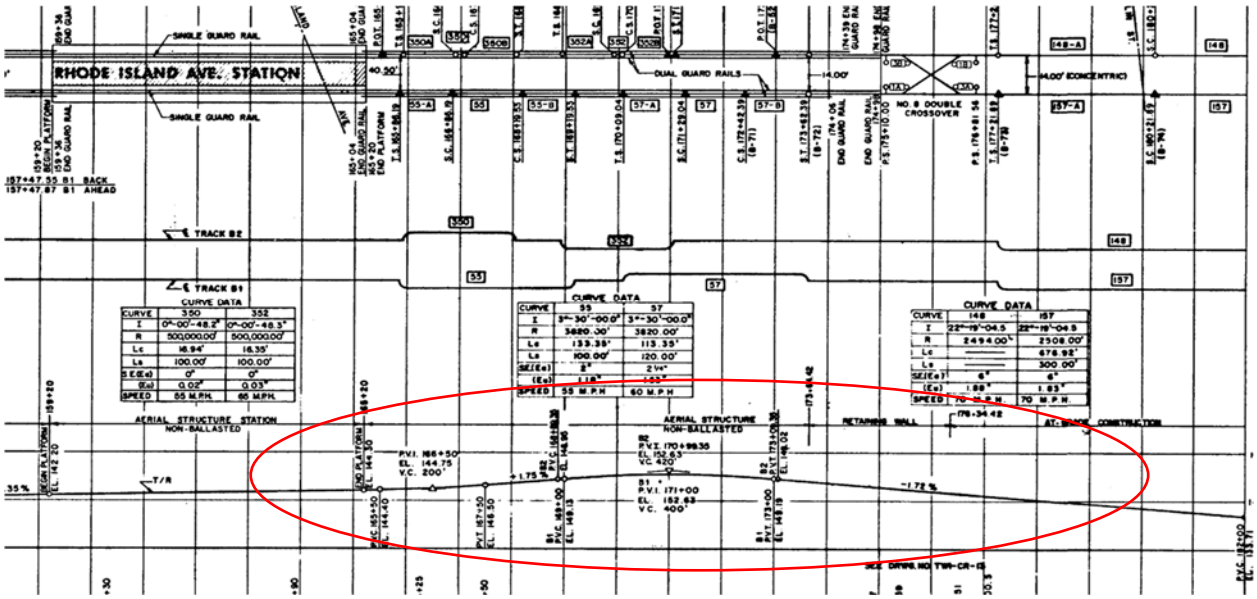
MTPD officers on scene instructed the RTRA Supervisor to participate in a Hot Wash before: 1) the recovery operations were complete, and 2) the incident train was prepared for transport. The RTRA Supervisor was engaged in this Hot Wash while CMNT Road Mechanic 1 and 2 prepared Train ID 722 and Train ID 724 for transport. MTPD did not allow the RTRA Supervisor to leave when they heard reports of the train rolling free. In addition, two RTRA Supervisors arrived on location to support this event; however, one RTRA Supervisor was on the trailing end of the recovery train, preparing to move the consist back to the platform to offload the customers. The other RTRA Supervisor responsibilities and duties included: performing as the OSC, Forward Liaison, and recovery Train Operator; confirming third rail power was de-energized, providing updates to ROCC; incident planning; and participating in the Hot Wash. The second dispatched RTRA Supervisor arrived on-scene and assisted with the on the recovery train operation by acting as a Train Operator on the trailing end of Train ID 123.

A review of the Radio RTC tenure and training revealed the RTC had six months of experience as a certified RTC at the time of the event. The Radio RTC experienced difficulties multi-tasking during the incident, including not responding to other trains and field personnel. The difficulties multitasking was also recorded in previous instances by ROCC management during OJT training. The Radio RTC failed their first RTC Certification Practical administered on February 22, 2021, due to not being able to complete the simulations in the allotted parameters. One of the simulations was 7000 Series Isolation Procedures for Self-Recovery. A review of the second RTC Certification Practical on February 26, 2021, indicated that two of the three simulations were identical to the initial RTC Certification Practical, except for the 7000 Series Isolation Procedures for Self-Recovery, which was substituted with a 7000 series Doors Closed Failure. Note that, although not specifically applicable to initial RTC testing, RTCs are not allowed to be re-certified using the same simulations as initially tested. The RTC controller passed their certification with 100 percent on their second attempt. RTCs are only allowed two attempts to pass with a grade of 85 percent or above before being dropped from the RTC training course.

Incident Site

Rhode Island Avenue Station, Track 1

- Outside Station
- Point of Vertical Tangent Chain Marker (CM) B1 173+00
- Track Grade of -1.72% from CM B1-173+00 to CM B1-133+00
- Elevation 152.63 feet at CM B1-173+00 to 133.00 feet at CM B1-133+0033.71
- 44-foot grade
- Ballast Track



Field Sketch/Schematics

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 Process and Methods

Upon identifying the runaway train incident at Rhode Island Avenue Station on March 26, 2021, SAFE launched a cross-functional investigation. SAFE team members worked with relevant WMATA subject matter experts to review the incident's facts and data.

Investigation Methods

The investigative methodologies included the following:

- Physical Site Assessment

- Formal Interviews – SAFE interviewed nine individuals as part of this investigation. Interviews included persons present at, during, and after the incident, those directly involved in the response process, and managers responsible for the procedure. SAFE interviewed the following individuals:
    - Two CMNT Mechanics
    - RTRA Supervisor
    - The Recovery Train Operator
    - The Disabled Train Operator
    - Two ROCC Radio RTCs
    - ROCC Buttons RTC
    - ROCC Assistant Superintendent

- Informal Interviews – Collected through conversations with individuals during the investigation to provide background and supporting information.

- Documentation Review – A collection of relevant work history information and process documentation contained in Metro systems of record. These records include:
    - Employee Training Procedures & Records
    - Metro Safety Rules and Procedures handbook (MSRPH)
    - National Oceanic and Atmospheric Administration (NOAA) data
    - Office of Chief Mechanical Officer (CMOR) Incident Investigation Team (IIT) data
    - Office of Car Maintenance (CMNT) Periodic Inspection review
    - Power Restoration
    - Rail Operations Control Center (ROCC) incident report
    - Office of Rail Transportation (RTRA) investigative findings
    - ROCC RTRA Quality Assurance/Quality Control Group Standard Operating Procedure

- System Data Recording Review – A collection of information contained in Metro Data Recording Systems and outside recording systems. This data includes:
    - Audio Recording System (ARS) Playback phone, Ambient, and radio communications to include Advanced Information Management System (AIMS)
    - Audio recordings of District of Columbia Fire and Emergency Medical Services (DCFEMS) Channel 1 (via OpenMHz)
    - District of Columbia Office of Unified Command (OUC) timeline
    - Closed Circuit Television (CCTV)
    - Vehicle Monitoring and Diagnostic System (VMDS) data

Investigation

On Friday, March 26, 2021, at 1542 hours, the Radio RTC observed via AIMS Train ID 122 [L-7446.7447.7295.7294.7302.7203.7385.7384-T] experiencing difficulties departing Rhode Island Avenue Station. The Radio RTC contacted the Train Operator and attempted to ascertain if the Train was having any issues. The Train Operator reported that their TCD screen was showing the fault was on cars 7302 and 7303. The Train Operator said that there were no tripped C/B's and that the Train was unable to recharge after troubleshooting efforts. At 1544 hours, MTPD contacted the Button RTC for a status report of the disabled train and notified the Button RTC that they were dispatching units for assistance. At approximately 1546 hours, the Radio RTC communicated with CMNT Road Mechanic 1 and Train ID 116 to assist with transport to the down train at Brookland Station.

At 1548 hours, the Radio RTC instructed the Train Operator to respond to cars 7302 and 7303 and release the holding brakes on both cars. At 1552 hours, the OEM notified the ROCC FLO of a disabled train. Prior to this notification, the ROCC FLO did not receive any communication from ROCC personnel regarding this event. CMNT arrived on the scene at 1553 hours and was given FT to board Train ID 122 to assist. At approximately 1554 hours, the Train Operator reported that they released the holding brake on cars 7302 and 7303. At approximately 1557 hours, the Train Operator said they were cutting trucks on cars 7302 and 7303 and heading to the lead car to activate the Power Knockout (PKO) C/B's. At 1600 hours, the Train Operator reported that they were in the lead cab and activated PKO. Radio RTC re-blocked Train ID 122 to Train ID 722 and permitted them to move at no greater than 45 mph to Brookland Station, Track 1, after conducting a rolling brake test. CMNT Road Mechanic 1 aboard the Train ID 122 reported that the train was still unable to move after activating PKO. At 1610 hours, CMNT personnel said that they were on the train's trailing end attempting to get brakes off indication on the console. At 1613 hours, the Train Operator reported they had cut trucks on cars 7302 and 7303, and their consist was keyed

down, which applied the holding brakes through the entire consist. CMNT requested the Train Operator remain in the lead car and key up the train while they attempted to verify the trucks were cut out on cars 7302 and 7303.

At approximately 1617 hours, an RTRA Supervisor on the scene reported a customer was on the roadway in the direction of Rhode Island Avenue Station. At 1618 hours, CMNT personnel said that they needed to perform a recovery. The RTRA Supervisor reported that the customer had arrived safely at the Rhode Island Avenue Station platform. At 1626 hours, CMNT requested that the Train Operator key down the train while they attempted to charge the consist from car 7302. CMNT personnel reported that they were in the process of cutting trucks on the two trailing cars.

At 1632 hours, the RTRA Supervisor on the platform contacted the Radio RTC and requested to recover Train ID 122 with Train ID 123 located on the platform at Rhode Island Avenue Station, which was offloaded. At approximately 1634 hours, the Radio RTC contacted the Train Operator on Train ID 123 and gave the Train Operator a permissive block to no closer than 10 feet of Train ID 122. The Train Operator on Train ID 123 reported that they were unable to move their train due to another customer on the roadway. At 1636 hours, ROCC de-energized third rail power, the Radio RTC instructed the Train Operator aboard Train ID 722 to apply a hand brake.

At 1638 hours, the Radio RTC instructed the RTRA Supervisor to hot stick third rail power to verify power was de-energized. The Radio RTC notified the Train Operator aboard now Train ID 722 that MTPD was being dispatched to the down train to evacuate the customers. At approximately 1640 hours, the RTRA Supervisor confirmed that third rail power was de-energized at Chain Marker (CM) B1-166+00. At 1642 hours, MTPD requested a headcount of the customers aboard the train and the Radio RTC appointed the RTRA Supervisor as the On-Scene Commander (OSC). At 1648 hours, the Radio RTC granted the OSC, MTPD, and CMNT Road Mechanic 2 permission to enter the roadway to access Train ID 722. At approximately 1653 hours, the RTRA Supervisor reported that MTPD requested that the customers remain on the Train and ROCC utilize Train ID 123 to perform a recovery.

At 1701 hours, third rail power was restored on Track 1 Rhode Island to allow Train ID 123 to perform the recovery. At 17:03:30 hours, MTPD contacted DCFEMS OUC and requested an ambulance to Rhode Island Avenue Station for a woman who was 12 weeks pregnant onboard the disabled train. At 17:03:36 hours, the ROCC FLO contacted the OUC and notified them of two people on the train requesting medical assistance. This report was later determined to be inaccurate, which was likely due to mixed reports from responding personnel.

At 17:04:38 hours, DCFEMS Medical Local requested an OB at Rhode Island Avenue Station. Ambulance 6 was dispatched. ROCC FLO then called the DCFEMS Emergency Medical Liaison Officer (ELO) and said, “They just dispatched an ambulance for an OB. The train is not at the station; it’s on the tracks.” The DCFEMS ELO position is designed to add a critical level of operational oversight and medical expertise in an effort to facilitate deployment of resources and coordinate responses to requests for emergency assistance as received by the OUC. According to the DCFEMS ELO, they just reported to work and received the event updates from the ROCC FLO. At 1705 hours, the RTRA Supervisor reported that a customer was injured aboard Train ID 722 and requested Train ID 123 to perform the recovery. At approximately 1707 hours, the Radio RTC instructed Train ID 123 to proceed to no closer than 10 feet of Train ID 722 under a permissive block. The RTRA Supervisor notified the Radio RTC that they were going to proceed to no closer than two feet of Train ID 123 to allow the customers to exit Train ID 722 and board Train ID 123. At 1717 hours, the Train Operator aboard Train ID 722 reported that their train was clear of all customers. At 1721 hours, the RTRA Supervisor said that 109 customers were safely on the platform, and DCFEMS was on the scene.

At 1730 hours, CMNT reported to the ROCC that Train ID 123 was successfully coupled to Train ID 722 and they were in the process of cutting out trucks on Train ID 722. At 1738 hours, CMNT notified the Radio RTC that all the trucks were cut. At 1739 hours, the RTRA Supervisor reported to the Radio RTC that the train was moving. CMNT reported that they needed to reapply the brakes in Train ID 722. The Radio RTC attempted to confirm if Train ID 123 coupled to Train ID 722. CMNT personnel went to verify if the two consists were coupled. At 1740 hours, the Train Operator on recovery Train ID 123 reported that their train was not properly coupled to the down train. Upon investigation, it was confirmed that Train ID 123 did not achieve a proper mechanical couple to make the add to Train ID 722 before the trucks were cut out. The Radio RTC instructed CMNT personnel to safely couple the trains and report the car numbers coupled. At 1747 hours, the RTRA Supervisor reported that cars 7384 and 7438 were coupled. At approximately 1752 hours, CMNT said the trucks were cut out on Train ID 722. The Radio RTC instructed recovery Train ID 123 to perform a rolling test to verify the train was rolling freely under a permissive block.

Normal service resumed at Rhode Island Avenue Station, Track 1. Train ID 722 was transported to Shady Grove Yard for a post-incident inspection at 17:53 hours.

Chronological ARS Timeline

A review of ARS playback, i.e., WMATA phone and radio communications to include AIMS playback, Open MHz, and OUC data revealed the following:

Time	Description
15:36:00 hrs.	Train ID 122 Train Operator: Entered and serviced Rhode Island Avenue Station. [AIMS]
15:37:46 hrs.	Train ID 122 Train Operator experienced a stuck holding brake and BIE condition 1033 feet outside Rhode Island Avenue Station platform limits. [VMDS]
15:41:15 hrs.	Radio RTC: Train ID 122 Train Operator Track 1 in approach to Brookland do the best you can with your schedule please over." [Ops 1 Radio]
15:41:32 hrs.	Train ID 123 Train Operator: Requested permission from ROCC to enter stop and proceed mode to berth at Rhode Island Avenue Station properly. Radio RTC: Instructed Train ID 123 to standby speed commands would be coming shortly. [Ops 1 Radio]
15:42:25 hrs.	Radio RTC: Train ID 122 in approach to Brookland. Are you okay?" [Ops 1 Radio]
15:42:41 hrs.	Train ID 122 Operator: Responded to the Radio RTC regarding their Train not moving; the Train Operator reported a stuck holding brake and BIE on 7302 and 7303. [Ops 1 Radio]
15:42:55 hrs.	Button RTC: Notified the ROCC Assistant Superintendent of Train ID 122 experiencing a stuck holding brake condition on Track 1 in the interlocking near Rhode Island Avenue Station. [Phone Call]
15:43:02 hrs.	Train ID 122 Train Operator: Keyed down and up, moved the Master Controller and held it for 3-5 seconds. Train ID 122 recycled the holding brake lever. No change. [Ops 1 Radio]
15:43:07 hrs.	Button RTC: Notified CMNT desk of Train ID 122 experiencing a stuck holding brake condition Track 1 in the interlocking at Rhode Island Avenue Station. CMNT Desk: Notified the Button RTC the stuck brake was on 7302 and 7303. [Phone Call]

Time	Description
15:43:47 hrs.	Radio RTC: Train ID 122 Train Operator: Did you Attempt to recharge? [Ops 1 Radio]
15:43:52 hrs.	Train ID 122 Train Operator: "I did attempt to recharge; the console was still indicating a stuck holding brake and a BIE." [Ops 1 Radio]
15:43:59 hrs.	Radio RTC: Requested if Train ID 122 had any tripped C/B's. [Ops 1 Radio]
15:44:06 hrs.	Train ID 122 Train Operator reported no C/B's tripped. [Ops 1 Radio]
15:44:35 hrs.	MTPD: Contacted the Button RTC to confirm the location of the disabled train and notified the Button RTC that they were sending units to assist. [Phone Call]
15:43:48 hrs.	Button RTC: Notified ROIC of Train ID 122 experiencing a stuck holding brake condition [Phone Call]
15:44:52 hrs.	Train ID 122 Train Operator: Reported the TCD screen reflected stuck holding brake on 7302-7303, BIE, Zero Speed faults, and HVAC on. [Ops 1 Radio]
15:46:10 hrs.	Radio RTC: Communicated with CMNT Road Mechanic 1 and Train ID 116 to assist with transport to the down train at Brookland Station. [Ops 1 Radio]
15:46:44 hrs.	Radio RTC: Contacted Train ID 122 Train Operator to ascertain if Brookland platform was clear. [Ops 1 Radio]
15:46:47 hrs.	CMNT Desk: Called Buttons RTC and stated, "I know you said a BIE and Stuck Holding brake, but if they key down and cut the trucks out on 7302 and 7303, they should be able to get brakes off. Make sure they check their air pressure." [Phone Call]
15:46:53 hrs.	Train ID 123 Train Operator: Notified the Radio RTC there was enough room for their train to properly berth at Brookland Station platform [Ops 1 Radio]
15:47:01 hrs.	Radio RTC: Granted Train ID 122 a permissive block to properly berth at Rhode Island Avenue Station Track 1, service, and standby. [Ops 1 Radio]
15:48:38 hrs.	Radio RTC: Instructed the Train Operator to release the holding brake on cars 7302 and 7303. [Trouble shooting efforts yielded no results] [Ops 1 Radio]
15:48:40 hrs.	Radio RTC: Instructed Train ID 122 to make good announcements to their customers. [Ops 1 Radio]
15:48:49 hrs.	Radio RTC: Instructed Train ID 122 Train Operator to cut out the holding brake on 7302-7303. [Ops 1 Radio]
15:52:02 hrs.	WMATA OEM: Contacted the ROCC FLO and stated, what's going on? Do we have a disabled train somewhere? ROCC FLO: "I knew nothing about it; I am heading over to speak with the ROCC Assistant Superintendent now. The first time I heard about it was on the radio." WMATA OEM: Me too. [Phone Call]
15:53:02 hrs.	Radio RTC: Granted CMNT Road Mechanic 1 permission to disembark Train ID 116 without FT to cross over from Track 2 to Track 1 and board disabled train. ** Note: Train ID 116 was adjacent to track 1. [Ops 1 Radio]

Time	Description
15:53:14 hrs.	WMATA OEM: They're saying they're about to move it to Brookland Station. It's got people on it, but no one in distress. It looks like they are pulling it in right now, is 117 on Track 2? ROCC FLO: They didn't tell me. WMATA OEM: Or is it the other one. ROCC FLO: I don't remember. WMATA OEM: I'll keep looking at the maps a see what happens. ROCC FLO: Okay [Phone Call]
15:54:35 hrs.	Train ID 122 Train Operator: Cut out the holding brake on 7303-7302. [Ops 1 Radio]
15:56:39 hrs.	Train ID 122 Train Operator: Requested permission to cut trucks on 7303-7302. [Ops 1 Radio]
15:57:34 hrs.	Train ID 122 Train Operator: Notified the Radio RTC trucks were cut out on 7303-7302 and requested permission to activate PKO. [Ops 1 Radio]
15:59:13 hrs.	VMDS data shows PKO activated.
16:00:18 hrs.	Train ID 122 Train Operator: Notified Radio RTC PKO bypass activated and requested permission to move. Radio RTC: Granted 122 permission to move under a permissive block to Brookland Station Track and offload with speed not to exceed 45 Mph. [Ops 1 Radio]
16:00:53 hrs.	Radio RTC: instructed Train ID 122 Train Operator to re-block to Train ID 722 and perform a rolling free, rolling brake test. [Ops 1 Radio]
16:01:43 hrs.	Radio RTC: Train ID 722, where are you moving to? [Ops 1 Radio]
16:03:04 hrs.	Train ID 722 Train Operator: Attempted to take a point of power and unable to get brakes off. [Ops 1 Radio]
16:03:08 hrs.	CMNT Road Mechanic 1: Notified the Radio RTC they were attempting to get brakes off to no avail. [Ops 1 Radio]
16:03:19 hrs.	Radio RTC: "Has PKO been activated? Is that affirmative?" [Ops 1 Radio] CMNT Road Mechanic 1: Confirmed PKO activated.
16:03:32 hrs.	Radio RTC: authorized Train ID 722 to activate ATP bypass if necessary. [Ops 1 Radio]
16:04:14 hrs.	CMNT Road Mechanic 2: Contacted the Button RTC and stated, make sure the train is not BIE on the back end. Make sure they charge up. [Phone]
16:05:49 hrs.	Train ID 722 Train Operator: Notified the Radio RTC that ATP was Cutout on 7303 and 7302 to isolate." [Ops 1 Radio]
16:06:13 hrs.	Train ID 722 Train Operator: Notified the Radio RTC ATP cutout, and they were still unable to move. [Ops 1 Radio]

Time	Description
16:07:50 hrs.	Radio RTC: "Train ID 722 are your customers, okay? Anyone need medical?" Train ID 722 Train Operator: Everything is good at this time; no one needs medical attention." Radio RTC: Acknowledged. [Ops 1 Radio]
GAP	During this three-minute gap, the Radio RTC adjusted schedules, communicating with Train Operators and performing regular duties during this emergency. Throughout the event, this occurs.
16:10:23 hrs.	CMNT Road Mechanic: Attempted to get brakes off on the opposite end of the consist. [Ops 1 Radio]
16:10:23 hrs.	Button RTC: Notified ROIC Train ID 126 will be the first train single tracking from NoMa Gallaudet U to Fort Totten. [Phone Call]
16:10:56 hrs.	Radio RTC: Instructed the Train Operator to hit the white light acknowledgment. Train ID 722 Train Operator notified the Radio RTC it was not illuminated. [Ops 1 Radio] Note: This allows the Train Operator to get a brake released during a white light condition. A white light condition prevents the train from getting a brakes off indication.
16:12:15 hrs.	CMNT Road Mechanic: Requested to cut PKO. ROCC granted permission. [Ops 1 Radio]
16:12:54 hrs.	Radio RTC: Attempted to ascertain if Train ID 122 Train Operator was keyed down or up when trucks were cut out. [Ops 1 Radio]
16:13:25 hrs.	CMNT Road Mechanic 1: Notified the Radio RTC trucks were cut back out, and please have the Train Operator key up and go. [Ops 1 Radio]
16:17:29 hrs.	RTRA Supervisor: Reported customer on the roadway in the direction of Rhode Island Avenue Station. [Ops 1 Radio] Note: There is no recorded audio of the RTRA Supervisor being dispatched. Their statement indicates that they arrived on scene at approximately 1600 hours.
16:18:09 hrs.	CMNT Road Mechanic: Notified the Radio RTC they needed to conduct a self-recovery. [Ops 1 Radio]
16:22:27 hrs.	Train ID 722 Train Operator: No ADC illuminated; personnel aboard had to verify and close the door the customer self-evacuated from. [Ops 1 Radio]
16:26:07 hrs.	CMNT Road Mechanic: Requested the Train Operator to key down so they could attempt to recharge up from 7302. [Ops 1 Radio]
16:29:44 hrs.	WMATA OEM: Hey, should I be at Brookland or Rhode Island? Fire Liaison Officer: Rhode Island. I am sorry, that is my fault. Are you over at Brookland? WMATA OEM: Yes, so the train is closer to Rhode Island? ROCC FLO: Yes, I am sorry. WMATA OEM: Okay, let me go on down there. [Phone Call]
16:31:14 hrs.	CMNT Road Mechanic: Cutting trucks [Ops 1 Radio]
16:32:42 hrs.	RTRA Supervisor: Requested permission to utilize Train ID 123 as a recovery train. [Ops 1 Radio]
16:33:06 hrs.	RTRA Supervisor: Advised ROCC to use the recovery train at Rhode Island Avenue Station. [Ops 1 Radio]
16:34:14 hrs.	Radio RTC: Instructed the Train Operator of Train ID 123 to close in no closer than 10 feet. of the disabled train. [Ops 1 Radio] Recovery Train Operator: Reported they could not move their train due to customers located on the roadway. [Ops 1 Radio]

Time	Description
16:36:00 hrs.	Third rail power de-energized Track 1 Rhode Island Avenue Station. [AIMS]
16:38:08 hrs.	RTRA Supervisor: Confirmed third rail power was de-energized at CM B1 166+00. [Ops 1 Radio]
16:38:14 hrs.	WMATA OEM: Did I screw that up? I do not know why I went to Brookland. ROCC FLO: I don't know, who knows? Are you at Rhode Island? WMATA OEM: No, I am pulling in now. ROCC FLO: Bring a WSAD up there and make sure they put them down. WMATA OEM: Just tell them the OEM unit is 30 seconds out right in front of the station. I will bring up two WSADS. ROCC FLO: We prompted them (ROCC) to call the Fire Department, and they said no. WMATA OEM: How far is it? How many people? ROCC FLO: It's about 100 people. I don't know a passenger count, but it's not far at all. [Phone Call]
16:36:17 hrs.	Button RTC: Received a call from an RTRA Supervisor asking, "Can we recover that train or not?" Button RTC: We can't move anything; we have the power down right now. They told us to bring power down so MTPD can rescue those customers. RTRA Supervisor: What do you want to do now? Button RTC: I don't even know RTRA Supervisor: Okay. [Phone Call]
16:42:56 hrs.	Radio RTC: Appointed the RTRA Supervisor as the OSC. (This was the first OSC assignment recorded from ROCC). MTPD requested a total headcount of personnel on the disabled train. [Ops 1 Radio]
16:44:48 hrs.	Button RTC: Requested RTRA Supervisor, Train ID 722, and CMNT Road Mechanic 1 for a full headcount of passengers. [Ops 1 Radio]
16:47:12 hrs.	Train Operator: Reported a total of 109 customers aboard. [Ops 1 Radio]
16:57:41 hrs.	A pregnant passenger aboard the disabled train notified DC 911 that they were stuck on a Redline train while en route to the hospital and WMATA would not let her off the train. DC 911 transferred the call to MTPD. [OUC]
16:57:26 hrs.	MOC Assistant Superintendent: Notified MOC Power desk that third rail power was about to be restored. [Phone Call]
16:57:37 hrs.	Button RTC OPS 3: Received notification from ROCC personnel third rail power was about to be energized Track 1 between NoMa Gallaudet and Brookland Stations. [Phone Call]
16:59:10 hrs.	Button RTC received a call from an RTRA Supervisor who stated, "you heard me about the power, right?" Button RTC: "Yeah, Power is about to come up. We know we have a whole process with that now. This is why we didn't want to bring the power down. But okay. We are going to be bringing it up in a minute." WMATA personnel: Stated Okay. [Phone Call]
16:59:22 hrs.	ROCC Fire Liaison Officer: Notified DCFEMS ELO at OUC via phone and reported, "I need an assignment for a stranded train at Rhode Island Avenue Station. I got one requesting EMS, and a train stuck a couple of hundred feet from the platform on an elevated structure. 109 customers onboard, one person requesting EMS right now, and they are in the process of moving the train back to the platform right now." [Phone Call}

Time	Description
17:00:01 hrs.	CMNT Road Mechanic 2: Contacted the Button RTC and asked the Button RTC, “what is the process we are about to do now?” Button RTC: We are getting ready to restore third rail power and use the Train at Rhode Island to recover it. Do we need to recover it? CMNT Road Mechanic 2: “I don’t know because we don’t have any power.” Button RTC: “Okay, well, when we restore power, you can give a quick update, and we will go with whatever you say. Once we restore the third rail power, we’ll let you know. We are getting ready to restore third rail power now.” CMNT Road Mechanic 2: Acknowledged the Button RTC. [Phone Call] ** Note: Ambient audio indicates the Button RTC told the Radio RTC to “come on.”
17:01:04 hrs.	Third rail power restored Track 1 Rhode Island Avenue. [AIMS] **Note: power announcements were not made on OPS 1 to restore third rail power. All other notifications were made.
17:03:30 hrs.	MTPD: Ambulance to Rhode Island Avenue Station for a woman who is 12 weeks pregnant, on the train, and the train is stopped. [Phone call to OUC]
17:03:36 hrs.	ROCC FLO: Contacted the OUC and notified them of the mixed report of two patients on the train requesting medical assistance.
17:04:58 hrs.	DCFEMS: Medical Local at Rhode Island Avenue Station for an OB. Ambulance 6 was dispatched. [Channel 1 Open MHz]
17:05:08 hrs.	RTRA Supervisor: Central, 18 at Rhode Island. We still holding at Rhode Island Track 1, or are we ready to recover the train? [Ops 1 Radio]
17:05:21 hrs.	Radio RTC: Instructed the RTRA Supervisor to standby momentarily; they have CMNT Road Mechanic aboard to rectify the train. [Ops 1 Radio]
17:05:30 hrs.	RTRA Supervisor: Transit wants that train moved; they say someone’s injured on the train. **Note: The Radio RTC does not respond to the RTRA Supervisor radio transmission. [Ops 1 Radio]
17:05:32 hrs.	ROCC FLO: Called DCFEMS Fire Liaison Officer and said, “They just dispatched an ambulance for an OB. The Train is not at the station; it’s on the tracks.” DCFEMS ELO: I just walked in ROCC FLO: It’s Rhode Island Avenue; the train is a couple of hundred feet past Rhode Island Avenue Station on Track 1. They are trying to bring the train back to the station. There are two different people, one anxiety and one injured of some sort. [Phone Call]
17:05:55 hrs.	CMNT Road Mechanic: Notified Radio RTC there were only four cars on the console; the two trains are isolated from each other. I am trying to normalize. Radio RTC stated, "we have the train of Track 1 come in and rescue that train." [Ops 1 Radio]
17:07:18 hrs.	Radio RTC: Granted permission to the recovery train to close in behind the disabled train to allow customers to board the rescue train. [Ops 1 Radio]

Time	Description
17:11:58 hrs.	DCFEMS Fire Special Ops Battalion Chief: Contacted ROCC Fire Liaison Officer. ROCC FLO: "Reported a disabled train just past Rhode Island Avenue Station track one for about an hour. ROCC attempted to do a couple of different things; they are in the process of moving a recovery train to the disabled and couple it. Then bring it back to the platform. A couple of different reports. One with anxiety, a patient with a laceration, and a pregnant female. I do not know how many exact patients. It sounds like you guys will not have to go to the roadway. I think they will be able to move the train back, and it may just be basically an EMS call." Chain Marker 170+00 176+00 I have 109 people on the train. I am on Bravo 7 ops. Third rail power is up, and they are single-tracking on the other track. DCFEMS Fire Special Ops Battalion Chief: Give me a call back if anything changes.
17:12:37 hrs.	DCFEMS: "Local Alarm Engine 26, Battalion Chief Spec Ops, Squad 1, Squad 3, EMS7, Medic 24, Ambulance 12, Safety Battalion Chief. Respond for Metro Elevated Rescue at Rhode Island Avenue Station Tac Channel 0B7." **Note: The dispatcher stated Elevator Rescue, and the assignment was for an Elevated Train Rescue. [Channel 1 Open MHz]
17:13:52 hrs.	DCFEMS: Responding to several people trapped inside the train at Rhode Island Avenue Station. [Channel 1 Open MHz]
17:21:34 hrs.	OSC: Reported 109 customers safely on the platform at Rhode Island Avenue. [Ops 1 Radio]
17:23:15 hrs.	DCFEMS IC: "Decoupled on the roadway, Metro has brought in a rescue train to move the occupants off of the affected train; that has been completed. All passengers are off the decoupled train. We are working to assess how many possible patients we have. Once I get that number, I will let you know if we need any additional resources." [Channel 1 Open MHz]
17:26:50 hrs.	Uncouple Switch activated on the recovery train lead car Train ID 438 [VMDS]
17:30:22 hrs.	CMNT Road Mechanic: Reported that the rescue train successfully coupled to the disabled train. [Ops 1 Radio]
17:31:08 hrs.	CMNT Road Mechanic 2 began cutting out trucks on the disabled train [This is supported by the VMDS timeline noted in Appendix A.]
17:34:22 hrs.	CMNT Road Mechanic cut out the last truck on the disabled train [This is supported by the VMDS timeline noted in Appendix A]
17:37:48 hrs.	MTPD: MTPD Captain called the ROCC Assistant Superintendent and requested they communicate to the RTRA Supervisor that their presence was needed on the platform and to expedite their response so they could turn the scene over to RTRA and conduct a Hot Wash. [Phone Call]
17:38:47 hrs.	CMNT Road Mechanic: Reported the trucks cut out on the disabled train.
17:39:14 hrs.	Motion detected on cars 7384 and 7385. Train runaway event. [This is supported by the VMDS timeline noted in Appendix A.]
17:39:40 hrs.	CMNT Road Mechanic 2: Attempts to contact ROCC, "Central" intelligible.
17:39:43 hrs.	CMNT Road Mechanic 2 cuts back the rear truck Car 7446 on the Glenmont end. [This is supported by the VMDS timeline noted in Appendix A.]
17:39:50 hrs.	CMNT Road Mechanic 2 cuts the front truck on Car 7446 on the Glenmont end. [This is supported by the VMDS timeline noted in Appendix A.]

Time	Description
17:40:00 hrs.	RTRA Supervisor: That train's moving! CMNT Road Mechanic 2: Attempts to contact ROCC, "Be advised" unintelligible. Radio RTC: "Are we proceeding at this time?"
17:40:03 hrs.	RTRA Supervisor: "No, we are not proceeding; I don't know if they are moving on their own or what." [Ops 1 Radio]
17:40:11 hrs.	Train ID 722 came to a complete stop 137 feet after trucks were cut back in. [This is supported by the VMDS timeline noted in Appendix A.]
17:40:12 hrs.	CMNT Road Mechanic 2: The train was rolling, over; we had to cut the trucks back in. The train was rolling free."
17:40:20 hrs.	Radio RTC: Are we hooked up at this time? Did we make an add [couple trains]? [Ops 1 Radio]
17:40:31 hrs.	Radio RTC: Let's do this the safe way; let's make sure we have the recovery train hooked up to the incident train and make sure the trucks are cut." [Ops 1 Radio]
17:40:41 hrs.	Recovery Train Operator: This was the Operator on the recovery train. We were not hooked up. When you pulled off just now, the recovery train was still sitting in the same place. [Ops 1 Radio]
17:40:59 hrs.	Radio RTC: Contacted CMNT Road Mechanic 2 and stated, "make sure we have brakes applied. I don't think we ever made the add [coupled the trains]?." Did we ever make the add [couple trains]?? [Ops 1 Radio]
17:41:07 hrs.	CMNT Road Mechanic 2: Replied that's affirmative. [Ops 1 Radio]
17:41:13 hrs.	RTRA Supervisor: Interjected and stated, "negative central, we did not make the add." [Couple the train] [Ops 1 Radio]
17:41:18 hrs.	Radio RTC: "If we made the add, did we have a pull-apart? I know we are on an incline?"
17:41:27 hrs.	RTRA Supervisor: "Central, we need to make the add"? (couple trains) [Ops 1 Radio]
17:41:34 hrs.	Radio RTC: Instructed the RTRA Supervisor, "help us out; we need this train added up so we can move this train."
17:41:47 hrs.	Radio RTC: "CMNT Road Mechanic 2, let's make sure we have enough brakes on that train to prevent it from pushing and rolling." CMNT Road Mechanic 2: Acknowledged.
17:47:17 hrs.	RTRA Supervisor: Reported that cars 7384 and 7438 were coupled. [Ops 1 Radio]
17:52:28 hrs.	CMNT Road Mechanic: Reported the trucks cut out on Train ID 122. [Ops 1 Radio] Radio RTC: Instructed recovery Train ID 123 to perform a rolling test to verify the train was rolling freely under a permissive block. [Ops 1 Radio]
17:53:23 hrs.	Train ID 722 Train Operator began moving towards Shady Grove Yard. [This is supported by the VMDS timeline noted in Appendix A.]

**Note: Times above may vary from other systems' timelines based on clock settings. Additionally, the WMATA term "add" is used, meaning coupling a train to another consist.

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

Event Recorder (ER) Data Graph/Sequence of Events

Based on the CMOR ITT analysis of the downloaded Vehicle Monitoring System (VMS) and ER, the completed data analysis confirmed that the cause of this failure was a tripped Battery System C/B on car 7303. The tripped battery system C/B created Single and Double Train Control Network (TCN) faults on car 7303. With the Double TCN network fault, the system could not communicate its failure to the train's network and therefore failed to announce the failure to the TCD of the lead car. In turn, the battery system C/B fault was not logged by the VMDS.

Maximo Data

Data reflects the current was measured on the B+ and B- sides, which measured approximately thirty amps while in the shop; however, the C/B was very warm and measured 93°-96° F. CMOR IIT compared readings with 7385. The current draw was similar, but 7385 Battery System C/B measure was 74° F.

Cars were re-coupled in the original configuration to perform a yard track test, with the Battery System C/B in the normal position. No stuck holding brake or TCN network faults were detected. While performing the track test, CMOR IIT monitored the current on 7385 and 7303. Both were around 60 amps; however, 7303 temperature quickly increased to 257° F, while 7385 remained at 74° F.

Once the test was completed, the Battery System connections were thoroughly inspected, and the B+ connection on the line side was found loose with a visual indication of overheating damage. CMOR IIT noted the Battery System C/B would need to be replaced. CMOR IIT identified four other married pairs on Battery System C/B were inspected for loose connections. No loose connections were found on the A or B car. However, 7336 torque marks were found offset.

The Remote Input/Output (RIO) 5 is powered by the VMDS C/B, which is powered by the B+ Main (Battery System). When the Battery System C/B trips, the RIO loses power and will be unable to report the status of the breaker. However, the Train Operator will see a long list of faults for the dead/dark car but will have no tripped C/B indication. The Battery System C/B did not show as tripped on the TCD because the monitoring for the breaker is routed through the RIO 5.

A review of Car history on 7302-7303 revealed a battery failure in December 2020. Kawasaki vendors replaced the bad battery banks and released the train back to WMATA's CMNT department for subsequent Daily Inspection and release.

Vehicle Monitoring and Diagnostic System

Based on the VMDS data, the two consists were initially coupled. While CMNT personnel were cutting out trucks on the disabled consist, the uncouple switch on the recovery consist Train ID 123 (Car 7438) was activated. Soon after, the console on car 7438 (Recovery Train) was keyed down. The Disabled Train was keyed up and back down. The Recovery Train was keyed back up during the time the trucks were still in the process of being cut out. After the last truck was cut out, the consist began to roll. The data shows trucks were then cut back in, and the disabled train came to a complete stop after traveling 137 feet. The consist was coupled again, and all trucks were cut back out. The train was then transported to Shady Grove Yard. The VMDS data is seen below.

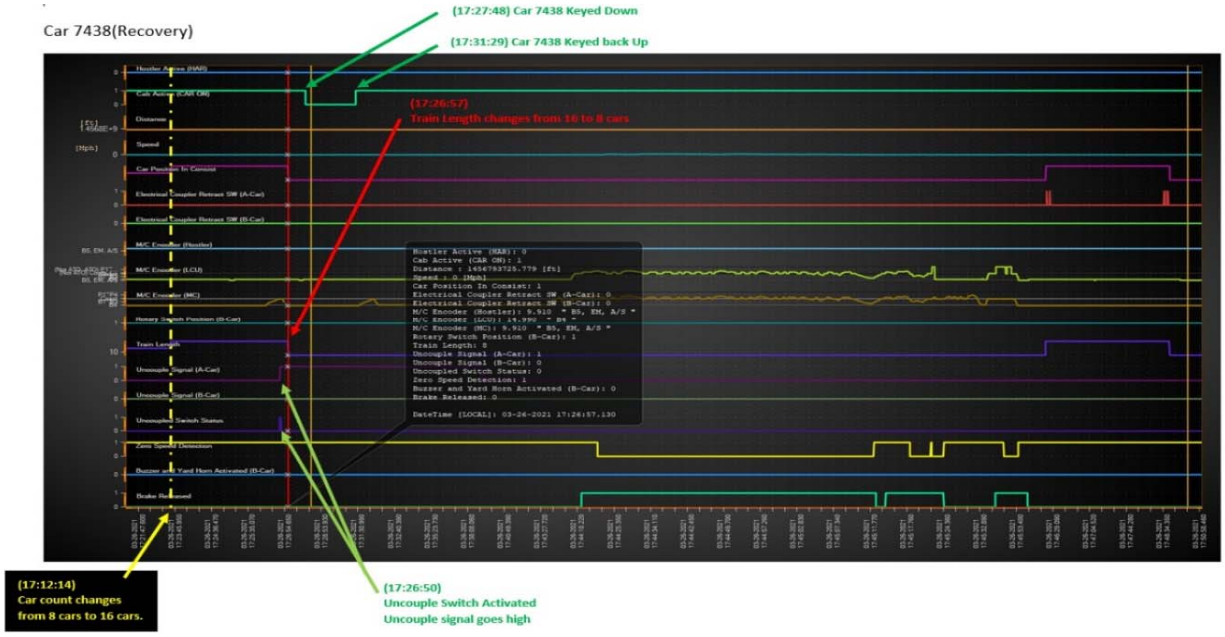


Figure 1 - VMDS data of recovery train 7438 showing key down uncouple switch activation and the Train Operator keying down.

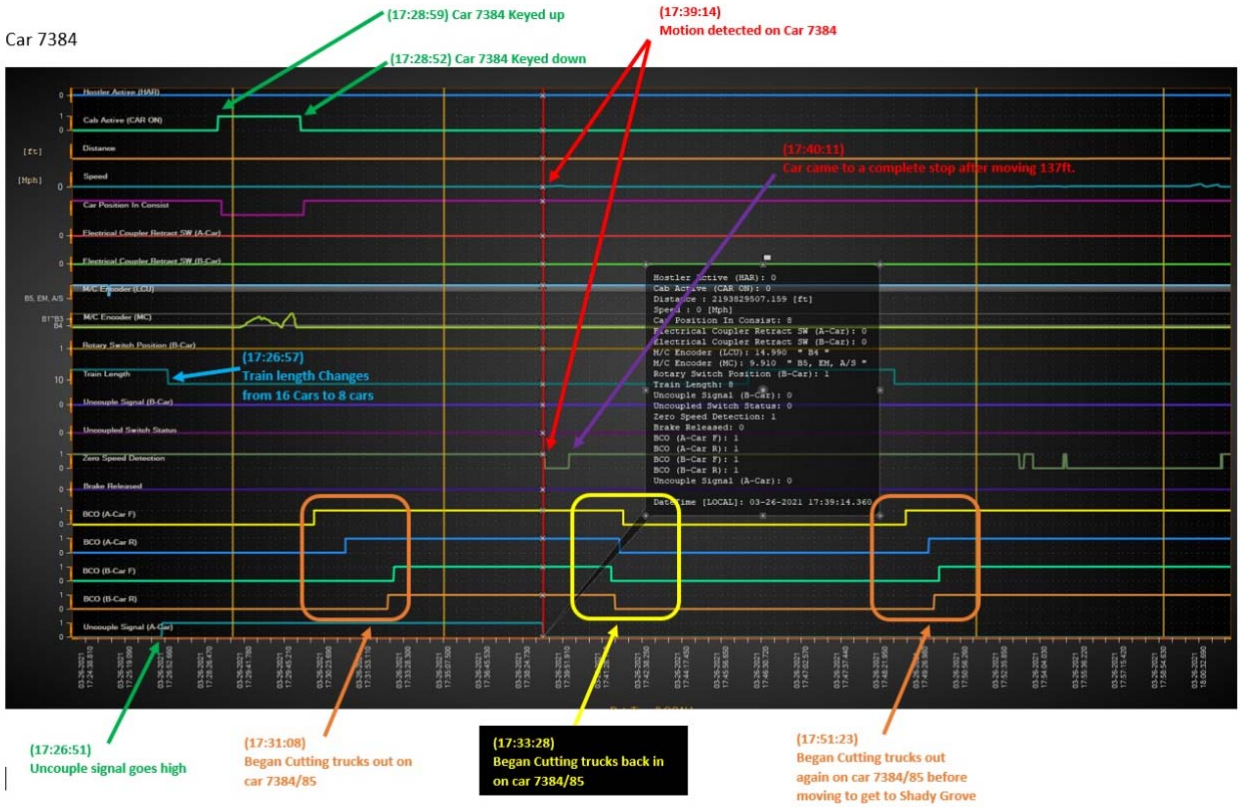


Figure 2 - VMDS data of recovery train 7384 showing train length change, key up and down up truck cut out and motion time parameters.

Office of Car Maintenance (CMNT)

During the event, CMNT Desk reviewed the Fleet wise software data, which identifies failures of respective trains via remote access. The CMNT desk called the OPS 1 Button RTC to provide troubleshooting assistance. The CMNT Desk is relocated at Branch Ave Service and Inspection shop for COVID-19 mitigation. The screenshot below shows how the CMNT Desk remotely receives trouble information from the field; this image is captured from the trouble codes being sent from the disabled train.

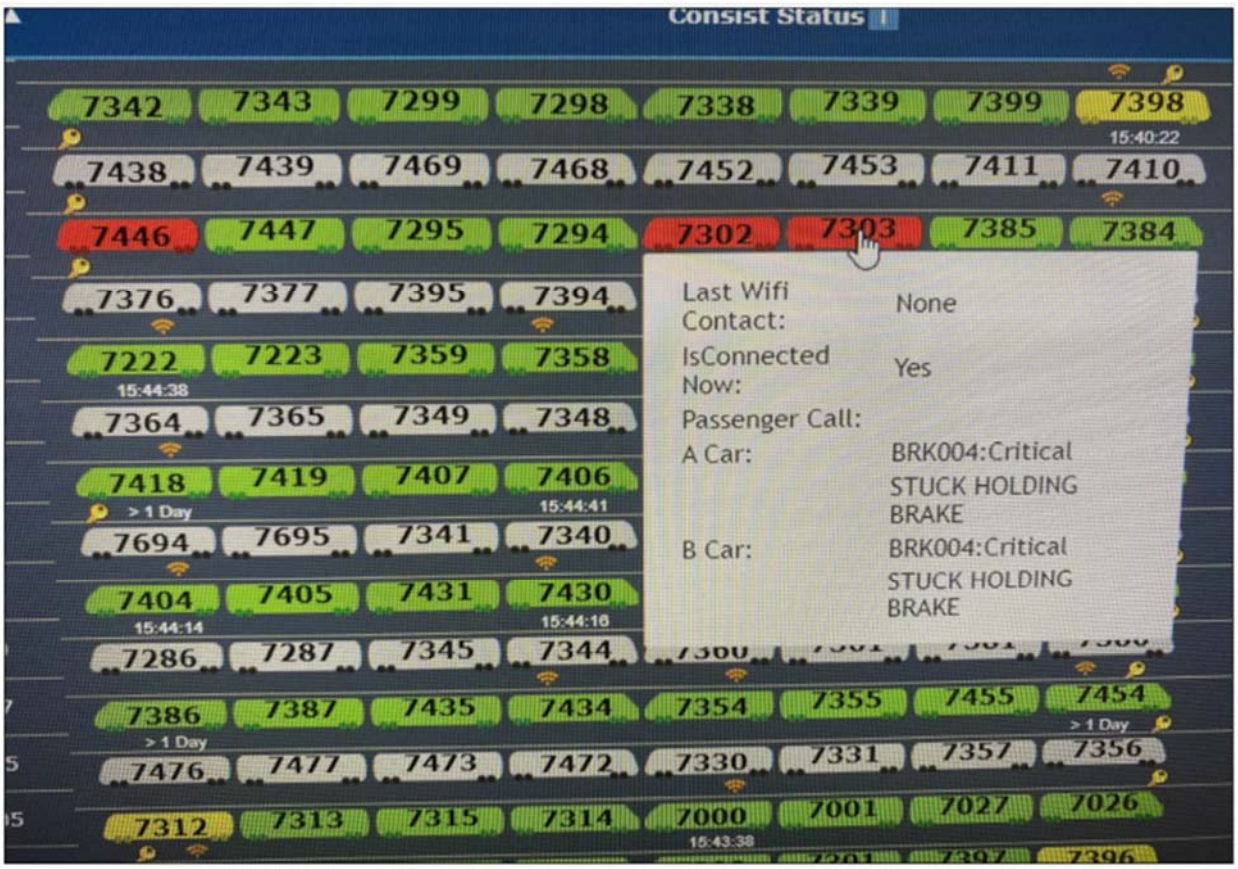


Figure 3 - Fleet Wise software data display.

The CMNT Desk stated to ROCC personnel: “I know you said a BIE and Stuck Holding brake, but if they key down and cut the trucks out on 7302 and 7303, they should be able to get brakes off. Make sure they check their air pressure.”

Advanced Information Management System (AIMS)

The following shows the AIMS visuals of the incident.

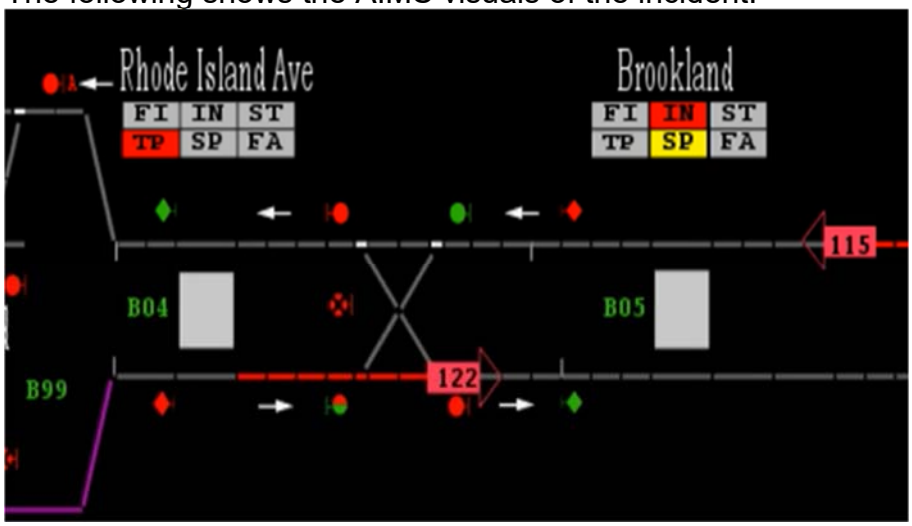


Diagram 1: Train 122 stopped due to a brake malfunction.

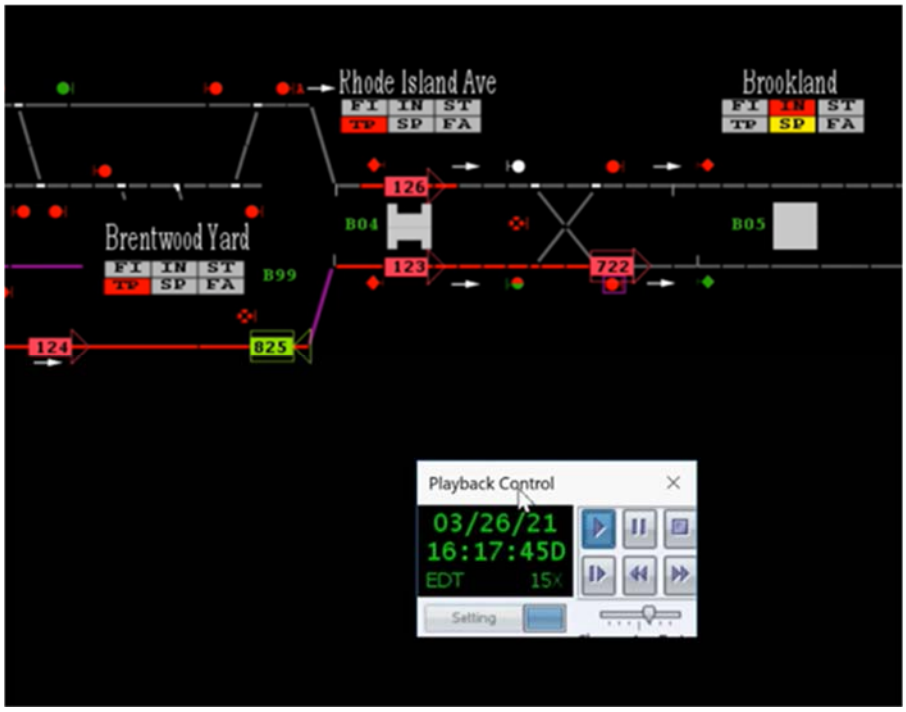


*Diagram 2: Train ID 126 [First single-tracking Train] Serviced Rhode Island Track 2 Against traffic during the report of a customer on the Roadway. **Note: ROCC did not de-energize Third rail power for the first self-evacuating customer; the customer was on the platform limits in a timeframe of approximately 90 seconds.*

Diagram 3: Train ID 126 Departed Rhode Island Avenue Station after the customer was safely on the platform limits at Rhode Island Avenue Station.

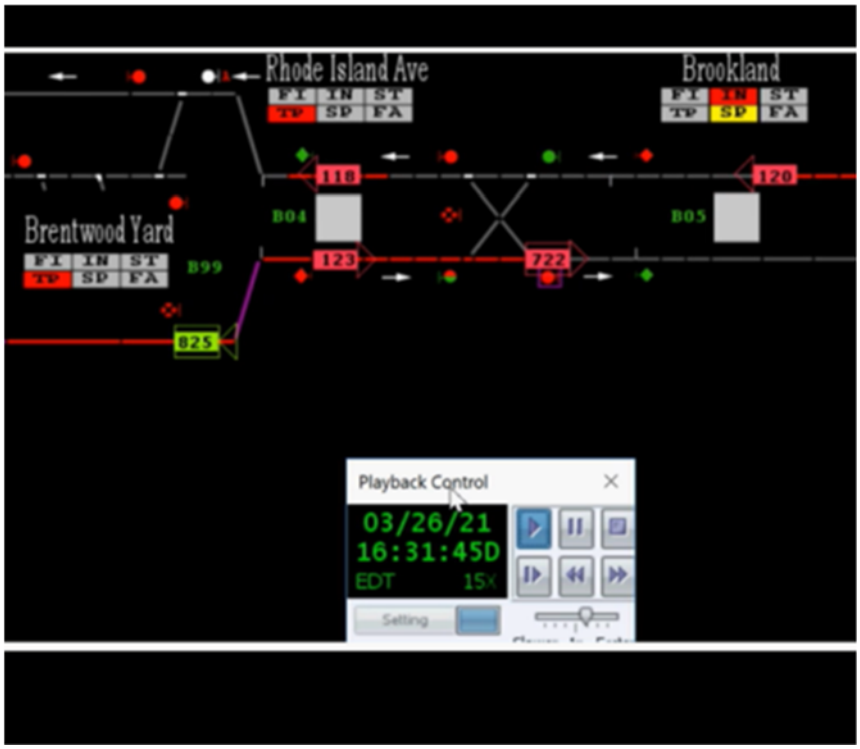


Diagram 4: Train ID 118 Serviced Rhode Island Avenue Station and operating with the normal flow of traffic on Track 2.

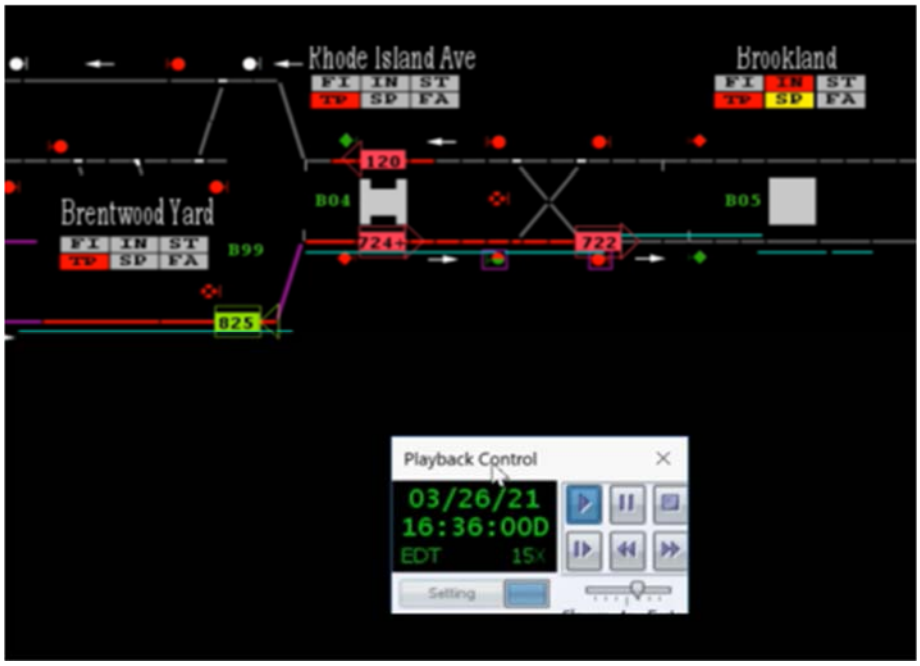


*Diagram 5: Train ID 120 at Rhode Island Avenue Station, when ROCC de-energized Third Rail Power at approximately 16:36 hours. ** Note: Train ID 120 asked the Radio RTC if they wanted them to hold momentarily until the passenger was clear of the roadway. ARS playback did not yield evidence of the Radio RTC responding.*

Diagram 6: Train ID 120 Serviced Rhode Island Avenue Station and Continued Operation Track 2 with the flow of traffic.

Diagram 7: Train ID 127 Serviced the Rhode Island Avenue Station Via Track 2 against the normal flow of Traffic at 1647 Hours

Rail Operations Control Center (ROCC)

A review of the ARS phone playback revealed that the Buttons Controller received and placed approximately 60 calls during the incident, including notifications to ROCC management, CMNT, MTPD, and ROIC. The Button RTC also conducted single tracking updates, line adjustments, turnback location planning, and managed communications with CMNT Road Mechanic 2, RTRA Supervisor, Terminal Station, and Storage Yard Interlocking Operator.

The Radio RTC received ROCC supervisor reinstruction on June, 7, 2021.

Office of System Maintenance (SMNT) Communication Section (COMM)

The RTRA Supervisor stated that radio communications at the Rhode Island Avenue Station were problematic, with inconsistent transmission occurring on a regular basis.

Per COMM, the radio communication deficiencies experienced by the RTRA supervisor may have been the result of low or defective batteries, user error, busy system, system glitches, system outages, or dead spots.

A radio operational test was conducted between Brookland Station and NoMa Station on both tracks by COMM, and no trouble was found. The System of Record data shows one ticket within the last month reported on 4/16/21 and tested in conjunction with MTPD. There was no trouble found.

Office of Rail Transportation (RTRA)

RTRA investigated the actions of the Glenmont division Train Operator and RTRA Supervisor associated with Rhode Island Avenue Station events. RTRA management interviewed and verbally reinstructed the RTRA Supervisor on reporting procedures [unusual occurrences] to ROCC and documenting an occurrence in greater detail on incident reports.

RTRA has also partnered with the Rail Operations Quality Training (ROQT) Department, and over 660 Train Operators and Supervisors have been trained on the reverse stretch procedure. RTRA management advised the RTRA Supervisor to request additional supervisory support via ROCC or their Division Management Team during emergencies. RTRA management noted, the Train Operator of Train ID 123 did not play a significant role in this event due to relinquishing their operation of the recovery train.

SPOT Checks

Train Operators are periodically evaluated by RTRA Supervisors on train operation knowledge and skills. The following summarizes the supervisory spot checks conducted by RTRA management:

- The Train Operator of Train 122 was reviewed 34 times during January – December 2020 with no exceptions to report. The Operator was also reviewed 42 times within 2021 and four times on March 26, 2021 with no significant findings.
- The Train Operator of Train ID 123 was reviewed 69 times within 2021, with two occurring on March 26, 2021, with no significant findings.

Training

Rail Operations Quality Training (ROQT)

A review of the RTC's on-the-job training and test records indicates that the RTC had difficulties multitasking. The RTC was later sent to ROQT for refresher training on December 31, 2020. The ROQT Training Instructor Summary noted that the Radio RTC had difficulty in multitasking and was not extremely detailed oriented.

A ROCC Assistant Superintendent noted that during the initial certification process, the Radio RTC did not finish the simulation in the allotted 20-minute time parameter scoring 80 percent. Days later, the RTC tested with a different ROCC Assistant Superintendent and scored 100 percent on all three simulations.

A review of the ROCC RTC certification practical test revealed two out of the three scenarios were identical for the second attempt. (Note that, although not specifically applicable to the initial RTC certification, RTCs are not allowed to be recertified using the same simulations as initially tested.) The RTC failed the Self Recovery Isolation Procedure Scenario from the first attempt and later administered a 7000 series Door troubleshooting scenario for the second attempt.

The ROCC Assistant Superintendent that was overseeing operations on March 26, 2021 was recertified on January 07, 2021. No exceptions were noted in this employee's training record.

Office of Car Maintenance (CMNT)

A review of CMNT's Daily Safety Briefing sheet indicates the two CMNT Road Mechanics received a briefing on March 23, 2021 – three days before the event. The briefing discussed MSRPH General Rule 1.32, which states, "employees involved in, witnessing, or informed of an accident or incident, to include near misses, on the Metrorail system shall inform their supervisor, Transit Police, ROCC or other appropriate authority as soon as possible, and shall file a written report." However, none of the involved parties except the RTRA Supervisor detailed the runaway train event in their incident reports.

CMNT Road Mechanics underwent scenario-based training and mechanical troubleshooting practices before the Rhode Island Avenue mechanical failure.

Office of Rail transportation (RTRA)

The RTRA Supervisor that was on-scene was recertified on May 16, 2019. A review of the RTRA Supervisor's training record revealed the following:

- On April 12, 2017, the RTRA Supervisor underwent 7000 Troubleshooting for Rail Operation Supervisors and CMNT Road Mechanics.
- On August 13, 2020, the RTRA Supervisor underwent Rail Supervisor Refresher Training.

The Train ID 122 Train Operator was recertified on their third attempt on March 17, 2021. A review of the Train Operator's training record revealed the following:

- On July 11, 2018, the Train Operator underwent 7000 Troubleshooting for Rail Operation Supervisor's and CMNT Road Mechanics.
- On November 6, 2020, the Train Operator underwent and Train Operator Refresher.

Metro Transit Police Department (MTPD) Incident Report

On Friday, March 26, 2021, at 1547 hours, Train ID 122 (Red Line toward Glenmont) became disabled approximately 100 yards from the end of the Rhode Island Avenue Station platform (Chain Marker 176+00). Three MTPD Officers arrived on the scene and set up On-Scene Command at 1555 hours. MTPD assumed the role of On-Scene Command. The RTRA Supervisor responded to the Command post and attempted to guide the Train Operator over the radio on how to troubleshoot the train issue.

At 1604 hours, two MTPD Officers were briefed, assumed on-scene command (RIAV command), and an MTPD Sergeant assumed the role of forward liaison. At 1611 hours, RTRA advised that train cars 7302 and 7303 did not have power, the rest of the train cars had power. MTPD Sergeant notified ROCC to have the Train Operator make announcements and move the stranded customers that were in the cars without power to cars with power as it was hot outside. At 1612 hours, RTRA advised they needed additional time to troubleshoot the issue.

Trains began single-tracking at this time. MTPD Sergeant 2 responded to Brookland Station to assist as Brookland Station command. There were no crowds reported at either location. At 1618 hours, MTPD officers observed a patron self-evacuate and walked down track one towards the platform. MTPD immediately ordered rail to bring down third rail power. An MTPD Officer was

able to secure the customer and moved them to a secure location to assess for injuries and gather information.

Investigation revealed the customer was an adult and was getting too hot on the train. RTRA gave an approximate 3-minute ETA to have the train ready to move to Brookland. Just before the train proceeded, a second customer self-evacuated. Power was immediately ordered down until the patron was safely on the platform. Due to the operator of the disabled train not communicating with ROCC, it was determined MTPD needed to intervene to prevent further customer evacuation, get an accurate count of customers on the train, and assess any medical needs. MTPD, OEM 27, and the RTRA Supervisor coordinated a plan to avoid any other patrons evacuating.

OEM 27 confirmed that third rail power was down using a hot stick and placing WSADs before MTPD approached the disabled train. At 1700 hours, two MTPD Officers and the CMNT Road Mechanic 1 [first on the scene] walked down the track with their PPE on and boarded the train. Officers confirmed there were 109 customers on board and confirmed there were no injuries initially reported. OEM 27 retrieved the WSAD, returned to the platform, and stood by at the command post. Once a clear track was confirmed of persons and equipment, and MTPD Sergeant 1 ordered Track 1 power restored.

At 1717 hours, all customers were evacuated back to the platform through the bulkhead doors. With the assistance of MTPD Officers, they were able to identify the patrons on board the train as they returned to the platform. Officers inquired about any injuries. No other customers were claiming injury or requesting police assistance. Medics were requested for a 33-year-old female with an anxiety attack and a 40-year-old female claiming to be dehydrated. Engine 55, EMS #6, and #12 responded to the scene to treat the two customers. Medics advised that they would not enter an elevated platform and would be staged in the bus bay. Both patrons refused treatment, provided their information to MTPD, and left the scene. At 1742 hours, the scene was turned over to the RTRA Supervisor. The RTRA Supervisor noted that this was caused by an issue with the brakes and was maintenance related.

During the Hot Wash, the following was discussed.

- Throughout the incident, ROCC was sending conflicting information on who was an incident command. MTPD had to keep iterating that they were in command and had not turned the scene over.
- MTPD officers advised that no announcements were being made while on the train, despite OSC requesting rail to make frequent announcements. This initial lack of information and then conflicting information between MTPD and RTRA caused customers to mistrust and become agitated with the MTPD Officers on the scene.
- MTPD Officers were reminded of the importance of maintaining the perimeter and that no one should be going into the scene without the permission of the OSC. The Watch Commander requested a way to contact the RTRA Supervisor so they could move the train while the Hot Wash was being conducted. The Watch Commander contacted the RTRA Supervisor at 1817 hours and identified the following:
    - The RTRA Supervisor attempted to go to an alternate channel; however, ROCC would not change, so they had to wait for an extended time to relay information; and
    - Two RTRA Supervisors were requested to the scene; however, only one arrived.

The following findings were identified in the MTPD after-action report:

- Radio transmissions were coming in broken and with static transmissions. OSC had to repeat orders and questions several times as it appeared transmissions were not going through. MTPD ordered a Work order to address the radio issues.
- Due to the MTPD officers reporting they were directly in contact with the operator, it was believed these two members were on board the train; however, it was later learned they were parked off Rhode Island Ave, NE alley, under the lead train car. The officers communicated by shouting up from the street to the Train Operator of the incident train to share information with the OSC. This miscommunication led the OSC to believe the real-time details from the Train Operator were from an officer on the train who would be able to keep passengers calm and informed. Additionally, the MTPD Officers at street level near the incident train left the scene without notifying the OSC.
- MTPD Officers reported, "both officers then began speaking with the Train Operator and called out over the radio to RIAV Command of our location and that we were in direct contact with the Train Operator. The Train Operator then relayed a message for passengers to retreat to a train car with A/C and power."
- MTPD Officer aboard Train ID 722 advised that no announcements were being made while on the train, despite OSC requesting that rail make frequent announcements. This initial lack of formation and conflicting information between MTPD and RTRA caused the customers on board to become agitated with the Officers they encountered on the scene.
- During the self-evacuations, MTPD communicated with ROCC using the radio channel MTPD 2X; however, MTPD personnel should have used the ETS box to speak directly to the ROCC regarding bringing down power and the status of third rail power.
- During the second evacuation, MTPD requested clarification to identify if the second person was an employee or patron. Designating a member to be assigned to the ETS box throughout the scene to go direct with rail, as needed through coordination with the OSC, would be another layer of communication.
- As the event was ending, the RTRA Supervisor was informed that MTPD would be conducting the Hot Wash on the platform, and their contribution was required. Before all members were present for the Hot Wash, the RTRA Supervisor responded onboard Train ID 724 for an unknown reason and appeared not to cooperate, per MTPD.
- Members stood by for a moment, radioed a Hot Wash would be conducted, and the RTRA Supervisor did not respond. It was later determined through interviews that the RTRA Supervisor was still actively responding to the event, specifically addressing the CMNT Road Mechanic aboard to ensure the train was coupled before cutting out brakes on the disabled train in conjunction with assisting passengers in evacuating from the disabled train.
- The Watch Commander telephoned the ROCC Desk at 1737 hours to request the RTRA Supervisor's participation. The RTRA Supervisor was highly distracted throughout the scene. The RTRA Supervisor was highly concerned with problems aboard the train, preventing them from paying attention. MTPD started the Hot Wash and used their radio to communicate with either the operator or the Train Operator. It was noticed that the train was not moving.
- To ensure continued train movement, the Watch Commander requested a way to contact the RTRA Supervisor for their input with the Hot Wash. The Watch Commander called the RTRA Supervisor at 1817 hours for an approximately 5-minute discussion, where the following information was shared:
    - The RTRA Supervisor was not being acknowledged on the radio when they were speaking with ROCC. The RTRA Supervisor reported they had to wait their turn to be acknowledged, and there were periods the RTRA Supervisor waited an extended time to relay information to rail.

    - The RTRA Supervisor advised having an option to use an alternate channel and making incidents the priority. Two RTRA supervisors were requested to the scene; however, only one arrived. The RTRA Supervisor advised that they tried to accomplish everything thrown at them and didn't share the complications they experienced with the MTPD OSC.

- The MTPD Captain clarified it was essential to communicate with the OSC if the concern is another supervisor needing MTPD assistance for transport to the scene benefits everyone involved. MTPD at ROCC took nine (9) to eleven (11) minutes from the time the train became disabled until the time car maintenance could respond. Car maintenance made an unsuccessful attempt to disable the affected four packs. The progress that was being made was interrupted due to patrons self-evacuating from the train. Power had to be brought down each time a patron self-evacuated. These continued interruptions lead to rail determining it would be best to end the attempts at cutting out the four packs and to send the rescue train.
- One MTPD Sergeant reported ROCC did not consult with them or share information regarding evacuating customers to the trackbed.

District of Columbia Fire Emergency Medical Services (DCFEMS)

OUC did not dispatch DC Fire & EMS immediately after receiving a 911 call requesting an ambulance. The OUC did not send an ambulance until approximately seven minutes later. When MTPD called OUC back, the ambulance was dispatched. The OUC noted that MTPD reported "Ambulance to Rhode Island Avenue Station for a woman who is 12 weeks pregnant, on the train and the train is stopped."

OUC dispatched a full complement of rescuers from DC Fire & EMS at 1712 hours. This was 15 minutes after ROCC Fire Liaison called and requested an assignment. According to OUC and radio traffic playback, dispatchers did not initially connect or coordinate this dispatch of the nine additional fire and EMS units with Ambulance 6, which was dispatched to the Rhode Island Avenue Station eight minutes earlier. Despite early information, OUC appears to have treated these as two separate incidents. OUC confirmed two different incident numbers were used.

There was a later radio transmission where the DC Fire & EMS incident commander informed OUC that these two calls were the same emergency. Even after Fire & EMS arrived at Rhode Island Avenue, the communications from WMATA were lacking per the OUC. A radio transmission at 1720 hours showed the DC Fire & EMS incident commander believed they were dealing with a decoupled train.

Interview Findings

Based on the investigation launched into the Rhode Island Avenue Station Runaway Train event, SAFE conducted interviews via Microsoft teams, which included the investigation team, members of the WMSC and relevant Metro management. These interviews were conducted over three weeks after the event and identified the following key findings associated with this event:

Train Operator (Train ID 122)

The Train Operator observed multiple failures on the TCD screen. The Train Operator went through several troubleshooting procedures from the lead car to no avail. The Train Operator notified the Radio RTC that there was a stuck holding brake on cars 7302 and 7303. The Train Operator was then instructed to respond to cars 7302 and 7303 and release the holding brakes. The Train Operator was also instructed to cut trucks out on cars 7302 and 7303. These attempts were not successful.

The Train Operator stated that when CMNT arrived, they were instructed to make announcements to the customers and provide the Radio RTC with a customer's headcount. The Train Operator reported that MTPD arrived on the scene, and a plan was set in place to have a recovery train evacuate the customers. However, MTPD opted to have the customers be transferred from the disabled train to the recovery train and offloaded to Rhode Island Avenue Station platform. The Train Operator reported that they received a report that personnel exited the train. However, they did not observe any broken seal switches or open doors when walking throughout the train. The Train Operator reported being knowledgeable of the train moving unassisted during the first attempt to couple the trains. However, they were in the lead car and did not observe any part of the recovery process.

The Train Operator did not report the roll-away train at the time of the occurrence. The Train Operator completed their incident report the day following the event, and there was no clear reason why they did not mention the roll-away in their statement.

Train Operator (Train ID 123)

Based on the SAFE interview, Train ID 123 lost speed readouts on approach to Rhode Island Avenue Station. The Train Operator requested permission to enter the stop and proceed to properly berth at the 8-car marker. The Radio RTC told Train ID 123 to stand by. Shortly after, ROCC permitted Train ID 123 to properly berth at the 8-car marker. Upon arrival to the platform, the Train Operator noticed an RTRA Supervisor already on the platform.

The Radio RTC gave Train ID 123 permission to move their train up to Train ID 122. The Train Operator notified the Radio RTC that they could not move due to a passenger on the roadway. The RTRA Supervisor assumed control of Train ID 123 to perform close-in procedures for rescue train efforts on Train ID 122 because the Train Operator for Train ID 123 was nervous and felt uncomfortable using coast to car wash to approach the disabled train.

On approach, the RTRA Supervisor coupled to the down train. Train ID 123 Train Operator stated they recalled the RTRA Supervisor stepping over to Train ID 122 but could not remember if the RTRA Supervisor uncoupled the trains. Train ID 123 Operator noted the CMNT Road Mechanic and RTRA Supervisor spoke about the train being uncoupled and the statement from the RTRA Supervisor that “this train needed to be coupled.” The CMNT Road Mechanic explained to the RTRA Supervisor that the train is coupled based on the coupler hooks. The RTRA Supervisor stated, “are you sure this train is coupled?” The CMNT Road Mechanic responded, “yes.”

While standing on the lead car facing the disabled train, Train ID 123 Operator saw the train roll and reported the train rolling over the radio.

ROCC Assistant Superintendent

The ROCC Assistant Superintendent noted they were not near the console when the train rolled away and were not notified by the RTCs that the train rolled away and had to have brakes cut back in.

Radio RTC

The Radio RTC reported that they dispatched CMNT from Fort Totten and stated that an RTRA Supervisor was already on the platform at Rhode Island Station. There were several failed attempts to troubleshoot the train. They had to dispatch additional CMNT to assist in the troubleshooting efforts. There was a report of customers exiting the train and accessing the roadway. The Radio RTC reported preparations to have customers exit the disabled train and walk to the Rhode Island Avenue Station platform with third rail power de-energized. The Radio RTC noted that a revenue train behind the disabled was instructed to offload and prepare for recovery.

The Radio RTC said that the first coupling attempt was unsuccessful, causing the disabled train to roll unassisted. The Radio RTC stated that they were notified during the first attempt to couple the recovery train that they were successfully coupled; however, the Radio RTC could not remember if CMNT or the RTRA Supervisor notified them. The Radio RTC stated that after the first attempt to couple to the disabled train, they were relieved by an additional Radio RTC that assumed the duties of the Radio RTC and instructed CMNT to attempt another recovery.

The Radio RTC reported that the second attempt to recover the train was successful. The Train Operator was instructed to clear Rhode Island Avenue Interlocking utilizing the “Proceed” method, and the disabled train was towed to Shady Grove Yard.

The Radio RTC did not report the roll-away train at the time of the occurrence because the Button RTC wrote the incident report. They did not write the incident report; they also stated they did not notice that the train rolling away was not in the incident report.

Additional Radio RTC [Student Trainer]

Additional Radio RTC [Student Trainer] reported that they were “only” offering support to the Radio RTC on the console when they arrived at the console. The additional RTC reported that when they realized how long the process was to move the train, they stepped in and assumed duties as the Radio RTC. The additional RTC reported the Button RTC stated the trains were coupled before taking over duties from the Button RTC. The additional RTC stated there was confusion due to MTPD initially requesting the evacuation of customers via the roadway, an operation that was then canceled when MTPD opted to have ROCC recover the disabled train.

The additional RTC reported that CMNT had permission to cut trucks on the disabled train, and they received a report from the operator on the recovery train stating that the disabled train was moving. The additional RTC tried to ascertain if the Train was proceeding. CMNT reported that they were cutting trucks back in. The additional RTC had all personnel stop and redo the procedures correctly, couple the trains, verify that the cars were coupled, and verify which car was coupled.

The additional RTC stated they did not write nor read the incident report. The RTC noted that the original Radio RTC wrote the incident report and asked them to submit the report for approval to the ROCC Assistant Superintendent due to not having system access to submit the incident report.

Button RTC

The Button RTC stated that Train ID 122 reported a BIE, and subsequent troubleshooting efforts yielded no results to assist the train in moving. The Button RTC notified the on-duty Assistant Superintendent and CMNT. CMNT utilized an application called Fleet Wise to assist in the troubleshooting efforts for the disabled train.

The Button RTC was able to identify that the problem cars were 7302 and 7303. After several failed attempts, the Button RTC reported receiving a report that a customer exited the train. However, when they monitored the platform camera, they could see that the customer made it to the platform at Rhode Island Avenue.

The Button RTC then stated that MTPD reported a second customer had entered the roadway. Third rail power was then de-energized in the area for safety. The Button RTC then said that MTPD requested to perform a recovery with the train behind the disabled train.

The Button RTC reported that after the customers were offloaded from the disabled train, the recovery train was given a permissive block within two feet of the disabled train. Two CMNT personnel were on the scene to assist with recovery efforts.

The Button RTC stated that there were two attempts to couple the train. According to the Button RTC, the disabled train began to roll free during the second attempt to recover the disabled train. The Button RTC reported that CMNT had to cut trucks back due to a report that the train was rolling free.

The Button RTC said they did not know why they did not report the runaway train in the incident report.

RTRA Supervisor/Recovery Operator/OSC/Forward Liaison

According to the RTRA Supervisor on-scene, the RTRA Supervisor assumed operation of the recovery train from the recovery Train Operator. The recovery Train Operator reported they were nervous and did not feel comfortable operating towards the down train on a decline. The RTRA Supervisor did not report the unintentional coupling to the disabled train “because it was not intentional.” Upon unintentional coupling to the disabled train, the RTRA Supervisor immediately uncoupled the recovery and incident train. The RTRA Supervisor did not report the unintentional coupling to the disabled train.

The RTRA Supervisor communicated with the CMNT Road Mechanic and advised them not to start the recovery or troubleshooting process until passengers were off the train. The RTRA Supervisor notified the CMNT Road Mechanic that the train was uncoupled even though the TCD screen reflected differently. MTPD evacuated customers onto the platform from the emergency exit of the trailing car on the recovery train positioned within the platform limits. The RTRA Supervisor was on the platform when the disabled train rolled over 100 feet towards Brookland Station. The RTRA Supervisor reported that radio communications at Rhode Island Avenue Station were subpar, and radio chatter is excessive during emergencies. The RTRA Supervisor reported hearing only one power announcement.

CMNT Road Mechanic 1

CMNT Road Mechanic 1 was not able to successfully self-recover the train, which was on a graded track. There was a turnover process between both CMNT Road Mechanics. CMNT Road Mechanic 1 stated they did not witness the runaway while positioned in the middle of the disabled consist as the brake person in case of an emergency. CMNT Road Mechanic 1 received second-hand information that the train was rolling and felt they could not provide any meaningful information regarding the runaway in their report. CMNT Road Mechanic 1 did not observe either attempt to couple the trains.

CMNT Road Mechanic 2

CMNT Road Mechanic 2 stated during a follow-up interview that they did not communicate with an RTRA Supervisor on the recovery train. The mechanic did not recall a conversation with the RTRA Supervisor that the train was not coupled. CMNT Road Mechanic 2 did not say the train is coupled based on the TCD screen. CMNT Road Mechanic 2 then asked who is the RTRA Supervisor and further stated that the only Supervisor they knew of was the person in front of the recovery train with the Train Operator.

CMNT Road Mechanic 2 then recalled, while in the middle of the consist after the customers were evacuated the customers that they went back to where the RTRA Supervisor coupled the trains. The RTRA Supervisor said they accidentally coupled the train instead of being at the two-foot mark to transport the customers from the down train [Train ID 122] to the recovery train [Train ID 123]. SAFE asked whether the RTRA Supervisor mentioned anything about the train being uncoupled, to which the CMNT Road Mechanic 2 responded, “no, the RTRA Supervisor did not say anything about the train being uncoupled, not to me anyway. I am taking their word; that is when I got permission to cut the trucks in the down train after the customers were evacuated.” CMNT Road Mechanic 2 noted the only thing they heard was that the trains coupled. The CMNT Road Mechanic 2 stated they showed the RTRA Supervisor how to retract the couplers.

CMNT Road Mechanic 2 reported they did not go to the TCD screen. The CMNT Road Mechanic 2 said they were standing in the doorway and showed the RTRA Supervisor how to retract the couplers. CMNT Road Mechanic 2 noted they were not present when the train coupling happened. CMNT Road Mechanic 2 told the RTRA Supervisor that the pins needed to be retracted to isolate the bad car from the good car. CMNT Road Mechanic 2 recalled telling the RTRA Supervisor the mechanical hook “is the only thing we need to worry about because the hook is the hook.” The CMNT Road Mechanic reported they observed the mating of each coupler's faces and did not see any space between the couplers.

CMNT Road Mechanic 2 did not recall previously encountering an instance where a train may appear coupled but was not. CMNT Road Mechanic 2 did not recall the RTRA Supervisor stating to ensure the train was coupled before cutting out the trucks. CMNT Radio Mechanic 2 normalized the train to do the self-recovery after attempting to perform the self-recovery. CMNT Road Mechanic 2 noted all communication of the train being coupled was with the RTRA Supervisor and Train Operator. There was no communication with ROCC about the train being coupled. CMNT Road Mechanic 2 observed the train moving and asked via radio if they received permission to move. Following the train rolling, CMNT Road Mechanic 2 cut back in trucks to stop the runaway train. CMNT Road Mechanic stated the train did not enter the interlocking and that the train rolled approximately 20-30 feet.

CMNT Road Mechanic 2 did not utilize the quick reference manual during the incident. CMNT Road Mechanic 2 stated there was no particular reason why the runaway was not reported in their report. CMNT Road Mechanic 2 noted they were given ample opportunity to be descriptive in their reports.

Weather

On March 26, 2021, at the time of the incident, NOAA recorded the temperature as 63° F, with clear skies throughout the evening. SAFE has concluded that weather was not a contributing factor in this incident (Weather source: NOAA) – Location: Washington, DC.)

Human Factors

Post Incident Toxicology Testing

At the time of this incident, ROCC, RTRA, and CMNT involved personnel were not removed from service for post-incident toxicology testing due to the non-report of the runaway train event. Based on the investigative findings and Metro's drug and alcohol policy, involved personnel should have been removed from service for post-incident testing. Under WMATA's current Drug and Alcohol Policy and Testing Program Policy Instruction 7.7.3/6, Post-Incident Testing may be performed on employees and contractors whose performance cannot be "completely discounted" as a contributor to an event.

Fatigue

Radio RTC

Evidence of fatigue:

The incident data was evaluated for conditions at the time of the incident to distinguish whether evidence of fatigue was present. The available data indicated no evidence of fatigue. The Controller reported feeling fully alert at the time of the incident. The employee reported experiencing no symptoms of fatigue in the time leading up to the incident.

Fatigue Risk:

The incident data was evaluated 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 employee reported keeping a regular sleep schedule in the days leading up to the incident and worked evening shifts in the days leading up to the incident. The employee was awake for 8.7 hours at the time of the incident. The off-duty period preceding the incident was 16 hours long, which provided an opportunity for 7-9 hours of sleep. The employee reported 9 hours of sleep the night before the incident. This was comparable to the employee's reported usual workday sleep durations. The employee reported no issues with sleep.

Button RTC

Evidence of fatigue:

The incident data was evaluated for conditions at the time of the incident to distinguish whether evidence of fatigue was present. The available data indicated no evidence of fatigue. The Controller reported feeling Fully Alert at the time of the incident. The employee reported experiencing no symptoms of fatigue in the time leading up to the incident.

Fatigue Risk:

The incident data was evaluated 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 employee reported keeping a regular sleep schedule in the days leading up to the incident and worked evening shifts in the days leading up to the incident. The employee was awake for 8.7 hours at the time of the incident. The off-duty period preceding the incident was 16 hours long, which provides an opportunity for 7-9 hours of sleep. The employee reported 9 hours of sleep in the night before the incident. This was comparable to the employee's reported usual workday sleep durations. The employee reported no issues with sleep.

Additional RTC

Evidence of fatigue:

The incident data was evaluated for conditions at the time of the incident to distinguish whether evidence of fatigue was present. The available data indicated no evidence of fatigue. The Controller reported feeling Fully Alert at the time of the incident. The employee reported experiencing no symptoms of fatigue in the time leading up to the incident.

Fatigue Risk:

The incident data was evaluated 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 employee reported keeping a regular sleep schedule in the days leading up to the incident and worked evening shifts in the days leading up to the incident. The employee was awake for 5.7 hours at the time of the incident. The off-duty period preceding the incident was 16 hours long, which provided an opportunity for 7-9 hours of sleep. The employee reported 12.5 hours of sleep the night before the incident. This was comparable to the employee's reported usual workday sleep durations. The employee reported no issues with sleep.

ROCC Assistant Superintendent

Evidence of fatigue:

The incident data was evaluated for conditions at the time of the incident to distinguish whether evidence of fatigue was present. The available data indicated no evidence of fatigue. The Assistant Superintendent reported feeling Fully Alert at the time of the incident. The employee reported experiencing no symptoms of fatigue in the time leading up to the incident.

Fatigue Risk:

The incident data was evaluated 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 employee reported keeping a regular sleep schedule in the days leading up to the incident and worked evening shifts in the days leading up to the incident. The employee was awake for 9 hours at the time of the incident. The off-duty period preceding the incident was 16 hours long, which provided an opportunity for 7-9 hours of sleep. The employee reported 8 hours of sleep the night before the incident. This was comparable to the employee's reported usual workday sleep durations. The employee reported no issues with sleep.

Train Operator (Train ID 122)

Evidence of fatigue:

The incident data was evaluated for conditions at the time of the incident to distinguish whether evidence of fatigue was present. The available data indicated no evidence of fatigue. The Train Operator reported feeling Fully Alert at the time of the incident. The employee reported experiencing no symptoms of fatigue in the time leading up to the incident.

Fatigue Risk:

The incident data was evaluated 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 employee reported keeping a regular sleep schedule in the days leading up to the incident and worked morning and evening shifts in the days leading up to the incident. The employee was awake for 4.7 hours at the time of the incident. The off-duty period preceding the incident was over 48 hours, accounting for the employee's off-duty days. This provided an opportunity for more than 7-9 hours of sleep. The employee reported 11 hours of sleep the night before the incident. This was comparable to the employee's reported usual workday sleep durations. The employee reported no issues with sleep.

Train Operator (Train ID 123)

Evidence of fatigue:

The incident data was evaluated for conditions at the time of the incident to distinguish whether evidence of fatigue was present. The available data indicated no evidence of fatigue. The Train Operator reported feeling Fully Alert at the time of the incident. The employee reported experiencing no symptoms of fatigue in the time leading up to the incident.

Fatigue Risk:

The incident data was evaluated 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 employee reported keeping a regular sleep schedule in the days leading up to the incident and worked day shifts in the days leading up to the incident. The employee was awake for 11.2 hours at the time of the incident. The off-duty period preceding the incident was 14 hours long, which provided an opportunity for 7-9 hours of sleep. The employee reported 7 hours of sleep the night before the incident. This was comparable to the employee's reported usual workday sleep durations. The employee reported no issues with sleep.

RTRA Supervisor

Evidence of fatigue:

The incident data was evaluated for conditions at the time of the incident to distinguish whether evidence of fatigue was present. The available data indicated no evidence of fatigue. The Rail Supervisor reported feeling Fully Alert at the time of the incident. The employee reported experiencing no symptoms of fatigue in the time leading up to the incident.

Fatigue Risk:

The incident data was evaluated 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 employee reported keeping a regular sleep schedule in the days leading up to the incident and worked morning shifts in the days leading up to the incident. The employee was awake for 13.2 hours at the time of the incident. The off-duty period preceding the incident was 16 hours long, which provided an opportunity for 7-9 hours of sleep. The employee reported 8 hours of sleep the night before the incident. This was comparable to the employee's reported usual workday sleep durations. The employee reported no issues with sleep.

CMNT Road Mechanic 1

Evidence of fatigue:

The incident data was evaluated for conditions at the time of the incident to distinguish whether evidence of fatigue was present. The available data indicated no evidence of fatigue. The

Mechanic reported feeling Fully Alert at the time of the incident. The employee reported experiencing no symptoms of fatigue in the time leading up to the incident.

Fatigue Risk:
The incident data was evaluated 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 employee reported keeping a regular sleep schedule in the days leading up to the incident and worked evening shifts in the days leading up to the incident. The employee was awake for 6.7 hours at the time of the incident. The off-duty period preceding the incident was 16 hours long, which provided an opportunity for 7-9 hours of sleep. The employee reported 10.5 hours of sleep the night before the incident. This was comparable to the employee's reported usual workday sleep durations. The employee reported no issues with sleep.

CMNT Road Mechanic 2
Evidence of fatigue:
The incident data was evaluated for conditions at the time of the incident to distinguish whether evidence of fatigue was present. The available data indicated no evidence of fatigue. The Mechanic reported feeling Fully Alert at the time of the incident. The employee reported experiencing no symptoms of fatigue in the time leading up to the incident.

Fatigue Risk:
The incident data was evaluated 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 employee reported keeping a regular sleep schedule in the days leading up to the incident and worked evening shifts in the days leading up to the incident. The employee was awake for 8.7 hours at the time of the incident. The off-duty period preceding the incident was 16 hours long, which provided an opportunity for 7-9 hours of sleep. The employee reported 9 hours of sleep the night before the incident. This was comparable to the employee's reported usual workday sleep durations. The employee reported no issues with sleep.

Since fatigue evidence and risk factors were not present for any of the employees, the biomathematical fatigue modeling application (SAFTE-FAST Web SFC) was not applied.

Findings

- Train ID 122 experienced a stuck holding brake condition approximately 1033 feet outside the Rhode Island Avenue Station platform limits.
- Train ID 122 Train Operator reported the TCD screen reflected a stuck holding brake on 7302-7303, BIE, Zero Speed faults, and HVAC failure.
- The ROCC appointed the RTRA OSC an hour after the incident began.
- Two customers self-evacuated to the roadway. Both returned to the platform without injury.
- The ROCC was in the process of de-energizing third rail power when ROCC received the first report of a customer on the roadway; however, the customer returned to the platform, and power was not de-energized.
- The ROCC de-energized the third rail power for the second customer self-evacuation.
- The Radio RTC did not make third power restoration announcements on OPS1 before restoring third rail power.
- The Radio RTC is a newly certified controller with six months of experience as an RTC.
- The Radio RTC training records indicate the RTC failed their first simulation test required to certify as an RTC.

- A review of the RTC's on-the-job training and test records indicates that the RTC had difficulties multitasking.
- A ROCC Assistant Superintendent noted that the RTC did not finish the simulation in the allotted 20-minute time parameter scoring 80 percent. Days later, the RTC tested with a different ROCC Assistant Superintendent and scored 100 percent on all three simulations.
- A review of the ROCC RTC certification practical test revealed ROCC management administered the same test provided by ROQT, where two out of the three scenarios were identical for the second attempt.
- The Third-Party Safety Officer (TPSO) report does not indicate an unscheduled power restoration for March 26, 2021.
- The RTRA Supervisor stated, "Transit wants that train moved; they say someone's injured on the train." The Radio RTC did not respond to the RTRA Supervisor's radio transmission.
- The ROCC FLO sent OEM EM 27 to Brookland instead of Rhode Island Avenue Station.
- The ROCC FLO called DCFEMS ELO and said, "They just dispatched an ambulance for an OB. The Train is not at the station. It's on the tracks."
- The rescue train coupled on a graded track [downhill slope] behind the disabled train.
- The RTRA Supervisor did not report the accidental coupling and uncoupling of the train consist to the Radio RTC.
- Two RTRA Supervisors arrived on location to support this event; however, one RTRA Supervisor was on the trailing end of the Recovery train preparing to move the consist back to the platform to offload the customers. The other RTRA Supervisor was acting as OSC, Recovery Train Operator to the down train, and Forward Liaison per SOP 1A.
- Based on SAFE interviews and witness statements, the RTRA Supervisor notified CMNT Road Mechanic 2 that Train ID 724 was not coupled. The RTRA Supervisor requested that the CMNT Road Mechanic 2 verify the train was coupled before cutting out trucks on the disabled train.
- CMNT personnel did not observe the initial recovery attempt.
- CMNT personnel reported the recovery train and disabled train were coupled. Once the disabled train cut all trucks, the disabled train rolled free, confirming the recovery train was not coupled.
- Train ID 722 rolled 137 feet before coming to a complete stop after CMNT Road Mechanic 2 cutback in trucks on the disabled consist.
- ARS playback revealed that the Radio RTC, CMNT Road Mechanic 2, RTRA Supervisor, and Recovery Train Operator spoke about the train moving and not being coupled.
- ROCC personnel did not notify the on-duty Assistant Superintendent of the runaway train.
- On March 23, 2021, CMNT management conducted a daily safety briefing with the involved Road Mechanics on reporting and documentation procedures under MSRPH 1.32. SOP 1A
- The RTRA Supervisor Spot Checked the Train Operator of Train ID 122 34 times from January – December in 2020 with no exceptions to report.
- The RTRA Supervisor Spot-checked the Train Operator of Train ID 122 42 times in 2021 and four on March 26, 2021. No significant findings were identified.
- The RTRA Supervisor Spot-checked the Train Operator of Train ID 123 69 times within 2021, with two occurring on March 26, 2021. No significant findings were identified.

Immediate Mitigation to Prevent Recurrence

- RTRA removed Train ID 722 from service for a post-incident inspection.
- CMNT removed the Battery C/B from Train ID 722 for analysis.

- Rail operations will develop instructions and training, where needed, to require “stretch” testing when coupling and minimal acceleration to ensure proper coupling.
- Rail operations will codify its procedures for rolling event criteria as the unintentional movement of any rail car by more than one foot.
- SAFE and the OEM are staffing the ROCC with an Incident Management Official (IMO) on a 24-7 basis to coordinate incident response and assist Fire Liaisons.
- ROCC and SAFE will develop a playbook for any disruptions to service, emphasizing safety and monitoring customer experience.
- SAFE reissued instructions to WMATA staff regarding existing requirements to report safety incidents, such as rolling events.

Probable Cause Statement

The initial probable cause of the incident was that the Battery System C/B in Car 7303 tripped, disabling Train ID 122, which did not relay status information to the TCD console that a C/B was tripped in the respective car due to the system circuit configuration. The TCD faults display would reflect a dead/dark car (total power loss), which would trigger the BIE and apply the holding brake. The holding brake would not release unless the Battery System C/B condition was resolved and subsequently indicated as a stuck holding brake.

Train ID 122 Train Operator indicated there were no C/B’s tripped on their lead car to the Radio RTC. Upon becoming aware of the initial issue, ROCC began troubleshooting efforts with RTRA personnel and later with CMNT Road Mechanic personnel for the initially reported stuck holding brake condition. The extended troubleshooting effort, lack of support personnel and customer communication led to two customer self-evacuations to the Rhode Island Avenue Station platform and a controlled evacuation of 109 customers to the rescue train [Train ID 724].

Contributing Factors

Announcements were not broadcasted on the failure cars [7302-7303] as a result of losing battery power when the Battery System C/B in Train ID 122 tripped. The Train Operator spent time walking through the 8-car consist to update customers, providing a headcount to ROCC, and troubleshooting the train; these activities further contributed to the two-customer self-evacuation event.

Although it was initially reported to the Radio RTC that there were no C/Bs tripped, CMOR IIT post-incident inspection revealed the battery system circuit breaker was in a tripped state.

The lack of a correct emergency response support dispatch to the disabled train further contributed to the self-evacuation. DCFEMS received notification of a stranded train on an elevated structure with “a pregnant passenger aboard requesting EMS… from a train stranded 100 feet outside the platform limits.” However, DCFEMS did not dispatch a full complement of support until 15 minutes later, after the ROCC FLO contacted OUC ELO and corrected a dispatch for an ambulance. This dispatch occurred six minutes prior to the customers being safely evacuated to the platform.

The RTRA Supervisor accidentally coupled and uncoupled the incident train to the disabled train while preparing to evacuate customers without notifying the Radio RTC of their actions. During the recovery of the disabled train, the CMNT Road Mechanic did not verify that the recovery train, Train ID 724 was coupled to Train ID 722 before cutting out the trucks in the disabled consist, resulting in the disabled train rolling 137 feet during the recovery processes. The trains were on

a section of track with a designed grade of -1.72% for 44 feet, which contributed to the disabled train rolling after the trucks were cut out.

The trains appeared to be coupled because the uncoupled recovery train was positioned behind the disabled train on the downgrade. The proximity switch on the front coupler indicated a rail vehicle was present, leading CMNT Road Mechanic 2 to believe the trains were coupled based on the TCD screen indication. The RTRA Supervisor communicated with the CMNT Road Mechanic that the trains needed to be coupled and verified before cutting trucks. This verification was not performed based on the TCD screen indication noted above.

MTPD officers on scene instructed the RTRA Supervisor to participate in a Hot Wash before: 1) the recovery operations were complete, and 2) the incident train was prepared for transport. The RTRA Supervisor was engaged in this Hot Wash while CMNT Road Mechanic 1 and 2 prepared Train ID 722 and Train ID 724 for transport. MTPD did not allow the RTRA Supervisor to leave when they heard reports of the train rolling free. In addition, two RTRA Supervisors arrived on location to support this event; however, one RTRA Supervisor was on the trailing end of the recovery train, preparing to move the consist back to the platform to offload the customers. The other RTRA Supervisor responsibilities and duties included: performing as the OSC, Forward Liaison, and recovery Train Operator; confirming third rail power was de-energized, providing updates to ROCC; incident planning; and participating in the Hot Wash. The second dispatched RTRA Supervisor arrived on-scene and assisted with the on the recovery train operation by acting as a Train Operator on the trailing end of Train ID 123.

A review of the Radio RTC tenure and training revealed the RTC had six months of experience as a certified RTC at the time of the event. The Radio RTC experienced difficulties multi-tasking during the incident, including not responding to other trains and field personnel. The difficulties multitasking was also recorded in previous instances by ROCC management during OJT training. The Radio RTC failed their first RTC Certification Practical administered on February 22, 2021, due to not being able to complete the simulations in the allotted parameters. One of the simulations was 7000 Series Isolation Procedures for Self-Recovery. A review of the second RTC Certification Practical on February 26, 2021, indicated that two of the three simulations were identical to the initial RTC Certification Practical, except for the 7000 Series Isolation Procedures for Self-Recovery, which was substituted with a 7000 series Doors Closed Failure. Note that, although not specifically applicable to initial RTC testing, RTCs are not allowed to be re-certified using the same simulations as initially tested. The RTC controller passed their certification with 100 percent on their second attempt. RTCs are only allowed two attempts to pass with a grade of 85 percent or above before being dropped from the RTC training course.

Recommendations / Corrective Actions

The process will involve the departments' Safety Risk Coordinators to develop Corrective Action Plans (CAPs).

The following are the recommendations and corrective actions identified as a result of this investigation. These recommendations and corrective actions are tracked using WMATA's Safety Measurement System Incidents/Accidents (SMS I/A) Module and are verified by SAFE upon completion. The responsible department is identified in the corrective action code along with the Safety Risk Coordinator. Refer to the SMS I/A Module for additional information

Corrective Action Code	Description	Responsible Party	Due Date
92716_SAFECAPS_ CMNT_001	(RC-1, CF-1) Develop Service Bulletin SBF 107 (7000 Procedure for Checking Battery System C/B Terminal Bolts). Conduct a fleet inspection during Periodic Inspection and submit additional terminal bolt findings to Kawasaki for action.	CMNT SRC	8/31/2021
92716_SAFECAPS_ CENV _002	(RC-2) Conduct a Failure Mode, Effects & Criticality Analysis (FMECA) to determine the impacts of load shedding during emergency events and mitigate high hazard findings to ensure continued communication with customers.	CMOR SRC	8/31/2021
92716_SAFECAPS_ ROCC _003	(RC-3) Reinstruct the RTC's on recovery operations, including taking into consideration track physical characteristics such as track grade per SOP32.	ROCC SRC	8/31/2021
92716_SAFECAPS_ RTRA _004	(RC-4) Evaluate methods to expedite the transportation of RTRA supervision in the event of emergency, outside of using the rail system which may be impacted by the emergency of which requires RTRA supervision.	RTRA SRC	8/31/21
92716_SAFECAPS_ RTRA_005	(CF-3) Include how to check and reset C/Bs on the down car in the 7000 series troubleshooting guide.	RTRA SRC	8/31/2021
92716_SAFECAPS_ CMNT_006	(CF-5, CF-6) Explore providing direct railcar troubleshooting from CMNT personnel rather than through ROCC personnel. Troubleshooting guidance should include road mechanic experience and be provided in real time while CMNT personnel are responding to the scene. Note that the response time could be impacted by systems delays which are the result of the emergency.	CMNT SRC	7/31/2021
92716_SAFECAPS_ RTRA _007	(CF-7) Develop instructions, and training where needed, to require "stretch" testing when coupling – minimal acceleration to ensure proper coupling.	RTRA SRC	8/03/2021
92716_SAFECAPS_ RTRA _008	(CF-7) Codify procedures for rolling event criteria as the unintentional movement of any rail car by more than one foot.	RTRA SRC	4/10/2021
92716_SAFECAPS_ SAFE _009	(CF-8) Provide guidance on the proper process on reporting safety events.	SAFE SRC	6/21/2021
92716_SAFECAPS_ ROQT _010	(CF-9) Conduct a review of ROCC RTRA Quality Assurance/Quality Control Group Standard Operating Procedure to identify gaps in the certification process (e.g., simulation test reflecting the same as previous if failed).	ROQT SRC	8/31/2021
92716_SAFECAPS_ ROCC _011	(CF-9) Standardize how emergencies are communicated to 911 services by ROCC personnel, including using common phrases that do not rely on WMATA terminology that may be misunderstood.	ROCC SRC	7/31/2021
92716_SAFECAPS_ CMNT _012	(CF-10) Develop a lessons learned of this event, including the proper way to ensure couplings occur.	CMNT SRC	7/31/2021

Appendices

Appendix A – VMDS Timeline

Car 7384 Time	Description of Events
17:01:44 hrs.	3rd Rail Power Restored
17:12:14 hrs.	Car Count goes from 8 to 12 (Car 7438) Due to Isolation between 7302 and 7294
17:23:31 hrs.	Car Count goes from 12 to 16(Isolation between 7302 and 7294 Normalized)
17:26:50 hrs.	Uncouple Switch Activated in Car 7438 of Recovery Consist
17:26:51 hrs.	Uncouple Signal Goes High (Uncouple Switch Activated)
17:26:57 hrs.	Train length changes from 16 cars to 8 cars
17:27:48 hrs.	Car 7438 (Recovery Consist) Keyed Down
17:28:59 hrs.	Car 7384(disabled Consist) Keyed up
17:29:52 hrs.	Car 7384(disabled Consist) Keyed Down
17:31:08 hrs.	Brake Cylinder Cutout (BCO) Front Truck 7384
17:31:14 hrs.	BCO Front Truck 7446
17:31:14 hrs.	BCO Rear Truck 7446
17:31:14 hrs.	BCO Rear Truck 7447
17:31:20 hrs.	BCO Rear Truck 7384
17:31:29 hrs.	Car 7438(Recovery Consist) Keyed back up
17:33:16 hrs.	BCO Rear Truck 7302
17:33:28 hrs.	BCO Rear Truck 7385
17:33:28 hrs.	BCO Front Truck 7385
17:33:33 hrs.	BCO Front Truck 7447
17:33:33 hrs.	BCO Front Truck 7295
17:33:33 hrs.	BCO Rear Truck 7295
17:33:54 hrs.	BCO Rear Truck 7294
17:34:22 hrs.	BCO Front truck 7294
17:33:58 hrs.	BCO Front Truck 7302
17:39:14 hrs.	***Motion detected on Car 7384/85***
17:39:43 hrs.	Rear BCO on Car 7446 Normalized
17:39:50 hrs.	Front BCO on Car 7446 Normalized
17:40:11 hrs.	The train comes to a complete Stop after Traveling 137 feet
17:40:22 hrs.	Rear BCO on Car 7447 Normalized
17:40:33 hrs.	Front BCO on Car 7447 Normalized
17:40:42 hrs.	Front BCO on Car 7302 Normalized
17:41:48 hrs.	Front BCO on Car 7385 Normalized
17:41:57 hrs.	Rear BCO on Car 7385 Normalized
17:42:07 hrs.	Rear BCO on Car 7384 Normalized

Car 7384 Time	Description of Events
17:42:16 hrs.	Front BCO on Car 7384 Normalized
17:46:00 hrs.	Train Length Changes from 8 Cars to 16 Cars (Consists Re-Coupled)
17:48:21 hrs.	Coupler Isolated
17:48:57 hrs.	Train length Changes from 16 Cars to 8 Cars due to Isolation
17:50:24 hrs.	BCO Front Truck 7302
17:51:23 hrs.	BCO Front Truck 7385
17:51:23 hrs.	BCO Rear Truck 7385
17:51:23 hrs.	BCO Front Truck 7384
17:50:06 hrs.	BCO Rear Truck 7384
17:51:55 hrs.	BCO Front Truck 7447
17:52:01 hrs.	BCO Rear Truck 7447
17:52:17 hrs.	BCO Rear Truck 7446
17:52:31 hrs.	BCO Front Truck 7446
17:53:23 hrs.	Train Begins to move towards Shady Grove

Appendix B - Interview Summaries

Interview Details

Office of Rail Transportation (RTRA)

Train Operator (Train ID 122)

WMATA employee with three years of experience as a Train Operator and two years of service in a Bus Operator role.

The below narrative summarizes the interview with SAFE and represents the statements made by the involved individual. As such, times and details may present a conflict with the data contained in systems of record.

Based on the SAFE Interview, the Train Operator stated that the train came to a complete stop after servicing Rhode Island Avenue. The Train Operator observed multiple failures on the TCD screen. The Train Operator went through several troubleshooting procedures from the lead car to no avail. The Train Operator stated that the Radio RTC contacted them to ascertain if they needed assistance due to the amount of time it took to get the incident train moving. After troubleshooting efforts with the aid of the Radio RTC. The Train Operator notified the Radio RTC that there was a stuck holding brake on cars 7302 and 7303. The Train Operator was then instructed to respond to cars 7302 and 7303 and release the holding brakes. The Train Operator was also instructed to cut trucks out on cars 7302 and 7303, attempts which were not successful.

The Train Operator stated that when CMNT arrived, they were instructed to make announcements to the customers and provide the Radio RTC with a customer headcount. The Train Operator reported that MTPD arrived on the scene, and a plan was set in place to have a recovery train evacuate the customers. However, MTPD opted to have the customers be transferred from the disabled train to the recovery train and offloaded to Rhode Island Platform. The Train Operator reported that they received a report that personnel exited the train; however, they did not observe any broken seal switches or open doors when walking through the train. The Train Operator of the recovery train stated that an RTRA Supervisor arrived aboard the recovery train and assisted in evacuating customers to the platform at Rhode Island Avenue. Once the customers were cleared, the Train Operator responded to the lead car (7384) in preparation for recovery. The Train Operator reported that they were aware that the train moved unassisted during the first attempt to couple the trains, and they were in the lead car and did not observe any part of the recovery process.

SAFE questioned the Train Operator as to why they did not report the roll-away train at the time of the occurrence. The disabled Train Operator stated they did not fill out an incident report until the next day, and there was no reason why they did not mention the roll-away in their statement.

Train Operator (Train ID 123)

WMATA employee with six months of experience as a Train Operator and nine years of service as a Bus Operator.

The below narrative summarizes the interview with SAFE and represents the statements made by the involved individual. As such, times and details may present a conflict with the data contained in systems of record.

Based on the SAFE interview, Train ID 123 lost speed readouts on approach to Rhode Island Avenue Station. The Train Operator requested permission to enter the stop and proceed to berth at the 8-car marker properly. The Radio RTC told Train ID 123 to stand by. Shortly after, ROCC permitted the train Operator to berth at the 8-car maker properly-car maker. Upon arrival to the platform, the Train Operator noticed an RTRA Supervisor already on the platform.

The Train Operator of Train ID 123 recalled a customer self-evacuated to Rhode Island Avenue platform and the subsequent MTPD arrest of the customer. The Radio RTC gave Train ID 123 permission to move their train up to Train ID 122. The Train Operator notified the Radio RTC that they could not move due to a passenger on the roadway. Third rail power was de-energized and later re-energized. The RTRA Supervisor operated Train ID 123 to Train ID 122 because the Train Operator of Train ID 123 was nervous and felt uncomfortable using coast to car wash to approach the disabled train.

On approach, the RTRA Supervisor coupled to the down train. Train ID 123 Train Operator recalled the RTRA Supervisor stepping over to the other train but could not remember if the RTRA Supervisor uncoupled the trains. MTPD and the RTRA Supervisor evacuated the customers from the disabled train to the recovery train to escort the passengers to the platform. Train ID 123 noted CMNT Road Mechanic and RTRA Supervisor spoke about the train being uncoupled and the statement from the RTRA Supervisor that “this train needed to be coupled.” The CMNT Road Mechanic explained to the RTRA Supervisor that the train is coupled based on the hooks. The RTRA Supervisor stated, “are you sure this train is coupled?” and the CMNT Road Mechanic responded, “yes.”

While standing on the lead car facing the disabled train, Train ID 123 Operator saw the train roll and reported the train was rolling. Train ID 122 was then coupled and transported to Shady Grove Yard. The Train Operator and RTRA Supervisor disembarked at Noma Gallaudet Station.

Rail Transportation Supervisor

WMATA employee with four years of experience as an RTRA Supervisor with 16 years of service in various roles, including Bus Operator and Train Operator.

The below narrative summarizes the interview with SAFE and represents the statements made by the involved individual. As such, times and details may present a conflict with the data contained in systems of record.

“I was at Rhode Island Avenue Station platform and heard a train operator having issues with a stuck holding brake. 15-20 minutes into the event, MTPD arrived and waited to see if CMNT Road Mechanics could get the train moved. MTPD stated, if they could not get it to move, they would take over the scene. Minutes later, MTPD assumed control of the scene. I became the RTRA Forward Liaison. One customer disembarked the train, and MTPD arrested that individual. After that, ROCC removed the third rail power, and I utilized a hot stick and confirmed power was de-energized. Another customer disembarked the disabled train. OEM arrived and placed a WSAD in place and verified that power was de-energized. ROCC gave OEM permission to walk towards the down train to check on the customer. A CMNT Road Mechanic arrived to assist on scene CMNT Road Mechanic troubleshooting the disabled train.

While on the platform, MTPD noted evacuating the customer to the roadway to the platform; I notified ROCC. This plan was subsequently canceled. MTPD then checked on the customer to check for injuries or if the customer required medical attention. MTPD also checked the temperature of the train because power was de-energized. I asked to use a recovery train on the

platform no response from central. OEM removed the evacuation ladder then placed it back. Once MTPD gathered information of the customers' status, third rail power was re-energized, we received permission to use the train at the platform as a recovery train. Once the customer was on the train, we would pull the train back to the platform. I then asked the Train Operator if they were okay to perform the recovery; I asked central can I go with them, and we used the train on the platform to go and assist.

The first plan was to get the customers via recovery train, and another RTRA Supervisor would operate the recovery train back to the platform with the evacuated customers. I assumed operation of the recovery train halfway there because the Train Operator was nervous about operating the train over and down the graded track. Upon arrival, I accidentally coupled the train. I immediately uncoupled the train and ensured I could charge the train back up. We started offloading the customer from the bad train to the good train. I guess, when they got to the end, someone pulled the emergency door and started letting the customers off the train onto Rhode Island Avenue Station platform. The customers were escorted from the lead car of the recovery train down to the trailing end on the Rhode Island Avenue Station platform. MTPD assisted an elderly customer walking with a cane, scared of traversing consist due to the incline, which subsequently held up the remaining passengers. I was going to walk behind the other RTRA Supervisor and escort the customers off the train.

While waiting, the CMNT Road Mechanic started troubleshooting the train. I told the CMNT Road Mechanic don't troubleshoot the train because the train is uncoupled. Don't troubleshoot yet; wait for a minute. I planned to wait until we got the customers off the train, go back, and couple up the train, and make a recovery. The CMNT Road Mechanic then went to the roadway and cut the air valve off for the recovery to get the train to move. The CMNT Road Mechanic comes back on the train; I told them the train is uncoupled, and they said no, it's not, it's coupled. The CMNT Road Mechanic then looked on the ADU screen and said, look, this train is coupled. The RTRA Supervisor stated, look, I don't think this train is coupled; hold off. The CMNT Road Mechanic said the train is okay. Not only that, but it's also the hook. It's not liked the legacy train. All you need is the hook. The RTRA Supervisor stated, you make sure this train is coupled before you start cutting these trucks out. The CMNT Road Mechanic said, man, I got it; the train is coupled.

By that time, MTPD requested the RTRA Supervisor return to the platform. As I am on the platform, MTPD wanted to turn the scene back over to RTRA. At that time, I hear the Train Operator on the recovery train state; the train is moving, the train is moving. I turned around, looked, and saw the bad train had moved away from the recovery train. I asked MTPD, Can I please go? I need to see what's going on up there. They said to hold on one second; they finished what they had to do. They then released me, and I went to the train, took the good train back to the bad train, let central know I coupled the trains. The Two CMNT Road Mechanics cut the trucks again, and we started with the proceed to Shady Grove."

During the Q and A, SAFE asked the RTRA Supervisor to clarify the reason for uncoupling the train. The RTRA Supervisor responded that “it was a judgment call. The plan was to get all the customers on the train and take them back to the platform. I didn't mean to the couple because the train was on an incline. I had to have the train close enough for a customer to step over, for example, strollers, elderly or sick customers. The plan was to pull the train back to the platform.

I didn't want to hard-couple or startle the customer being on the train for an hour and a half. I wanted it close so they can step over and up when they transfer trains. That was my feeling with that.”

SAFE also asked whether it was reported to ROCC when the train was first coupling occurred. The RTRA Supervisor confirmed that this was not reported because it was not intentional. The CMNT Road Mechanic stated the train was coupled via radio because they were ready for recovery. However, the train would need to go back to the platform and was not prepared for recovery.

SAFE also asked the RTRA Supervisor the following questions:

Q: When there was a disparity between CMNT and RTRA, did you communicate?
A: No, there was too much chatter on the radio; I was unable to get through. It was a lot of traffic during an emergency. There were steps not reported to central but let's take our time at this point. Let's relax, and nothing was unsafe at this time.

Q: Were there any radio communication issues?
A: Rhode Island Avenue Station Ave: radio communication was bad; we could barely stay at the station for a duration due to the transmission issues.

Q: When did the train start to roll unassisted over 100 feet? Did it enter the interlocking?
A: I was on the platform when the train moved, talking to MTPD.

Q: Were you on the recovery train when it coupled up the second time?
A: Yes, I did not have to pass any signals to recouple.

Q: How many cars were still on the platform while the customers transferred to the recovery train?
A: One car was on the platform during the recovery process.

The RTRA Supervisor noted the plan would be to use the recovery train to evacuate customers to the platform; we can walk them through the train per MTPD. There was no option to recover the train from the opposite end because of the incline. It's not common practice to offload customers on the roadway as a last resort. I don't think MPTD knew what happened. MTPD did not ask any questions. I recall one power announcement made via radio.

Q: Why was the runaway train event not reported on your statement?
A: I was startled; I didn't know what transpired. I didn't know what the CMNT Road Mechanic did or the Train Operator. I was unsure if they were moving on their own.

Q: Did you have a conversation with CMNT afterward?
A: I wanted to, but I was upset. The other CMNT Road Mechanic stayed on the train the whole time. She was troubleshooting for at least an hour.

The RTRA Supervisor also noted, “when MTPD gets involved, there is a lot of miscommunication. You have to look at it from their perspective; they look at it like they want to get the customers off the train in desperation. We look at it like we have other means to get the customer off the trains. That is where the disparity comes in. They look at it as police, and we look at it as rail support. The train did not separate when it was initially uncoupled. I didn't want the train to go bad with the other train; that is why I uncoupled.”

Rail Operations Control Center (ROCC)

Radio Rail Traffic Controller

WMATA employee with one year of experience as a Rail Traffic Controller and 15 years of service, including a Bus Operator, Train Operator, and Interlocking Operator.

The below narrative summarizes the interview with SAFE and represents the statements made by the involved individual. As such, times and details may present a conflict with the data contained in systems of record.

Based on the SAFE Interview, the Radio RTC reported that they were notified from Train ID 122 that the train was unable to move. The Radio RTC said that they dispatched CMNT from Fort Totten and stated that an RTRA Supervisor was already on the platform at Rhode Island Station. The Radio RTC said that there were several failed attempts to troubleshoot the train. The Radio RTC said that they had to dispatch additional CMNT to assist in the troubleshooting efforts. The Radio RTC stated that there was a report of customers exiting the train and accessing the roadway. The Radio RTC reported preparations to have customers exit the disabled train and walk to the Rhode Island platform with third rail power de-energized. The Radio RTC then stated that a revenue train behind the disabled was instructed to offload and prepare for recovery.

The Radio RTC reported that the first attempt to couple was unsuccessful, causing the disabled train to roll unassisted. The Radio RTC stated that they were notified during the first attempt to couple that the recovery train was successfully coupled; however, the Radio RTC could not remember if CMNT or the RTRA Supervisor advised them. The Radio RTC stated that after the first attempt to couple to the disabled train, they were relieved by an additional Radio RTC that assumed the duties of the Radio RTC and instructed CMNT to attempt another recovery. The Radio RTC reported that the second attempt to recover the train was successful. The Train Operator was instructed to clear Rhode Island Avenue Interlocking utilizing the “Proceed” method. The disabled train was towed to Shady Grove Yard.

During the Q and A, SAFE posed the following question: “Why did the Radio RTC not report the roll-away train at the time of the occurrence?” The Radio RTC responded that the Button RTC wrote the incident report. They did not write the incident report. The Radio RTC also said they did not notice that the information regarding the train rolling away was not in the incident report.

Additional Radio Rail Traffic Controller (RTC)

WMATA employee with five years of experience as a Rail Traffic Controller and (14) years of service in various roles, including a Bus Operator, Train Operator, Utility Interlocking Operator, and RTRA Supervisor.

The below narrative summarizes the interview with SAFE and represents the statements made by the involved individual. As such, times and details may present a conflict with the data contained in systems of record.

Based on the SAFE Interview, the Radio RTC stated that they were initially working on OPS 2 [Blue, Orange, and Silver line console] with a Student RTC. Their student observed the disabled train at Rhode Island Avenue. The additional RTC observed trains begin to bottleneck and offered assistance to the Rail Traffic Controllers on OPS 1. The Radio RTC stated that when they initially arrived at the console, they were only providing support to the Radio RTC on the console. The

additional RTC reported that when they realized how long the process was to move the train, they stepped in to assume duties as the Radio RTC.

The additional RTC stated there was confusion due to MTPD initially requesting to evacuate the customers via the roadway, plans which were then canceled when MTPD opted to have ROCC recover the disabled train. The additional RTC reported that they were told by the Button RTC that the trains were coupled before taking over duties from the Student RTC as the Radio RTC. The additional RTC reported CMNT had permission to cut trucks on the disabled train. They received a report from the operator on the recovery train stating that the disabled train was moving. The additional RTC tried to ascertain if the Train was proceeding, and CMNT reported that they were cutting trucks back in. The additional RTC had all personnel stop and redo the procedures to correctly couple the trains, verify that the cars were coupled, and confirm which cars were coupled. Once the trains were safely coupled, the additional RTC stated that the disabled train was transported to Shady Grove Yard.

SAFE questioned the RTC as to why they did not report the roll-away train at the time of the occurrence. The RTC stated that they did not write nor read the incident report. The RTC noted that the original Radio RTC wrote the incident report and asked to submit the report for approval to the ROCC Assistant Superintendent because the original RTC did not have system access to submit the incident report to the ROCC Assistant Superintendent.

Button Rail Traffic Controller

WMATA employee with three years of experience as a Rail Traffic Controller and 23years of service, including a Bus Operator, Train Operator, Station Manager, RTRA Supervisor, and Interlocking Operator.

Based on the SAFE Interview, the Button RTC stated that Train ID 122 reported a BIE; the Button RTC said that troubleshooting efforts yielded no results to assist the train in moving. The Button RTC notified the on-duty Assistant Superintendent and CMNT. CMNT utilized an application called Fleet Wise to assist in the troubleshooting efforts for the disabled train. The Button RTC was able to identify that the problem cars were 7302 and 7303. After several failed attempts, the Button RTC reported they received a report that a customer exited the train; however, when they monitored the platform camera, they were able to see that the customer made it to the platform at Rhode Island Avenue.

The Button RTC then stated that MTPD reported a second customer had entered the roadway. Third rail power was then de-energized in the area for safety. The Button RTC then said that MTPD requested to perform a recovery with the train behind the disabled train. The Button RTC reported that after the customers were offloaded off of the disabled train, the recovery train was given a permissive block within 2 ft of the disabled train. Two CMNT personnel were on the scene to assist the recovery efforts. The Button RTC stated that there were two attempts to couple the train. According to the Button RTC, the disabled train began to roll free during the second attempt to recover the disabled train. The Button RTC reported that CMNT had to cut trucks back due to a report that the train was rolling free.

During the Q and A, SAFE questioned the Button RTC as to why they did not report the roll-away train at the time of the occurrence. The Button RTC stated that they wrote the incident report and did not know why they did not report the train runaway in the incident report.

ROCC Assistant Superintendent

WMATA employee with four years of experience as a ROCC Assistant Superintendent and five years as a Rail Traffic Controller. The ROCC Assistant Superintendent has (19) years of service in various roles, including a Bus Operator, Train Operator, and Interlocking Operator.

The below narrative summarizes the interview with SAFE and represents the statements made by the involved individual. As such, times and details may present a conflict with the data contained in systems of record.

Based on the SAFE Interview, the Assistant Superintendent stated that they received a notification from the Button RTC stating that Train ID 122 had a stuck-holding brake. The Assistant Superintendent noted that they initially listened to the incident on the handheld radio from the Assistant Superintendent console. Seven minutes into the incident, the Assistant Superintendent responded to the console to assist the RTCs. After several unsuccessful attempts to normalize the disabled train, CMNT arrived on the scene to help. The Assistant Superintendent stated that CMNT requested to self-recover the train but was unsuccessful.

The Assistant Superintendent reported that while CMNT was trying to perform a self-recovery, they received a report from the supervisor that there were customers on the roadway. With this information, the Assistant Superintendent instructed the controllers to de-energize third rail power. At that time, MTPD took over the scene in an attempt to place Warning Strobe Alarm Devices (WSADs) on the roadway and evacuate customers from the disabled train. The Assistant Superintendent stated that MTPD then canceled the evacuation and requested that ROCC recover the disabled train. The Assistant Superintendent indicated that they did not receive any notifications from the RTCs that the train rolled and brakes had to be reapplied. The Assistant Superintendent then reported that they were much later notified that the recovery train was not successfully coupled, and the disabled train rolled away a couple of feet.

During the Q and A, SAFE questioned the Assistant Superintendent as to why they did not report the roll-away train at the time of the occurrence. The Assistant Superintendent stated they were not aware of the roll-away train until April 13th, 2021.

Office of Car Maintenance (CMNT)

CMNT Road Mechanic 1

WMATA employee with 20 years of experience as a CMNT Road Mechanic.

The below narrative summarizes the interview with SAFE and represents the statements made by the involved individual. As such, times and details may present a conflict with the data contained in systems of record.

Based on the SAFE Interview, the CMNT Road Mechanic stated that they were dispatched to Rhode Island Avenue Station to assist with the disabled train. The CMNT Road Mechanic accessed the disabled train via track 2, utilizing FT protection. After troubleshooting, efforts included releasing the holding brakes and cutting trucks on the affected cars, all of which were to no avail. The CMNT Road Mechanic stated that they requested to self-recover the down train and, at that time, customers began to exit the train and enter the roadway to get back to the Rhode Island platform. The CMNT Road Mechanic reported that while they were in the process of performing a self-recovery, ROCC de-energized third rail power due to unauthorized personnel on the roadway.

During that time, an additional CMNT Road Mechanic 2 arrived on the scene and was given instructions to assist in the recovery process. The CMNT Road Mechanic 1 stated that the customers were escorted from the disabled train to the recovery train and offloaded to Rhode Island Avenue platform before the train recovery efforts proceeded. The CMNT Road Mechanic 1 stated that primary communication regarding the disabled train transitioned to the additional CMNT Road Mechanic 2 once they arrived on the scene. The CMNT Road Mechanic 1 reported that they began to cut trucks on the disabled train under the impression that the recovery train was already coupled. The CMNT Road Mechanic 1 began to feel the train moving slowly. The CMNT Road Mechanic 1 stated CMNT Road Mechanic 2 responded to the car they were on, and they were instructed to cut trucks back in. CMNT Road Mechanic 1 noted that a second recovery took place with a successful coupling, and the disabled train was transported to Shady Grove Yard.

During the Q and A, SAFE questioned the CMNT Road Mechanic 1 as to why they did not report the roll-away train at the time of the occurrence? The CMNT Road Mechanic 1 stated they did not witness the runaway because they were positioned in the middle of the disabled consist. The CMNT Road Mechanic 1 received second-hand information that the train was rolling and felt that they could not provide any meaningful information regarding the runaway.

CMNT Road Mechanic 2

WMATA employee with 21 years of experience as a Roadway Mechanic.

The below narrative summarizes the interview with SAFE and represents the statements made by the involved individual. As such, times and details may present a conflict with the data contained in systems of record.

Based on the SAFE Interview, CMNT Road Mechanic 2 stated they contacted ROCC to ascertain if they needed assistance due to the amount of time it was taking to get the incident train moving. The CMNT Road Mechanic 2 was then dispatched from their location at Gallery Place Station to Rhode Island for assistance. When the CMNT Road Mechanic 2 arrived on the scene, they received permission to access the train from the platform via track 1. The CMNT Road Mechanic 2 stated that when they arrived on the scene, ROCC was in the process of evacuating customers from the train with MTPD assistance. However, that procedure was canceled by MTPD, opting to have the customers walk through the disabled train to the recovery train and exit the recovery train on the Rhode Island platform.

Once the customers offloaded from the recovery train, the CMNT Road Mechanic 2 was told the recovery train had already been coupled to the disabled train. The CMNT Road Mechanic 2 stated they began to cut trucks on the disabled train with assistance from a CMNT Road Mechanic 1. While on the Glenmont end of the train, the CMNT Road Mechanic 2 realized that the train was moving without a communication method. The CMNT Road Mechanic 2 began to cut trucks back in to allow the disabled train to stop. The CMNT Road Mechanic 2 was then instructed to respond back to the roadway and observe the coupling of the recovery train and the incident train and notify the Radio RTC of the rail car numbers that were successfully coupled. Once the trains were properly coupled, the CMNT Road Mechanic 2 proceeded to clear Rhode Island Avenue to have the train transported to Shady Grove Yard.

The CMNT Road Mechanic 2 did not provide any reasons why the runaway train was not detailed within their report. The CMNT Road Mechanic noted they had ample time to give a detailed

description of incidents. The CMNT Road Mechanic stated they feel more training drills will assist with keeping CMNT Road Mechanics sharp.

SAFE conducted a second interview with the CMNT Road Mechanic 2 based on new discoveries from the RTRA Supervisor interview and revisited key points iterated by the RTRA Supervisor not noted by the CMNT Road Mechanic 2. The CMNT Road Mechanic 2 stated that they did not communicate with an RTRA Supervisor on the recovery train during the follow-up interview, noting, “I did not recall a conversation with the RTRA Supervisor that the train was not coupled.” The CMNT Road Mechanic 2 asked for clarification on who the RTRA Supervisor was and further stated that the only Supervisor they knew of was the person in front of the recovery train with the Train Operator.

The CMNT Road Mechanic 2 recalled, while in the middle of the consist after the customers were evacuated, that they went back to where the RTRA Supervisor coupled. The RTRA Supervisor said they accidentally coupled the train instead of being at the two-foot mark to transport the customers from the down train [Train ID 122] to the recovery train [Train ID 123]. When asked whether the RTRA Supervisor stated anything about the train being uncoupled, the CMNT Road Mechanic 2 responded, “no, the RTRA Supervisor did not say anything about the train being uncoupled, not to me anyway. I am taking their word. That is when I got permission to cut the trucks in the down train after the customers were evacuated.”

The CMNT Road Mechanic 2 further noted, “I was standing in the doorway. I helped the RTRA Supervisor how to retract the couplers, basically a recovery. I was not there when the coupling happened. I told the RTRA Supervisor that the pins needed to be retracted to isolate the bad car from the good car.”

The CMNT Road Mechanic 2 recalled telling the RTRA Supervisor that “the mechanical hook is the only thing we need to worry about because the hook is the hook.” The CMNT Road Mechanic 2 reported they observed the mating of each coupler's faces and did not see any space between the couplers.

The CMNT Road Mechanic 2 did not recall previously encountering an instance where a train may appear coupled but is not. The CMNT Road Mechanic 2 did not remember the RTRA Supervisor stating to ensure the train was coupled before cutting out the trucks. The CMNT Road Mechanic 2 normalized the train to do the self-recovery after attempting to perform the self-recovery. The CMNT Road Mechanic 2 noted all communication of the train being coupled was with the RTRA Supervisor and Train Operator. There was no communication with ROCC about the train being coupled. The CMNT Road Mechanic 2 said the train rolled approximately 20-30 feet.

Appendix C – Rules and Procedures

Rules and Procedures

Close-In Evacuation From Trains Stopped Behind A Disabled Train:

RTRA Supervisor

SOP 4.5.4.3 The train operator of the rescue train shall stop the train as near to the disabled train as possible without coupling, making required safety stops. In situations where the rescue train above is traveling downhill to the disabled train, the rescue train operator shall place one-wheel chock under the train wheel of the front axle of the rescue train (the wheel closet to the disabled train) to prevent the rescue train from rolling back and coupling to the disabled train (after rescue operation complete). After the rescue train has moved, the train operator of the disabled train shall remove the chocks from the running rail critical step).

Coupling/Uncoupling

SOP 16.5.2.1.6. When coupling to car units on a grade, the cars on the low end of the grade shall be operated to couple to the stationary cars on the high end. When coupling to car units on a grade, cars may be coupled on the high end provided that a secure coupling has been verified prior to cutting out brakes.

SOP 16.5.1.1. Only the ROCC, Operations Supervisors, CMNT Supervisors, and Interlocking Operators shall authorize the coupling/uncoupling of revenue cars.

Customer Self Evacuation from Trains

ROCC

4A.5.2.1.2 Remove power after allowing any nearby trains to move into stations at restricted speed (15 mph) while making a track inspection.

4A.5.2.1.3 If customer(s) is (are) brought back on board, advise the MTPD Dispatcher to make a radio announcement that ROCC is about to restore power. After the MTPD Dispatcher has confirmed that the announcement has been made with no negative response, restore power in compliance with SOP 2, and instruct the operator to operate in MODE 2 to the next station while making a track inspection. Instruct the next train on each track to make track inspections at restricted speed (15 mph) through the affected area.

4A.5.2.3.1 If it is determined that persons have exited the train: Instruct operator(s) and Rail Operations Supervisors and request MTPD to go to the scene, secure the train, and make necessary track inspections. When it is confirmed that tracks are clear, advise the MTPD Dispatcher to make a radio announcement that ROCC is about to restore power after the MTPD Dispatcher has confirmed that the announcement has been made with no negative response; restore power in compliance with SOP 2 and resume operations.

Incident and Accident Reporting

All personnel involved

General Rule 1.32 which states, “employees involved in, witnessing, or informed of an accident or incident, to include near misses, on the Metrorail system shall inform their supervisor, Transit Police, ROCC and/or other appropriate authority as soon as possible, and shall file a written report.

ROCC RTRA Quality Assurance/Quality Control Group Standard Operating Procedure

ROCC

6.3 Certification/Re-certification Exams

6.3.3 For Rail Traffic Controller re-certifications, RTRA QA/QC personnel will review the previous certification practical troubleshooting scenario to ensure the Rail Traffic Controller receives a different troubleshooting scenario.

Standard Operating Procedure (SOP1A) Incident Command

1A.4.8.2 Train Operators are responsible for Operating their trains in compliance with applicable rules and procedures

1A.4.6 Rail Car Maintenance (CMNT) is responsible for providing technical assistance to the WMATA OSC, as required

1A.4.11 The RTRA IC Liaison is responsible for remaining with the OSC in the Command Post to provide guidance on rail transportation issues.

1A.5.1.2.2 Establish a command post at the incident scene if one has not been established.

1A.5.1.2.3 Notify ROCC and MTPD of the location of the ICP or where it is located if moved from its original location

The Assistant Superintendent of ROCC, or designated ROCC Supervisor shall:

1A.5.1.2.4 Establish a WMATA Staging Area for personnel and equipment

1A.5.1.3.2 Coordinate all field activities and requests through the OSC

1A.5.1.3.3 Obtain the location of the Incident Command Post;
1A.5.1.6 Role / Duties of RTRA IC Liaison

The RTRA IC Liaison shall:

1A.5.1.6.1 Remain with the OSC in the Command Post to provide guidance on rail transportation issues.

1A.5.1.6.2 Act as a liaison between ROCC and IC in the command post and provide timely updates to ROCC.

1A.5.2 Securing Scene Once an Emergency Event Occurs:

1A.5.2.2 ROCC establishes a conference line or a radio emergency talk group

1A.5.2.3 ROCC or MTPD arrange transport of RTRA personnel to the scene by MTPD if required to hasten response

1A.5.3.1 ROCC shall dispatch two RTRA managers/supervisors to the scene. The first manager/supervisor to arrive shall be directed to the incident scene to assume the position of the OSC (if no OSCs are assigned) or the RTRA Forward Liaison. When the second manager/supervisor arrives, ROCC shall direct the RTRA manager to go to the Command Post and assume the RTRA IC Liaison role.

1A.5.4 Management of the Incident:

1A.5.4.2 OSC will confirm over the radio that they have linked up the RTRA I

1A.5.4.5 OSC secures the scene and establishes staging area.

Recovery Train Operations Restrictions

32.5.1.2 The following criteria shall be applied to all recovery train operations: The recovery train shall push the disabled train upgrade or pull the disabled train downgrade to the next station for off-loading customers. This results in a recovery train always being on the low side of the grade to prevent the disabled train, with brakes cut out and customers on board, from uncoupling and rolling away.

Rail Operations Control Center Procedures

32.5.2.7 After the coupling is complete, request the operator of the recovery train to check the operating console's train identity to ensure that it has not changed (If the console's train identity has changed, or if head/tail lights extinguished between the disabled/recovery trains, trains are not totally isolated) and to verify with the operator, by specific car number, that all brakes in the disabled train have been cut-out and verified by illuminated green brake indicator lights.

Appendix D - Third-Party Safety Official Daily Report

Third Party Safety Official Daily Report

March 26, 2021

Intervention Overview

Shift	Operations Desk	RTC Position	Power Restorations		TPSO Interventions
			Scheduled	Unscheduled	
1st – Day 0500-1300	#1	Button	0	0	0
		Radio	0	0	0
	#2	Button	0	0	0
		Radio	0	0	0
	#3	Button	0	0	0
		Radio	0	0	0
2nd – Mid 1300-2100	#1	Button	0	0	0
		Radio	0	0	0
	#2	Button	0	0	0
		Radio	0	0	0
	#3	Button	0	0	0
		Radio	0	0	0
3rd – Owl 2100-0500	#1	Button	1	0	0
		Radio	0	0	0
	#2	Button	4	0	0
		Radio	0	0	0
	#3	Button	7	0	1
		Radio	0	0	0
Total Scheduled (All Shifts)			**12**		
Total Unscheduled (All Shifts)				**0**	
Total Interventions (All Shifts)					1

Intervention Types:

Type A	Written Observation or Recommendation by TPSO
Type B	Oral Coaching From TPSO
Type C	Restoration Halted, Resumed with Assistant Superintendent
Type D	Restoration Halted, Resumed with General Superintendent, TRPM

Attachment 1 - TPSO Daily Report page 1 of 2

Intervention Summary:

Type A Interventions (1)

- RTC called breaker that was not listed on PRVR. TPSO indicated error. RTCs confirmed correct breaker (Ops 3).

Type B Interventions (0)

Type C Interventions (0)

Type D Interventions (0)

Recommendations:

Notes:

Attachment 1 – TPSO Daily Report page 2 of 2

Appendix E - Debriefing and Critique- 49 CFR 239

Department of Safety & Environmental Management (SAFE)

Rhode Island Avenue Station Evacuation & Runaway Train Incident – 49 CFR 239
Debriefing Session
Friday, April 23, 2021
2:00 pm – via Microsoft Teams

Meeting Notes (Updated 5/6/2021)

The Department of SAFE facilitated a debriefing session regarding the Rhode Island Avenue Station Evacuation and Runaway Train Incident that occurred on March 26, 2021 with the following in attendance:

Washington Metropolitan Area Transit Authority (WMATA)

- Fire Marshal (SAFE)
- Assistant General Superintendent (CMNT)
- Vice President & Chief Mechanical Officer (CMOR)
- Director (ROCC)
- Safety Officer, Investigations (SAFE)
- Director, Rail Line Operations (RTRA)
- Director, Rail Operations Control Center (RTRA)
- Vice President, Rail Infrastructure Maintenance & Engineering (RAIL)
- Executive Vice President & Chief Safety Officer (SAFE)
- Deputy Chief, Safety Assurance (SAFE)
- Executive Vice President & Chief Operating Officer (COO)
- Assistant General Superintendent, Rail Car Maintenance (CMNT)
- Manager, Investigations (SAFE)
- Safety Operations Manager (SAFE)
- Assistant General Superintendent, Rail Car Maintenance (CMNT)
- Vice President, Rail Operations Control Center & Strategic Transformation (ROCC)
- Vice President & Chief (MTPD)
- Director, Office of Emergency Management (OEM)
- Investigation Program Specialist (SAFE)
- Assistant Director, Rail Operations Control Center (ROCC)
- Senior Administrative Assistant (SAFE)
- Vice President, Rail Transportation Administration (RTRA)
- Vice President & Assistant Chief Safety Officer (SAFE)
- Senior Vice President (BPDV)

District of Columbia Fire & Emergency Medical Services (DCFEMS)

- [redacted] Battalion Chief
- [redacted] Battalion Chief

Washington Metrorail Safety Commission (WMSC)

- [redacted] Emergency Management Specialist/Safety Officer
- [redacted] ATC SME
- [redacted] Rail Vehicle SME
- [redacted] Traction Power SME
- [redacted] Chief Operating Officer
- [redacted] Communications Director
- [redacted] Investigations
- [redacted] Operations

Attachment 1 - Debriefing and Critique- 49 CFR 239 page 2 of 8

Purpose

The purpose of 49 CFR 239 is to reduce the magnitude and severity of casualties in railroad operations by ensuring that railroads involved in passenger train operations can effectively and efficiently manage passenger train emergencies.

Specific to this incident, today we will conduct a debrief and critique session to determine the effectiveness of emergency preparedness activities and improve/amend current processes with the information developed, following the spirit of 49 CFR 239.

Overview of Incident

On Friday, March 26, 2021 at 1542 hours, train 122, Red line, track 1 toward Glenmont became disabled with 109 patrons on board incident train approximately 100 yards from the end of the Rhode Island Avenue platform (Chain Marker 176+00). Train 122 experienced a tripped circuit breaker that disabled the train. A delay in response and rescue, led to two patrons self-evacuating that expanded the total response time. Eventually, all 109 patrons egressed directly to the station platform via a recovery train.

While attempting to recover the disabled train, the recovery train properly coupled to train 122 before the trucks were cut out in the disabled consist but the train operator hit the uncouple button. This resulted in the disabled train rolling 137 feet during the recovery process. No injuries were reported as a result of this event.

A pictorial view and timeline of the incident area (B04 Rhode Island Avenue) was shown and discussed.

Evacuation

All 109 passengers were evacuated on the station platform at Rhode Island Avenue. Two passengers reported injury. First was the result of anxiety and the second was shortness of breath. Both were treated at the scene; no transport required.

Discussion Points

Request for emergency response and immediate medical assistance (MTPD, DCFD)

MTPD Vice President & Chief – First audio to MTPD was at 1548 notification was for individual on the train tracks. Additionally, according to MTPD records the timeline displayed within the PowerPoint is not accurate please correct. As recorded by MTPD, the first self-evacuation took place at 1618, 5 minutes later the second self-evacuation occurred.

SAFE Fire Marshal – Manager of Investigations will connect with Chief of MTPD to correct the timeline of events.

Attachment 1 - Debriefing and Critique- 49 CFR 239 page 3 of 8

MTPD Vice President & Chief – 100 yards to the platform in 4 minutes was not quick enough. It would have been a faster response if two officers were available for the 109 passengers. This is by no fault of the operator that there was a break in communications. Also, with one rail supervisor on the scene to power up & down there should have been another for better communication. There were three learning points identified as a result of this incident.

1) To get a better response there should be two police officers available,
2) There is a need for a second rail supervisor, and
3) There should be better communication between the ROCC and incident command.

DCFEMS [redacted] – DC fire was notified late; approximately one hour after the beginning of the reported incident. When notified they were told of an injured or ill passenger. The call was for assistance but no direct or clear instructions of what was needed were given. Getting notification through the information flow is an issue. So, to help alleviate this his team is working on a response plan for the unknowns such as in this case. This will be placed in a response package. Also noted was getting proper resources was not available. They had to wait to find out what was needed to be done and at that point the longer passengers have wait on the train this creates a risk of the self-evacuation which is a problem and what took place in this incident. To better understand how they respond please know that DC Fire has a set protocol before they can enter the track bed: third rail power must be down and WSADs should be available before engagement. Although they were called late one person was evaluated, after that no other assistance was required.

SAFE – A SOP that will cover across the regions to standardize protocols for all responders involved is currently being created. Thanks Chiefs of MTPD and Auth for input.

DCFEMS [redacted] – Agreed with Chief Auth's account and added they should have been better aware of the information and there should be better communication moving forward.

Train operator communications with the passengers on board (RTRA)

RTRA Director, Rail Line Operations – Initially the train operator completed troubleshooting based on what was seen on the screen. He was instructed to go back to cut the holding brakes out. He went to troubleshoot making announcements to patrons along the way. After exhausting all troubleshooting tactics, he returned to the lead car at which time all the power went down and there were no further communication capabilities to notify passengers of instructions. A road mechanic from car maintenance reported to the scene at this time.

WMSC [redacted] – Inquired about on-board communications not being available after the power was reenergized and third rail power was down. QUESTION: Is there a backup system in place?

Attachment 1 - Debriefing and Critique- 49 CFR 239 page 4 of 8

CMOR Vice President & Chief Mechanical Officer – Not able to hear question clearly; Moses responded.

CMNT Assistant General Superintendent – Due to car 7303 battery circuit breaker tripping communications did not work. A restart should have resolved this, however, due to the extended time of incident this caused an issue and took them all out.

SAFE Fire Marshal – How long is battery life?

CMOR Vice President & Chief Mechanical Officer – 7ks have a one-hour battery life. The battery tripped, therefore there was only signal on the first and second cars; the third car and beyond had no transmissions. The original instructions were of holding brakes and there were six to seven major faults noted. The road mechanic time should also be noted (?) as she reported in a timely manner to assist with the incident. Mike Hass discovered two command faults where one was to implement self-recovery and in the process of doing this learned that the road mechanic was completing such task. Upon further review it was noted that there was an overheated loose breaker on the back of the train. At the time, inspection of this area was not a part of the inspection process. However, since this incident staff uses a heat gun to scan to see if overheating has occurred to prevent future issues.

Self-evacuation and Rescue of passengers (MTPD)

MTPD Vice President & Chief – As mentioned previously there should have been two officers on the train at 1618 for improved communications. The recovery train arrived to transport the passengers to the platform. Of the 109 passengers, MTPD staff was able to collect the names and information of 70 passengers of which the Lynn Bowersox's Communications team contacted with apologies and care/concern. There were two injuries reported and they were for anxiety and the other was for shortness of breath. No transport.

SAFE Fire Marshall – There were two self-evacuations and 107 entered the recovery train and were transported to the platform.

De-energization of third rail power in the event vicinity (RTRA, ROCC)

ROCC Assistant Director – First notification was at 1617 by unit 18. This notification was for a report of a patrons on the roadway. The second notification was that the patrons was on the platform. During the first notification power was not removed, however, power was removed when the operator reported this second patrons in the roadway.

RTRA Director, Rail Line Operations – RTRA supervisor hot-sticked.

Attachment 1 - Debriefing and Critique- 49 CFR 239 page 5 of 8

Actions on troubleshooting the disabled 7000 series train (CMNT, ROCC, RTRA)

CMOR Vice President & Chief Mechanical Officer – If reported accurately originally, the operator could have troubleshooted the right problem. Operator and road mechanic should know what is actually on the screen. QUESTION: Why would the road mechanic perform coupling for a second time?

RTRA Director, Rail Line Operations – The train operator will do what they are told by our ROCC and in this case he was told to cut out the tracks prior to holding the brake.

ROCC Assistant Director – Correct. Operators will comply with the ROCC instructions.

Actions to coordinate train traffic around the incident area to avoid congestion (ROCC)

ROCC Assistant Director – Single tracking was implemented; there was miscommunication between the superintendent and the on-duty command; and power should have been down.

SAFE Fire Marshall – To be clear single tracking was implemented; instruction to turn back trains was given. Power was back up after evacuation of patrons was gone.

ROCC Assistant Director – Seesaw movement was performed once patrons were notified.

The events surrounding the rescue/recovery/removal of the disabled train ensued past 1700 hours (CMNT, RTRA)

RTRA Director, Rail Line Operations – Supervisor took over the train. He accidentally coupled the train to the disabled train but once the mistake was realized correction was made. The 109 passengers were then escorted to the recovery train. Car mechanic noticed that the train was not coupled. Supervisor returned to the platform, jump back on train notify central of the pull-a-part of the undesired couple. Procedures and a retry was conducted and once clear of the interlocking train was instructed to move to Shady Grove.

CMNT Assistant General Superintendent – In this incident the operator was unable to notice that the trains were not properly coupled as it was flush any positioning of the trains you could not tell.

CMOR Vice President & Chief Mechanical – Based on the information given road mechanic completed task properly. QUESTION: Why attempt to cut? …after self-recovery.

SAFE Fire Marshall – What can we do to make sure procedures are in place and followed?

Attachment 1 - Debriefing and Critique- 49 CFR 239 page 6 of 8

CMOR Vice President & Chief Mechanical – Incident command should give accurate instructions in the beginning.

SAFE Fire Marshall – To better grasp the understanding of the proper procedures that should be performed by all parties involved a future meeting will be set for the ROCC, SAFE, CMNT and RTRA.

Immediate Mitigation Actions (SAFE)

SAFE Director, Rail Line Operations – Gave a quick read of the Immediate Mitigation Actions noted on the PowerPoint presentation (see attachment).

ROUNDTABLE

RTRA Director, Rail Line Operations – On Wednesday, April 21, 2021, 'Reverse Stretch Training' began, with two sessions per day. As of this meeting, a combination of approximately 110 operators and supervisors have been trained. A few staff members of the WMSC attended (today) Friday, April 23, 2021. Training will continue to reach required personnel.

MTPD Vice President & Chief – Informed meeting attendees about 'Joint Supervisor's Training for First Responders' that is open to both WMATA employees and external partners.

WMSC [redacted] – Made inquiry to CMNT [redacted] concerning the 'unique' way that the PA system failed: Can CMNT staff map out features and create procedures to address before another occurrence?

SAFE Vice President & Chief Mechanical – Actions have already begun to create and implement process(es) and all parties will be notified once they are underway.

BPDV– Submitted the following **(5/3/2021 @ 7:37pm)**:

- RTRA should verify that all operators have been certified on 7K series trains.
- CMNT and RTRA should put together a list of critical failures displayed on the TDD screen that require self-recovery. (Look at the data and prioritize).
- Ensure that every operator is familiar with self-recovery operations for 7K series trains.
- Ensure that ROCC receives the same information to assist them in self recovery operations.
- Also have terminal supervisors have discussions with operators, when time allows, on self-recovery operations.

Closing Remarks

SAFE Executive Vice President & Chief Safety Officer – Thanks Fire Marshall for 'excellent, well run' meeting. As well as 'Thanked' attendees for their time and feedback. Gave assurance that action will be taken using the meeting notes as a guide. Once a plan is in place, SAFE will circle back to all with updates.

SAFE Fire Marshall – Thanks everyone for their participation and support. Also, announced the next full scale exercise that is scheduled for Sunday, May 16, 2021 at Branch Avenue.

Lessons Learned and Follow-up

1. Better coordination on-scene among CMNT, RTRA, the ROCC, and incident commander when troubleshooting any rail vehicle.

   Action Owner: CMNT, RTRA, ROCC, and MTPD.

2. New SOP for jurisdictional 'disabled train' responses would have been useful in conjunction with this incident. This is currently in development within the COG.

   Action Owner: SAFE

3. Discussion points (page 3) - Discrepancy in incident timeframe, coordinate needed among SAFE and MTPD.

   Action owner: SAFE

4. MTPD officers aboard the train would have greatly assisted in this incident. This is a common finding from other recent disabled train incidents.

   Action Owner: MTPD

5. Reverse stretch training would has assisted in this incident and has begun at the time of this debriefing.

   Action Owner: RTRA

6. WMSC has requested follow-up on the unique circumstances of the PA system failure. CMNT staff are to map out the features and create procedures to address this matter.

   Action Owner: CMOR

Attachment 1 - Debriefing and Critique- 49 CFR 239 page 8 of 8

Appendix F – ROCC Incident Report

View Approved Incident Report

INCIDENT ID: 2021085RED5

DATE	TIME	LINE	ITEM
2021-03-26	1536	Red	5

LOCATION (STATION/YARD)
Rhode Island Ave-Brentwood (B04)

LOCATION/CHAIN MARKER (If Applicable)
Track one

REPORTED BY
Operator [redacted] #023886

TRAIN ID	DIRECTION	TRACK NUMBER	DEPTS NOTIFIED
122	O/B	1	Everbridge Alert/Messaging

CAR NUMBERS (XXXX-XXXX)
Lead Car

7446-7447	7295-7294	7302-7303	7385-7384
Caused Issue ☐	Caused Issue ☐	Caused Issue ☑	Caused Issue ☐

TRBL CODE
BRAK-BRAKE MALFUNCTION

RESP CODE
CMD

TYPE INCIDENT
Stuck Brake

ACTION PLAN
Dispatch CMNT, Dispatch RTRA Supervisor, Offload, Cut Trucks, Single Track, Evacuate Customers,

DELAYS IN MINUTES

LINE	INCIDENT	TRAIN	TOTAL DURATION
34	102	150	0

TRIPS MODIFIED

PARTIAL	GAP TRAIN	LATE DISPATCHES	REROUTED	NOT DISPATCHED	OFFLOADS
10	0	0	0	0	5

FIVE PRIMARY CONSOLE INDICATIONS

BCP	BRAKES ON ILLUMINATED	ALL DOORS CLOSED ILLUMINATED	AUTO\MANUAL ILLUMINATED	BPP
Yes	Yes	Yes	MANUAL	No

INCIDENT CHRONOLOGY

TIME	DESCRIPTION
1536	Train ID 122 track one leaving Rhode Island Avenue reported the train BIE and a stuck holding brake while in the interlocking. ROCC instructed train ID 122 operator to key down, key up and attempt to recharge. CMNT [redacted] and RTRA Supervisor [redacted] Unit 18 dispatched. ROCC Assistant Superintendent, CMNT, ROIC, and all concerned personnel notified.

Attachment 1 – ROCC Incident Report Page 1 of 3

View Approved Incident Report

1539	Train ID 122 operator reported the train charged unable to move. ROCC requested Train ID 122 operator to report what the TCD screen reads. Train ID 122 operator reported the TCD screen shows a stuck holding brake on car#7302-7303. ROCC instructed train ID 122 operator to make announcements and go to car #7302-7302 to cut out the holding brakes and confirm on the console.
1548	Train ID 122 operator reported the holding brake cut out on cars#7302-7303. ROCC instructed Train 122 operator to return to the lead car and attempt to get a brakes off.
1550	Train ID 122 operator reported unable to get a brakes off. ROCC instructed Train ID 122 operator to return to cars #7302-7303 and cut trucks.
1553	CMNT [redacted] on the scene to assist.
1557	Train ID 122 operator reported trucks cut out on car #7302-7303. ROCC instructed Train ID 122 operator to return to the lead cab and break the Power Knockout seal confirming illuminated on the console.
1601	Train ID 122 Operator reported Power Knockout broken on the lead car #7446 train unable to move. CMNT [redacted] on the train troubleshooting. Train 126 holding track one Noma for trains to clear single tracking.
1606	CMNT [redacted] requested permission to enter the roadway to perform self recovery under Foul Time.
1610	Train ID 126 first train to single track from NoMA to Fort Totten utilizing track two picking up train 123 customers for service towards Glenmont. Several trains turned in various locations for scheduling ending the line delay.
1616	RTRA Supervisor [redacted] Unit 18 reported a customer self evacuated to the roadway and is back on the platform at Rhode Island Avenue.
1625	Trian ID 124 granted an Absolute Block back to the platform track one NoMa to offload for service in the direction of Shady Grove.
1630	CMNT [redacted] reported unable to perform self recovery. ROCC instructed Train ID 123 to offload at Rhode Island Avenue to prepare for recovery.
1636	Customer self evacuated from the train. ROCC de-energized third rail power track one Rhode Island Avenue to remove customers from the incident train.
1639	ROCC granted RTRA Supervisor [redacted] Unit 18 permission to enter the roadway under Foul Time to hot stick and confirm power down.
1640	RTRA Supervisor [redacted] Unit 18 reported the second customer safely on the platform Rhode Island Avenue and power down at chain marker B1-166+00.
1654	MTPD requested power restored to utilize train ID 123 track one Rhode Island Avenue to assist with removing the customers from the incident train back to the platform.
1701	Power restored track one Rhode Island Avenue. ROCC instructed train ID 123 to proceed within two feet of the down train under a permissive block.
1706	Train ID 123 arrived within two feet of the down train. Customer evacuation procedures in effect. MTPD on the scene. RTRA Supervisor [redacted] deemed the RTRA Forward Liaison. SOP 1A in effect.
1716	RTRA Supervisor [redacted] Unit 18 reported 109 customers safely evacuated from the down train onto the platform Rhode Island Avenue.
1718	Train ID 104 arrived at Rhode Island Avenue to pick up the incident customers from train ID 122 ending the longest customer delay.
1720	CMNT [redacted] and DC Fire Department arrived on the scene.
1744	CMNT [redacted] requested to utilize train ID 123 for recovery. ROCC instructed train ID 123 to proceed with caution to make an add to the down train.
1746	Train ID 123 operator reported cars #7384 and #7438 coupled.

Attachment 1 – ROCC Incident Report Page 2 of 3

View Approved Incident Report

1752	CMNT [redacted] reported trucks cut out on train ID 122 consists. ROCC instructed Recovery Train ID 123 to perform a rolling test to verify rolling freely under a permissive block.
1758	Recovery train ID 123/723 and incident train ID 122/722 moving under a permissive block to clear the interlocking at Rhode Island Avenue.
1806	Train ID's 723 and 722 moving towards Shady Grove under a permissive block. Normal service resumed.

MAXIMO TICKET#
8531024

REPORT PREPARED BY	NAME	CLICK TO SIGN
RADIO CONTROLLER 1		
BUTTON CONTROLLER 1	[redacted]	✓
RADIO CONTROLLER 2		
BUTTON CONTROLLER 2	[redacted]	✓

SUPERINTENDENTS OR ASSISTANTS SECTION

ADDITIONAL FOLLOW-UP CORRECTIVE ACTIONS OR REMARKS	
FOLLOW-UP INFORMATION OBTAINED FROM SUPPORT DEPARTMENTS	
NOTIFICATIONS/PAGE GROUPS	#1/CEO ☐ #2/DGM &BELOW ■
ADDITIONAL NOTIFICATIONS MADE BY PHONE	SAFETY [redacted]

APPROVED BY	NAME	CLICK TO SIGN
REPORT APPROVED BY SUPT. OR ASST SUPT.	[redacted]	✓

Attachment 1 – ROCC Incident Report Page 3 of 3

Appendix G – RTRA Corrective Actions

From: [redacted]
To:
Subject: Fwd: Request for Information - Supervisor [redacted] - March 26, 2021 Rhode Island Avenue - Runaway Train/Customer Self Evacuation/ Controlled Evacuation
Date: Sunday, October 17, 2021 12:04:14 PM

When I get back to a computer I will PDF and upload. This is the email thread
[redacted]

From: [redacted]m>
Sent: Thursday, May 20, 2021 16:47
To: [redacted]
Cc: [redacted]
Subject: RE: Request for Information - Supervisor [redacted] - March 26, 2021 Rhode Island Avenue - Runaway Train/Customer Self Evacuation/ Controlled Evacuation

Good Afternoon Mr. [redacted]
This email is to inform you of the corrective actions taken in the case of the disabled train rolling back on March 26, 2021 with Supervisor [redacted] on the scene. Supervisor [redacted] has been interviewed and verbally reinstructed on procedures as far as reporting all unusual occurrences to ROCC and then documenting those occurrences in greater detail on incident reports. RTRA has also partnered with the Rail Operations Quality Training Department and over 660 train operators and Supervisors have been trained on the reverse stretch procedure. We also advised Supervisor [redacted] to request additional supervisory support via ROCC or his Division Management Team during emergency situations. If there is anything else I can help you with please let me know.

[redacted]
Assistant Superintendent
Glenmont Rail Yard
[redacted]
Silver Spring, Md., 20906

[redacted] – Office
[redacted] - Cell

From: [redacted]
Sent: Thursday, May 20, 2021 4:16 PM
To: [redacted]
Cc: [redacted]
Subject: Request for Information - Supervisor [redacted] - March 26, 2021 Rhode Island Avenue - Runaway Train/Customer Self Evacuation/ Controlled Evacuation

Attachment 1 – RTRA Corrective Actions Page 1 of 2

Mr. [redacted] -

According to our phone conversation at 1335 hours, please provide SAFE with RTRA's verbal reinstructions discussed with Supervisor [redacted] associated with March 26, 2021, Rhode Island Avenue Runaway Train, Customer Self Evacuation, Controlled Evacuation, and Mechanical failure events.

As discussed, there is no written report for Supervisor [redacted] and Train Operator [redacted] did not play a role in the event.

With appreciation,

[redacted]

Transit Safety Investigator

Department of Safety and Environmental Management

Washington Metropolitan Area Transit Authority

[redacted]

[redacted]

Office: [redacted]

Cell: [redacted]

Fax: [redacted]

Email [redacted]

Attachment 1 – RTRA Corrective Actions Page 2 of 2

Appendix H – Incident Response Management

M E M O R A N D U M

SUBJECT: Incident Response Management DATE: April 10, 2021

FROM: GM/CEO – Paul J. Wiedefeld

CC: Executive Management Team

TO: Board of Directors

Following extensive after-action reviews on two related rail incidents that occurred on March 26, 2021, I have taken both immediate actions and developed a number of larger organizational changes to the way we manage incidents that will apply to all rail, bus, paratransit and certain police incident responses.

The incidents of March 26th

Disabled Train

Train 122 became disabled on the Red Line about 100 yards from Rhode Island station platform, just before 4:00 pm, with 109 passengers on board. While all passengers were safely discharged on the platform without injury, a number of failures occurred during the recovery process, including:

- The cause of the mechanical failure, initially thought to be a stuck brake, was not easily remedied yet failed to trigger appropriate internal notifications and incident response to support our customers who were onboard for 90 minutes
- Communications between the ROCC and the field were inadequate regarding recovery efforts
- While the train operator walked the train to communicate the original delay to customers, the announcement system was not operative due to a power outage and updates to passengers were not provided timely, contributing to decisions by two passengers to self-evacuate
- MTPD was not notified timely and therefore did not board the train to lend aid and assist passengers

Train Rolling Event

After passengers safely disembarked at the station, employees began the process of coupling the disabled rail cars for towing to the yard. During that time, the disabled train unintentionally rolled approximately 137 feet at a speed

Attachment 1 – incident Response Memorandum page 1 of 3

of less than five mph before an employee applied the hand brake, bringing the train to a stop.

While no employees were injured, nor was there equipment damage, rail operations personnel at the scene failed to report the train rolling to ROCC or the Safety department (SAFE). The incident was discovered by WMATA safety employees while listening to audio recordings in the normal course of their post-incident review of the disabled train. Following confirmation of the discovery on April 8th, WMATA's SAFE department reported the incident to both WMSC and FTA, in compliance with FTA regulations (49 CFR part 674) and WMATA's Agency Safety Plan, as it met the criteria for "Runaway" train.

Immediate actions

To put in place safeguards while organizational changes at the ROCC improve communications and coordination, the following changes are effective today:

- Rail operations will develop instructions, and training where needed, to require "stretch" testing when coupling – minimal acceleration to ensure proper coupling
- Rail operations will codify its procedures for rolling event criteria as the unintentional movement of any rail car by more than one foot
- SAFE and the Office of Emergency Management (OEM) will position staff in the ROCC on a 24-7 basis to coordinate incident response and assist Fire Liaisons
- ROCC and Safety will develop a playbook for any disruptions to service with an emphasis on assuring safety and monitoring customer experience
- SAFE will reissue instructions to WMATA staff regarding existing requirements to report unusual occurrences, such as rolling events

Permanent actions

As we reviewed these incidents, it became clear to me that additional steps are needed to achieve our organizational commitment to a "Safety Trumps Service" operating ethos. In addition to continuing the changes underway at ROCC, we are lowering the threshold for emergencies to be defined as any train, bus or paratransit vehicle with passengers that cannot operate and assigning the responsibility of triggering emergency response to professional emergency management staff. Importantly, we are moving related incident management functions to the Safety department and making them the lead

Attachment 1 – incident Response Memorandum page 2 of 3

internal authority to manage emergency incidents. Together, these actions move us another step forward toward strengthening a culture of safety within our operations.

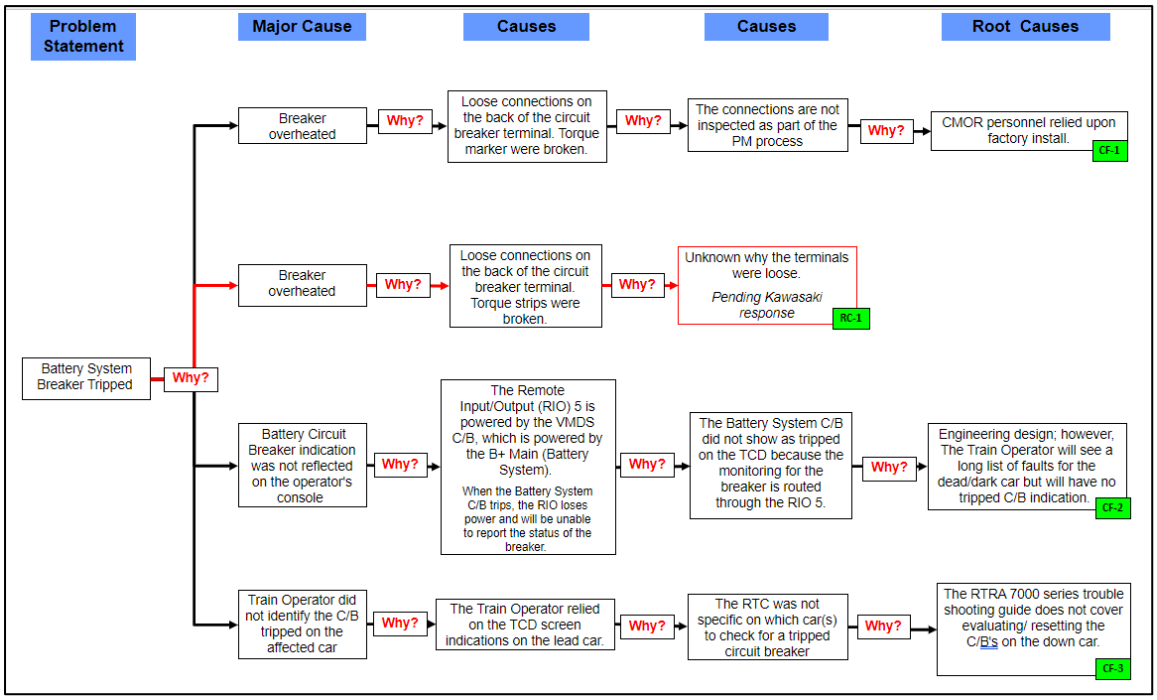
By Monday, all incidents of trains, buses, and paratransit vehicles disabled for any reason and for any amount of time will qualify for a new, lower threshold for internal notifications of all departments – SAFE, RAIL, BUS, CSCM, and MTPD.

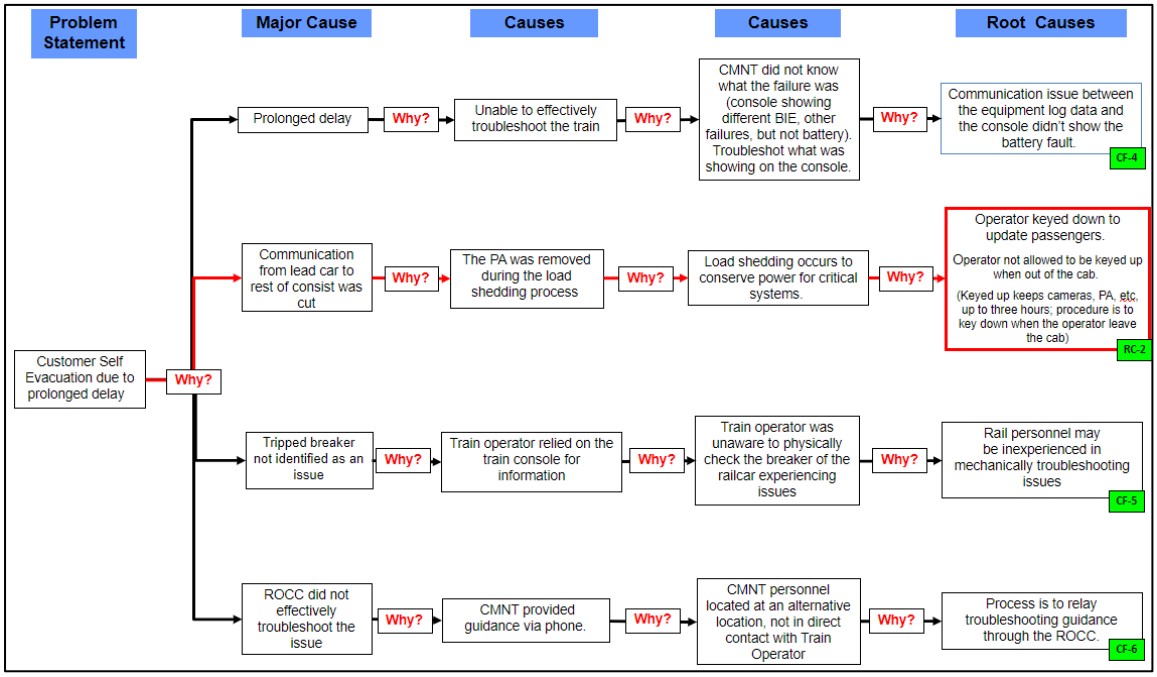
With the move of non-law enforcement OEM functions to SAFE, I am placing OEM/SAFE staff in a clear position of authority over operations when engaging in incident response, while also improving internal transparency. To that end, EVP/CSO Theresa Impastato will also lead the internal work needed for finalizing SOP1a, the procedure that guides incident response, and seek WMSC concurrence that the revision satisfies the corrective action plan.

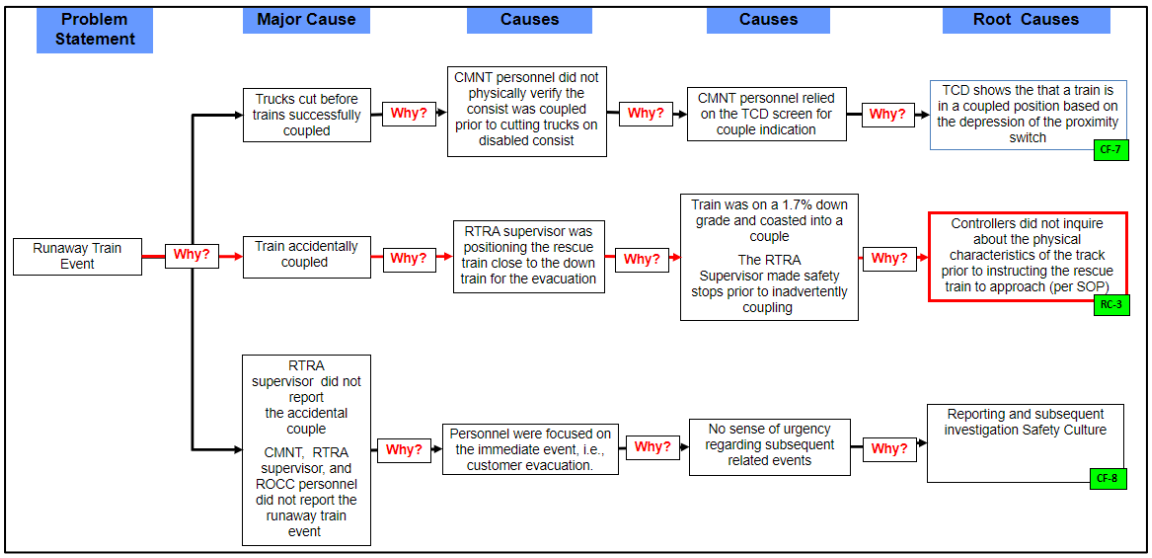
Theresa will be responsible for developing and implementing a strategic plan to improve WMATA's emergency response program with an emphasis on incident management, and will complete the transition of the OEM under SAFE over the next thirty days.

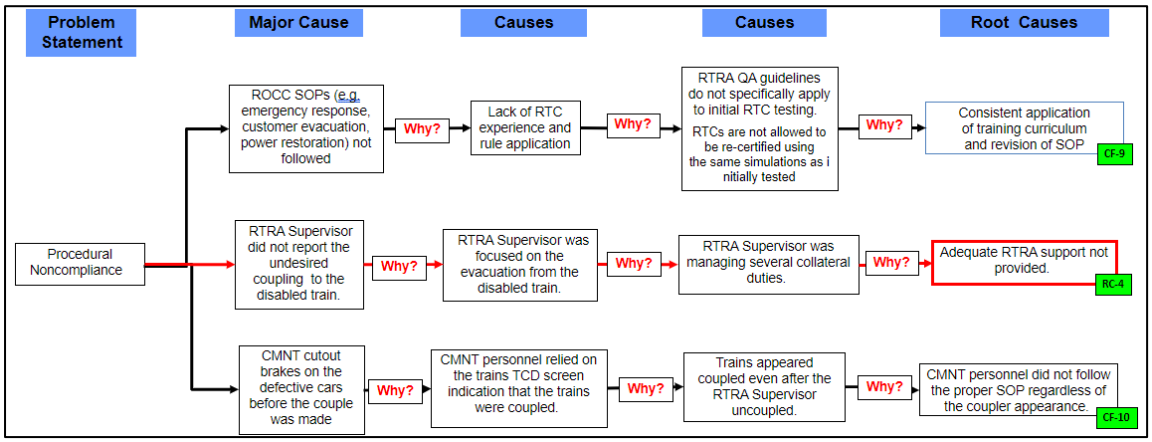
Attachment 1 – incident Response Memorandum page 3 of 3

Appendix I - Root Cause Analysis






Problem Statement
Major Cause
Causes
Causes
Root Causes
Runaway Train Event
Why?
Trucks cut before trains successfully coupled
Why?
CMNT personnel did not physically verify the consist was coupled prior to cutting trucks on disabled consist
Why?
CMNT personnel relied on the TCD screen for couple indication
Why?
TCD shows the that a train is in a coupled position based on the depression of the proximity switch
CF-7
Train accidentally coupled
Why?
RTRA supervisor was positioning the rescue train close to the down train for the evacuation
Why?
Train was on a 1.7% down grade and coasted into a couple
The RTRA Supervisor made safety stops prior to inadvertently coupling
Why?
Controllers did not inquire about the physical characteristics of the track prior to instructing the rescue train to approach (per SOP)
RC-3
RTRA supervisor did not report the accidental couple
CMNT, RTRA supervisor, and ROCC personnel did not report the runaway train event
Why?
Personnel were focused on the immediate event, i.e., customer evacuation.
Why?
No sense of urgency regarding subsequent related events
Why?
Reporting and subsequent investigation Safety Culture
CF-8


Problem Statement
Major Cause
Causes
Causes
Root Causes
Procedural Noncompliance
ROCC SOPs (e.g. emergency response, customer evacuation, power restoration) not followed
Why?
Lack of RTC experience and rule application
Why?
RTRA QA guidelines do not specifically apply to initial RTC testing.
RTCs are not allowed to be re-certified using the same simulations as i nitially tested
Why?
Consistent application of training curriculum and revision of SOP
CF-9
RTRA Supervisor did not report the undesired coupling to the disabled train.
Why?
RTRA Supervisor was focused on the evacuation from the disabled train.
Why?
RTRA Supervisor was managing several collateral duties.
Why?
Adequate RTRA support not provided.
RC-4
CMNT cutout brakes on the defective cars before the couple was made
Why?
CMNT personnel relied on the trains TCD screen indication that the trains were coupled.
Why?
Trains appeared coupled even after the RTRA Supervisor uncoupled.
Why?
CMNT personnel did not follow the proper SOP regardless of the coupler appearance.
CF-10