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WMSC Commissioner Brief: W-0055 – Improper Operation in New Carrollton Yard – August 11, 2020

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

Safety event summary:

A four-car 7000-series consist rolled back and coupled with an eight-car 3000-series consist in the New Carrollton Rail Yard while a Car Maintenance Technician was conducting a Daily Inspection. Following the improper operation and unintended coupling, the Interlocking Operator instructed the Train Operator to uncouple the trains and move the 7000-series consist, which would have violated Metrorail rules and procedures. The train operator correctly refused to follow that direction, and the event was only then properly reported.

The 7000-series consist moved backward during the Daily Inspection because the Car Maintenance Technician placed the Master Controller into coast during a brake pressure ("brakes off") test, and storage tracks have a slight grade. Daily Inspection procedures suggest but, for 7000-series cars, do not clearly state that the Master Controller should not be placed in coast or any power mode during the brake pressure test procedure. The procedure did not state any restrictions related to the Master Controller in coast or power mode for 7000-series "brakes off" tests. Office of Car Maintenance supervision, the Assistant Superintendent and the Technician involved were not aware of the details of existing written Daily Inspection procedures relating to prohibiting the use of coast or power during brake pressure tests of older rail cars either.

The Train Operator contributed to the fact that the outcome was an unintended coupling because that Train Operator had stored the 7000-series consist approximately one foot from the 3000-series consist, rather than the required two feet.

Probable Cause:

Metrorail did not develop or effectively communicate key aspects of the 7000-series Daily Inspection procedures to employees, adequately train employees on those procedures, or ensure that there was an effective compliance check program in place.

Corrective Actions:

Following an extended review, the WMSC identified that WMATA did not have a Daily Inspection brake pressure test procedure statement related to the Master Controller position for 7000-series railcars, and the associated 2000-, 3000- and 6000-eeries procedure does not apply. Metrorail will develop that procedure.

Metrorail inspected the cars involved in this collision, identified no damage, and returned the cars to service.

The Office of Car Maintenance communicated Daily Inspection procedures to employees in the New Carrollton Yard. The New Carrollton division specifically conducted a safety briefing related to this event and Daily Inspection Procedures on September 9, 2020.

SAFE recommended a broader CMNT Lessons Learned document regarding this event, that CMNT perform internal procedural audits to ensure the procedures are being followed, and that all staff, including management, are specifically told about any changed or new procedures.

SAFE also recommended a Lessons Learned for Train Operators, Interlocking Operators and other RTRA personnel regarding rail car storage, the need to identify and be aware of track grade, and the importance of safety briefings prior to Train Operators beginning their shifts.

WMSC staff observations:

Car Maintenance employees and the Interlocking Operator also requested or directed the Train Operator to manipulate the scene of a safety event, in direct violation of Metrorail Standard Operating Procedure 800-01.

This event is another example of a violation of SOP 800-01, which is required to be addressed through the Corrective Action Plan WMATA was required to propose for the WMSC finding issued on October 20, 2020 after an October 9, 2020 Red Line train pull-apart near Union Station. The WMSC has approved this corrective action plan for implementation.

In response to the event itself, WMATA should consider whether specific procedures or processes are required to identify and communicate the grade of tracks in rail yards, particularly for those tracks where the slope is extremely slight, rather than just a one-time Lessons Learned document.

The event also demonstrates the importance of WMATA providing adequate training on and support for implementation of written procedures.

Staff recommendation: Adopt final report.

Washington Metro Area Transit Authority

Department of Safety and Environmental Management (SAFE)

FINAL REPORT OF INVESTIGATION A&I E20297

Date of Event:	8/11/2020
Type of Event:	Unintended Movement
Incident Time:	20:31 hrs.
Location:	New Carrollton Yard, Track 9
Time and How received by SAFE:	21:29 hrs. – On-Call Phone
WMSC Notification Time:	22:59 hrs.
Rail Vehicle:	7556-7557x7669-**7668x3280**-3281
Injuries:	No
Damage:	None
SMS I/A Incident Number:	20200812#88408

New Carrollton Yard – Unintended Movement
Undesired Coupling
August 11, 2020

Table of Contents

Abbreviations and Acronyms

ARS	Audio Recording System
CCTV	Closed Circuit Television
CENV	Vehicle Program Services
CMNT	Office of Car Maintenance inspection
COMM	Office of Communications Maintenance
DI	Daily Inspection
ER	Event Recorder
MC	Master Controller
MSRPH	Metrorail Safety Rules and Procedures Handbook
NOAA	National Oceanic Atmospheric Administration
NVR	Network Video Recorder
OCC	Operations Control Center
ROCC	Rail Operations Control Center
RTRA	Office of Rail Transportation
SAFE	Department of Safety and Environmental Management
TCD	Train Control Display
TRST	Office of Track and Structures
VMDS	Vehicle Monitor and Diagnostic System
WMATA	Washington Metropolitan Area Transit Authority

Executive Summary

On Tuesday, August 11, 2020, at 20:31 hrs., an Office of Car Maintenance (CMNT) Technician was assigned to conduct a Daily Inspection (DI) on the cars stored on Track 9 for revenue service. The CMNT Technician performed two (2) brakes off tests on the 7K consist Car 7556 of the open end consist (7556-57x7669-68) by positioning the Master controller (MC) into coast without applying the holding brake, consequently causing a rollback condition and subsequent undesired mechanical coupling to car 3280. This action was not compliance with CMNT DI 3.6 Brake procedures, which states, *"Manually apply holding brake using Manual Holding Brake Apply/Release switch on Auxiliary Control Panel. Verify Red Apply Indicator is On."*

The CMNT Technician reported the event to CMNT Supervisor as "the trains are close together and needed to be moved." CMNT Supervisor requested a photograph and identified the two consists were mechanically coupled. After that, CMNT Supervisor notified the Interlocking Operator of the event and requested the Train Operator to verify the condition. The Train Operator was assigned to uncouple the two consists on Track 9 and move the open end consist closer to the signal. After the Train Operator inspected the condition, they went to the Interlocking Operator and reported the trains were coupled. The Interlocking Operator instructed the Train Operator to uncouple the consist after being informed the two consists were coupled. The Train Operator stated, "Call and get the necessary permission from whom you need to get permission from; that's the only way I am touching that train." The incident was then reported to the division management and CMNT Operations Control Center (OCC) for an unusual occurrence notification. A post-incident inspection was performed on the affected cars and yielded no discrepancies. No injuries were reported as a result of this event.

The probable cause was a combination of improper railcar storage, failure to follow written rules and procedures outlined in the DI procedures, and departmental compliance oversight, consequently resulting in an undesired coupling event in New Carrollton Yard, Track 9.

The investigation identified the following issues:

The CMNT Technician did not follow DI procedure processes; the Train Operator did not store the 4-car consist no closer than 2-feet of the stationary legacy fleet consist being stored at the bumper post of Track 9; the Interlocking Operator instructed the Train Operator to uncouple an unintended movement incident train after being notified by CMNT Supervisor and Train Operator. The CMNT Supervision staff, Assistant Superintendent, and CMNT Technician were not aware of DI brake test procedures although it was distributed to staff.

The Train Operator stored the 4-car consist approximately one foot away from the 8-car consist stored at the Track 9 bumper post, directly violating MSRPH 3.126, which states, "*When storing Class 1 Rail Vehicles, operators shall: Secure cars being stored a minimum distance of two (2) feet apart at all storage locations, yards and/or tail track."*

The CMNT Technician performed two brakes off tests on the 7K consist by placing the MC in coast without applying the holding brake, consequently causing a rollback condition and subsequent undesired coupling violating "*CMNT DI 3.6 Brake procedures, which states, "Manually apply holding brake using Manual Holding Brake Apply/Release switch on Auxiliary Control Panel. Verify Red Apply Indicator is On."*

The Interlocking Operator instructed the Train Operator to uncouple the undesired coupled consists on Track 9, violating MSRPH 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."*

A review of the CMNT DI procedure revealed two casual factors. The CMNT DI procedure 3.6 caution box does not incorporate 7K series stating "Do not select coast point-of-power during the procedure.'' Secondly, the CMNT DI procedures does not instruct personnel to select coast on any fleet [2k-7k] during the DI Brake Test procedure within the steps of the procedure.

As a result of its investigation, the SAFE makes the following safety recommendations:

To CMNT, develop a Lessons Learned, and distribute to staff regarding findings of a recent event. Perform internal procedural audits for DI personnel to ensure process adherence. Hold an all-hands staff meeting to discuss new procedures and update the managerial staff of changes.

To CMNT, undertake a review of the DI DST 3.6 procedure to identify opportunites to clarify MC operation during testing processes and change caution box to reflect all trains series to include the 7k series trains.

To RTRA, develop a Lessons Learned with emphasis on rail car storage procedures and yard and environment conditions, i.e., track grade. Additionally, revisit the importance of reporting all incidents immediately. SAFE also recommends RTRA management ensure safety briefings are conducted via phone prior to the Train Operator's tour of duty.

Incident Site

New Carrollton Yard, Track 9

Field Sketch/Schematics

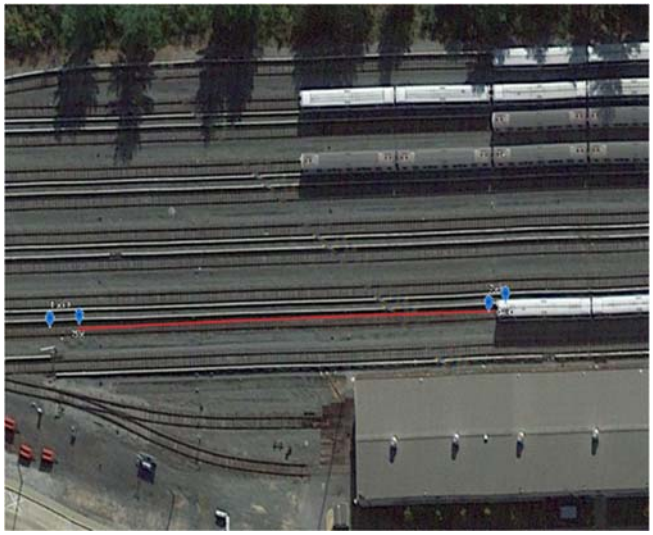

Photo 1: New Carrollton Yard, Track 9

Purpose and Scope

The purpose of this incident investigation and of this candid self-evaluation is to collect and analyze available facts, to determine the probable cause(s) of the incident, and to identify contributing factors, if any, to detail corrective actions with the intent of enhancing safety.

Investigative Process and Methods

Upon receiving notification of the unintended movement at New Carrollton yard on August 11, 2020, SAFE dispatched a cross-functional team to assess the scene and conduct the subsequent investigation. SAFE team members worked with relevant WMATA subject matter experts to review the incident's facts and data.

Investigative Methods

Investigative methodologies included the following:

- Physical Site Assessment
- Formal Interviews – SAFE interviewed four individuals as part of this investigation. Interviews included persons present at, during, and after the time of the incident, those directly involved in the response process, and Managers responsible for the process. SAFE interviewed the following individuals:
    - CMNT Electrician
    - Train Operator
    - CMNT Supervisor
    - Interlocking Operator

- 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
    - The 30-Day work history review
    - Certifications
    - Office Track and Structure (TRST) Yard Schematics
    - CMNT Daily Inspection Procedures
    - Metrorail Safety Rules and Procedures Handbook (MSRPH)
    - National Oceanic Atmospheric Administration (NOAA) data

- System Data Recording Review – A collection of information contained in Metro Data Recording Systems. This data includes:
    - Audio Recording System ARS playback review
    - Network Video Recording (NVR) Playback
    - Event Recorder (ER)
    - Vehicle Program Services (CENV) Vehicle Monitoring and Diagnostic System (VMDS) review

Investigation

Chronological Timeline of Events

Based on ARS playback, i.e., ambient, yard radio communication, SAFE determined the following:

Time	Description
17:17:36 hrs.	CMNT Supervisor called Interlocking Operator requesting a train on the north end of Track 9 [Ambient].
17:24:45 hrs.	The Interlocking Operator instructed the Train Operator to move the 7K 4-car consist from Track 10 to Track 9 [Radio].
20:40:21 hrs.	The Interlocking Operator instructed the Train Operator "to go out to Track 9 and check the lead 4-cars and verify if the trains are coupled up or not. [Radio]
20:51:45 hrs.	The Interlocking Operator requested if the Train Operator had "re-adjust it," the Train Operator stated, "I am about to give you a landline." [Radio]
20:52:40 hrs.	The Train Operator notified the Interlocking Operator Via phone and stated, "are you sure you want me to touch this?" Because whatever they did, they coupled the 7K to the legacy. Interlocking Operator: Did you uncouple it? Train Operator: 'No." Interlocking Operator: Yes, it should be ok. They showed us how to do this in class" Train Operator: "Ok, I was making sure they didn't let it roll back or put it in reverse and bust the couplers." Interlocking Operator: "Let me make sure." The Interlocking Operator then calls the CMNT Supervisor and stated, "I have the Train Operator on the line as well." The Train Operator stated, "the Trains were coupled and stated they stored those cars there earlier that evening, and they were 2-feet apart." The Interlocking Operator noted, "they probably went to get a brakes off and rolled too much" Train Operator states, "I want to make sure you all don't get tested; I do not want to get caught up in something later on." If you all say it is fine, I will uncouple it move it up, and give them some room." The CMNT Supervisor stated, "I don't want that Train Operator to touch it; I need to call my Superintendent and check before I make that type of decision." Interlocking Operator stated, "call me back and let me know." The Interlocking Operator then instructs the Train Operator "to leave Track 9 alone until CMNT tells us what to do." [Ambient] **Note:** The Train Operator then goes into the tower until CMNT makes their decision and discussed the move, how close the consist was to the stationary cars, that they climbed down between the trains after storing the cars on Track 9, and the CMNT Technician going into the building.
20:57:00 hrs.	CMNT Supervisor called back to Interlocking Operator and stated that it is on you all based on the conversation with their Superintendent, and it is an undesired coupling. The Interlocking Operator tried ascertaining the information and requested clarification. The CMNT Supervisor stated, "CMNT did not move the train physically; we do not move trains." The Train Operator stated CMNT personnel told the Train Operator they moved the train and needed it uncoupled so they could have room. The Interlocking Operator stated, "I need to call my Assistant Superintendent." [Ambient]
21:02:00 hrs.	The Interlocking Operator notified their Assistant Superintendent of the event. [Ambient]

Vehicle Program Services (CENV)

Event Recorder (ER) Data Graph/Sequence of Events

CENV reviewed Car 7668-69 and 7556-57 ER, Brake, Propulsion, and VMDS logs. There were no train failures that could have contributed to the coupling event. Based on NVR and ER data, when the individual moved the MC handle to coast, it allowed the consist to drift backward toward 3280 and couple.

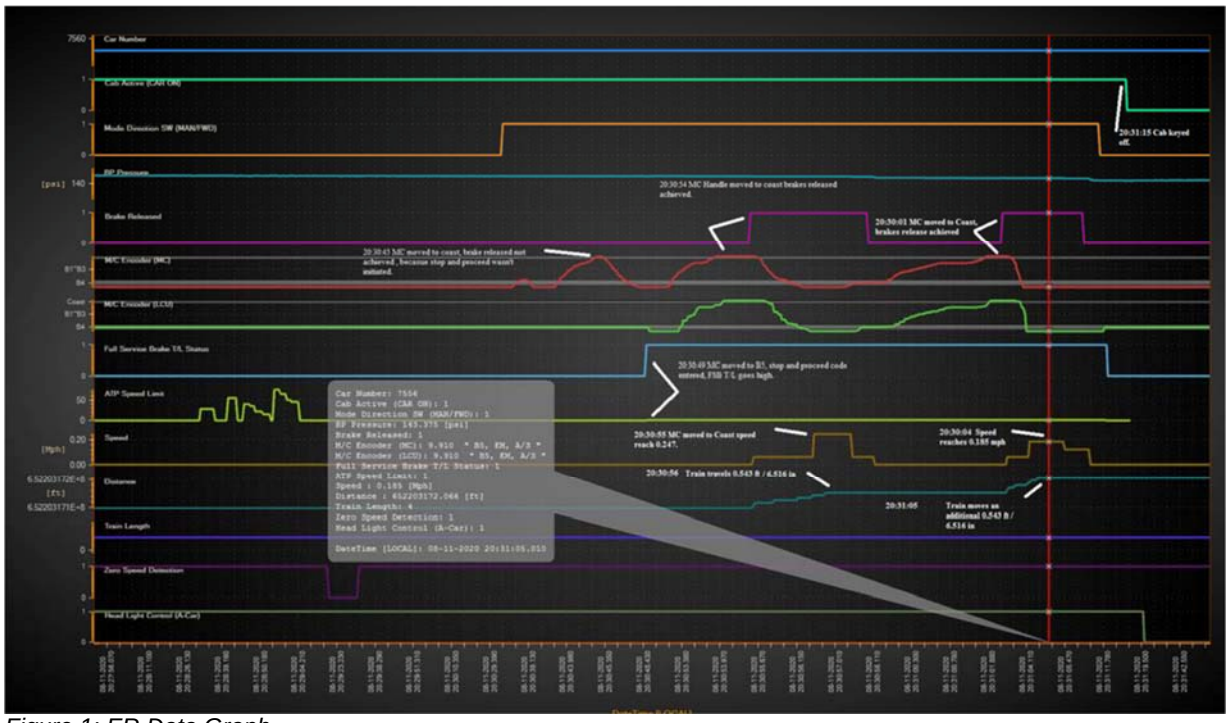

Figure 1: ER Data Graph

Based on CENV analysis of the downloaded Vehicle Monitoring and Diagnostic System (VMDS) and ER. Details from the data analysis are as follows:

ER Timeline Data

Time	Description
20:15:48 hrs.	7556 Cab keyed on.
20:30:39 hrs.	MC moved to B4.
20:30:45 hrs.	MC moved to the coast position, but brakes off was not achieved because the stop and proceed code was not entered.
20:30:49 hrs.	The stop and proceed code entered, MC moved to the coast position, and Brake released achieved.
20:30:55 hrs.	Train speed reaches 0.247; Train travels 0.543ft / 6.516 in, then MC is moved to B5.
20:31:01 hrs.	Moved the MC to the coast position again and achieved brakes off.
20:31:05 hrs.	Train speed reaches 0.185; Train travels an additional 0.543ft / 6.516 in, then MC is moved to B5.
20:31:06 hrs.	After the consist traveled a combined distance of 1.086 ft. / 13.032 in. 7668 trailing car logged a Coupled event.

Network Video Recorder

Photo 2: Based on a review of NVR car-borne forward-facing and console footage, the Train Operator secured consist T7556-7557x7669-7668L one foot away from the stored cars 3280x3281 on Track 9.

Photo 3: A CMNT Technician is later observed on lead Car 7556, keyed up performing DI Procedure.

Photo 4: The CMNT Technician is observed shortly after keyed up in car 7668 installing seals on the K and L panel behind the Train Operator seat.

Photo 5: After that, the CMNT Technician went back in the lead car, keyed up, continued DI check, then depressed the overtravel button and moved the MC to the coast position three times, subsequently achieving a brakes off indication on the console.

Photo 6: Forward-facing footage on Car 7668 shows the consist drift back twice and coupled to legacy car 3280 as the train was moved into the coast position the second time. The CMNT Technician then keys down the lead car 7556.

Photo 7: Train couples to legacy car 3280.

Office of Car Maintenance (CMNT)

Based on the post-incident inspection, CMNT did not find any discrepancies on Cars 7668 and car 3280. CMNT performed an inspection on front and rear electrical couplers, sheer bolts, and coupler face. A DI was completed on both cars and released for revenue service.

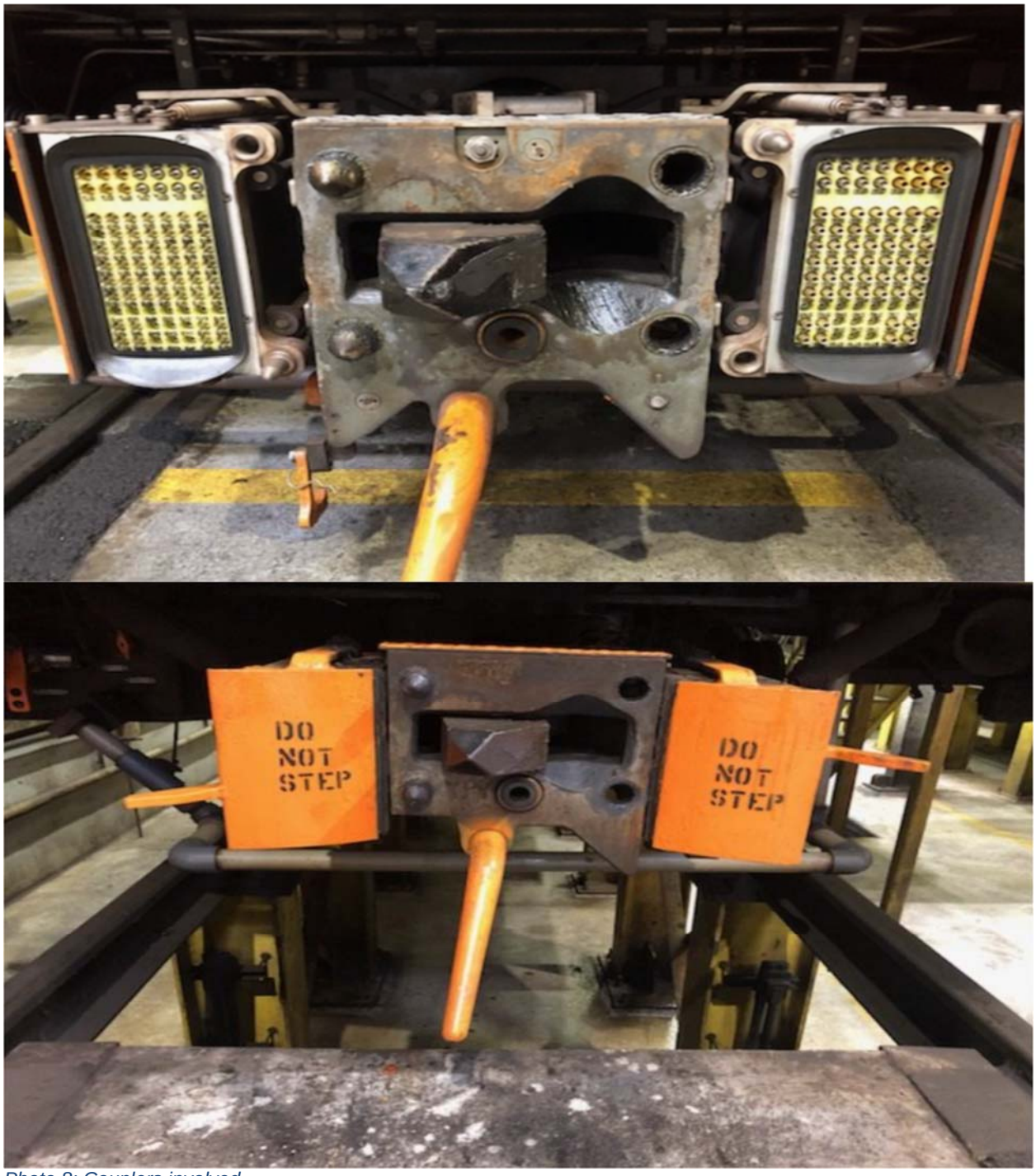

Photo 8: Couplers involved.

Office of Track and Structures (TRST)

Based on a New Carrollton Yard track schematics review, SAFE determined Track 9 is a Tangent track with a 0.1 percent grade. The slight grade contributed to the drift back condition when the CMNT Technician moved the MC to coast.

Office of Communication Maintenance (COMM)

COMM radio technicians tested communication equipment at New Carrollton Yard and completed radio operational test at the locations SAFE indicated revealed signs of audio discrepancies; COMM determined test yielded favorable results, and all communications were successful without any anomalies identified.

Interview Findings

Based on the investigation launched into the New Carrollton Yard undesired coupling event, SAFE conducted four (4) investigative interviews and identified the following key findings associated with this event, as follows:

RTRA Train Operator reported storing the vehicle 2-feet away from stored cars on Track 9. The Interlocking Operator instructed the Train Operator to uncouple the trains on Track 9 and move them closer to the signal.

CMNT Technician performed two brakes off test on train 7556 after normalizing train-line door circuit breakers found in the off position. CMNT personnel openly admitted coupling the trains during the interview. CMNT personnel notified CMNT Supervisor via cell phone the rail cars were too close.

CMNT Management and Supervision were unaware of DI Brake Test procedures 3.6 prohibiting the use of coast during the brake test on 2k/3k/6k series trains.

The Interlocking Operator reported a daily safety briefing was not conducted for employees reporting for their tour of duty. The Interlocking Operator called the inspection to determine if they wanted the Train Operator to uncouple the trains. The Interlocking Operator reported the incident after communicating with CMNT to uncouple the trains, and CMNT did not authorize the uncoupling of the affected consist.

Immediate Mitigation to Prevent Recurrence

- The Train Operator and CMNT Technician were removed from service for post-incident toxicology testing.
- CMNT removed and inspected the cars involved in the undesired coupling event with no anomalies found.
- CMNT notified personnel of DI procedures expectations at the New Carrollton yard.
- The New Carrollton division conducted a safety briefing to discuss the incident and DI procedure process on September 9, 2020. Refer to Appendix A, Attachment 1.

Findings

- The Train Operator stored the 4-car consist approximately one foot away from the 8-car consist stored at the Track 9 bumper post, directly violating MSRPH 3.126, which states, "*When storing Class 1 Rail Vehicles, operators shall: Secure cars being stored a minimum distance of two (2) feet apart at all storage locations, yards and/or tail track."*
- The CMNT Technician performed two brakes off tests on the 7K consist by placing the MC in coast, which is not a required step of the daily inspection procedures. Furthermore the CMNT Technician failed to apply the holding brake, consequently causing a rollback condition and subsequent undesired coupling violating *CMNT DI 3.6 Brake procedures, which states, "Manually apply holding brake using Manual Holding Brake Apply/Release switch on Auxiliary Control Panel. Verify Red Apply Indicator is On."*
- The Interlocking Operator instructed the Train Operator to uncouple the undesired coupled consists on Track 9, violating MSRPH 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."*
- The Train Operator that moved the consist from Track 10 to Track 9 and the responding Train Operator were the same person.
- The 4-car consist drifted backward approximately 1.086 feet before coupling to car 3280
- CENV analyzed the ER and did not find any anomalies with the railcars that could have contributed to the event.
- New Carrollton Track 9 has a designed slight grade.
- The CMNT Technician found train-line door breakers in the off position during DI inspection.
- The CMNT Technician initially reported cars were observed close together.
- The CMNT Technician used a cell phone to contact the CMNT inspection office of the train condition due to radio communication issues.
- CMNT inspected both railcars and did not find any damage caused by the undesired coupling event.
- CMNT Management and Supervision were unaware of DI Brake Test procedures 3.6 prohibiting the use of coast during the brake test.
- The CMNT DI procedure does not incorporate 7K series in the caution box "Do not select coast point-of-power during the procedure.''
- The CMNT DI procedures does not instruct personnel to select coast on any fleet [2k-7k] during the DI Brake Test procedure.

Weather

At the time of the incident, the NOAA recorded the temperature at 84°F with partly cloudy skies and relative humidity of 74 percent with no precipitation. The wind was recorded coming from the south at 8 mph. SAFE has concluded, due to the Northwest position of Track 9, the weather was not a contributing factor in this incident (Weather source: NOAA – Location: New Carrollton, MD)

Human Factors

Fatigue

Based on SAFE interview question related to Fatigue Factors and review of all employees' Interlocking Operator, Train Operator, and CMNT Technician 30-day work history, it was determined, employees' hours of service were in accordance with WMATA's *Fatigue Risk Management Policy 10.6* and *Hours of Service Limitations for Prevention of Fatigue Policy 10.7* and discounted Fatigue as a contributing factor for this event.

Post-Incident Testing

After reviewing the Train Operator and CMNT technician's post-incident testing results, it was determined that the employees involved were not in violation of the Drug and Alcohol Policy and Testing Program 7.7. 3/5.

Probable Cause

It was determined that the event's probable cause was a combination of improper railcar storage, failure to follow written rules and procedures outlined in the DI procedures, and departmental compliance oversight, consequently resulting in an undesired coupling event in New Carrollton Yard, Track 9.

During the investigation, the following issues were identified:

The CMNT Technician did not follow DI procedure processes; the Train Operator did not store the 4-car consist no closer than 2-feet of the stationary legacy fleet consist stored at the bumper post of Track 9; the Interlocking Operator instructed the Train Operator to uncouple an unintended movement incident train after being notified by CMNT Supervisor and Train Operator. The CMNT Supervision staff, Assistant Superintendent, and CMNT Technician were not aware of DI brake test procedures although distributed to staff.

The Train Operator stored the 4-car consist approximately one foot away from the 8-car consist stored at the Track 9 bumper post, directly violating MSRPH 3.126, which states, "*When storing Class 1 Rail Vehicles, operators shall: Secure cars being stored a minimum distance of two (2) feet apart at all storage locations, yards and/or tail track."*

The CMNT Technician performed two brakes off tests on the 7K consist by placing the MC in coast which is not a required step of the daily inspection procedures, furthermore the CMNT Technician failed to apply the holding brake, consequently causing a rollback condition and subsequent undesired coupling violating *CMNT DI 3.6 Brake procedures, which states, "Manually apply holding brake using Manual Holding Brake Apply/Release switch on Auxiliary Control Panel. Verify Red Apply Indicator is On."*

The Interlocking Operator instructed the Train Operator to uncouple the undesired coupled consists on Track 9, violating MSRPH 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."*

A review of the CMNT DI procedure revealed two casual factors. The CMNT DI procedure 3.6 caution box does not incorporate 7K series stating, "Do not select coast point-of-power during the

procedure.'' Secondly, the CMNT DI procedures does not instruct personnel to select coast on any fleet [2k-7k] during the DI Brake Test procedure within the steps of the procedure.

SAFE Recommendations

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. Refer to the SMS I/A module for additional information.

Corrective Action Code	Description
88408_SAFECAPS_ CMNT_001	Develop a Lessons Learned, and distribute to staff regarding findings of a recent event. Perform internal procedural audits for DI personnel to ensure process adherence. Hold an all-hands staff meeting to discuss new procedures and update the managerial staff of changes.
88408_SAFECAPS_ CMNT_002	Undertake a review of the DI DST 3.6 procedure to identify opportunites to clarify MC operation during testing processes and change caution box to reflect all trains series to include the 7k series trains.
88408_SAFECAPS_ RTRA_003	Develop a Lessons Learned with emphasis on rail car storage procedures and yard and environment conditions, i.e., track grade. Additionally, revisit the importance of reporting all incidents immediately. SAFE also recommends RTRA management ensure safety briefings are conducted via phone prior to the Train Operator's tour of duty.

Appendix A – Office of Car Maintenance Lesson's Learned

CY2020 Q4

Car Maintenance Incident and Accident Review Committee Special Alert

December 14, 2020

Inside This Issue

CMNT Incident and Accident Review Committee

The Car Maintenance Incident and Accident Review Committee was established to provide oversight and review of occurring at Car Maintenance shops and/or to Car Maintenance personnel. The committee is made up of departmental management staff to include, but not limited to the General Superintendent and Assistant General Superintendents. The Committee meets as required to review incidents and accidents in a timely manner when they occur.

SMS Incident 20200811#88408

Summary: On Tuesday, August 11, 2020 at New Carrollton Yard there was an unintentional coupling of car #7668 and #3280 on Track #9. There were no injuries or damages reported as a result of this incident.

Key take-aways: This incident occurred due to temporary release of the brakes without properly securing the train from movement. The investigation identified the employee did not adhere to the 7000 series Daily Inspection (DI) procedure as written. The procedure does not require the technician to release brakes during the DI process.

Additionally, the review identified an area for improvement in the procedure. In the DI procedure, there is a caution box stating, "*Do not select CST or a "Point-of-power" during the procedure*". This caution should not be limited to the 2K/3K/6K series. CENV will revise the procedure to ensure the caution covers all fleets. This update will be released at the end of January 2021.

Whenever there is any confusion regarding a policy or procedure, it is crucial to ask for clarity from your supervisor prior to conducting any maintenance activity. If an error in the procedure is identified your shop management will be able to effectively communicate the issue to CENV.

Attachment 1 – CMNT Lesson's Learned Page 1 of 2

Department Safety Coordinators

Department Safety Coordinators have been assigned to four districts within CMNT for the purpose of assisting CMNT Management with safety related issues and audits of the individual shops.

Wayne Thorne: Shady Grove S&I and Glenmont Yard

Jose Torres: Greenbelt Annex MRO Shop, Greenbelt Truck and MRO Shop, Brentwood MRO Shop

James Berger: Greenbelt S&I, Branch Avenue Shop, and Alexandria S&I

Christopher Behrns: New Carrollton S&I and West Falls Church S&I

The Department Safety Coordinators are liaisons between SAFE and CMNT and can be contacted to assist in resolving safety related issues identified within their respective areas. Additionally, the Coordinators will be conducting periodic assessments in each CMNT facility to identify safety hazards and work with shop management to implement appropriate mitigation measures. This includes all CTEM shops within those districts.

Return to Automatic Door Operation

WMATA is in progress of returning to the automatic door functions on the rail cars. The return to automatic doors will improve the rail car dwell time while servicing passengers at the stations leading increased on-time performance. While the return to automatic door function will have a significant impact to the passengers, the preventative maintenance process will be unaffected. Nevertheless, it will be critical for CMNT technicians to understand how the doors are being operated to properly diagnose any failures as they occur.

Attachment 1 – CMNT Lesson's Learned Page 2 of 2

Appendix B - Interview Summaries

Interview Details

CMNT Electrical Technician

The CMNT Electrician is a WMATA employee with two (2) years of experience as an AA Electrician and nine (9) years of service in various roles, including Electrician Helper, Electrician C, and Electrician B.

Based on the SAFE interview questions related to fatigue factors, signs, and symptoms, the CMNT Electrician did not report evidence of signs and symptoms of fatigue. A review of the Superintendent's 30-day work history determined the employee's hours of service were in accordance with WMATA's *Fatigue Risk Management Policy 10.6* and *Hours of Service Limitations for Prevention of Fatigue Policy 10.7.* Evidence, along with statements, indicates that the employee was not at an elevated risk of fatigue during this event.

The below narrative is a summary of 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.

The CMNT Electrical Technician was assigned to perform DI procedures on Track 9. Upon arrival, the CMNT Technician conducted blue flag procedures, entered from the bumper post Track 9, and placed their accountability card on the bulkhead door. After walking through the consist to the lead car, the technician did not recall how close the car 7668 and 3280 were at the time.

Once at 7556, the CMNT Technician keyed up the train and performed a door open operation. After opening the doors, the train indicated 7668 doors would not open. The CMNT technician went back to the affected car to investigate and found door train-line circuit breakers were off, and the train-line was cutout. The CMNT technician called the inspection office and reported, "this train has a problem, all breakers down" CMNT Supervisor instructed the CMNT Technician to normalize the train. The CMNT Technician went back to lead car 7556 and checked for brakes off. The CMNT technician stated the brakes off check was confirmed good and did not feel the train rolled back. Thereafter, the console indication reflected a "red box," and that means cars are touching" When the CMNT Technician keyed up originally, no red box was indicated on the Train Console Display (TCD) screen.

The CMNT Technician stated they were familiar with the 7K consist and DI procedures. There were no concerns about the job except trains being too close. CMNT Supervisor conducted a pre-job safety briefing prior to performing the DI procedure task.

CMNT Supervisor

The CMNT Supervisor is a WMATA employee with five (5) years of experience as a CMNT Supervisor and 15 years of service in various roles, including Electrician Helper and Electrician C.

Based on SAFE interview questions related to fatigue factors, signs, and symptoms, the Superintendent did not report evidence of signs and symptoms of fatigue. A review of the Superintendent's 30-day work history determined the employee's hours of service were in accordance with WMATA's *Fatigue Risk Management Policy 10.6* and *Hours of Service Limitations for Prevention of Fatigue Policy 10.7.* Evidence, along with statements, indicates that the employee was not at an elevated risk of fatigue during this event.

The below narrative is a summary of 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 Supervisor stated, a call came in regarding Car 7668 train-line breakers; after a review of Maximo's history, no data was found. CMNT instructed the CMNT Technician to normalize the train. Thereafter, CMNT Supervisor received notification from the CMNT Technician via Cell Phone [reportedly, due to radio communication issues] that they observed the trains close together. The CMNT Supervisor asked," What does close mean? Send me a photograph." After receiving the photograph, the CMNT Supervisor determined the trains were mechanically coupled and instructed the CMNT Technician to standby. The CMNT Supervisor called the Interlocking Operator and requested a Train Operator to go out to verify the report.

CMNT Supervisor then notified Assistant Superintendent and was instructed to notify ROCC and contact the RTRA Assistant Superintendent of the event. The CMNT Supervisor notified the CMNT desk at OCC to report an Unusual Occurrence. The CMNT Supervisor stated new DI procedures were distributed to employees; however, they were unaware that the brakes off test were removed from the DI procedures.

Train Operator

The Train Operator is a WMATA employee with seven (7) years of experience as a Train Operator and nine (9) years of service in various roles including, Bus Operator. The Train Operator's last certification was on April 13, 2018, and the Train Operator has no history of sleep issues to report.

Based on SAFE interview questions related to fatigue factors, signs, and symptoms, the Train Operator did not report evidence of signs and symptoms of fatigue. A review of the Superintendent's 30-day work history determined the employee's hours of service were in accordance with WMATA's *Fatigue Risk Management Policy 10.6* and *Hours of Service Limitations for Prevention of Fatigue Policy 10.7.* Evidence, along with statements, indicates that the employee was not at an elevated risk of fatigue during this event.

The below narrative is a summary of 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.

The Train Operator was assigned to move a 4-car consist stored on Track 13 or 11 to Track 9. The Train operator performed the move and stored the cars approximately two feet from the stationary stored cars on Track 9 at 17:32 hrs. After storing cars, the Train operator did not return or moved the cars for any reason. The Interlocking Operator instructed the Train Operator via Radio to assist the CMNT mechanic on Track 9; the interlocking Operator stated, the CMNT mechanic stated, the trains were too close to each other and needed to move the open end consist back towards the signal. While walking towards the lead cars, “the mechanic stuck their head between the two legacy cars 6-cars away from the lead cars and said, “They needed help.”

When the Train Operator saw the consist coupled, the Train Operator went to the tower face-to-face and notified the Interlocking Operator the trains were coupled, and they were not touching the train. Based on the interview, the Train Operator stated, the Interlocking Operator still wanted the Train Operator to uncouple the trains. The Train Operator stated, “call a get the necessary permission from whom you need to get permission from; that’s the only way I am touching that train.” The Train Operator stated, there was no noticeable damage from a visual inspection before reporting the event.

Interlocking Operator

The Interlocking Operator is a WMATA employee with 12-years of experience as an Interlocking Operator and 23-years of service in various roles, Bus Operator and Train Operator. The Interlocking Operator’s last certification was in September 2018.

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 Interlocking Operator stated, before the incident, Automatic Train Control Maintenance technicians were fixing a switch in the yard. Before starting their shift, SAFE requested if a Safety briefing was conducted before respective Train Operators starting their tour of duty. The Interlocking Operator stated, no. As a result of COVID-19, face-to-face safety briefings were halted. SAFE requested if phone safety briefings were performed to mitigate the pandemic social distancing, and they responded yes; however, they have not been performing them as of late.

Before the incident was reported, the Interlocking instructed the Train Operator to move a 4-car consist stored on Track 13 or 11 to Track 9. After the train was secured, approximately a couple of hours later, the CMNT Supervisor notified the Interlocking Operator that a CMNT technician reported the trains on Track 9 were too close, and the trains were coupled. The Interlocking Operator instructed the Train Operator to verify the condition of the trains and uncouple the consist. The Train Operator reported the trains were coupled and clarified they did not couple the trains. The Train Operator then stated, do we have permission to uncouple the trains from CMNT. The Interlocking Operator then instructed the Train Operator to standby and notified CMNT of the condition.

The CMNT Supervisor called the Interlocking Operator and stated, “it is on you all or something similar.” The Interlocking Operator then called their Superintendent and ROCC to report the event. SAFE advised the Interlocking Operator that all incidents should be reported immediately, and equipment/trains positions should not be altered in any way after identifying a potential incident and or accident.