

FINAL REPORT OF INVESTIGATION A&I E17277

May 24, 2017

RWP Event

Adopted by the Metrorail Safety Commission at its meeting on May 14, 2019.

Washington Metrorail Safety Commission
777 North Capitol Street, NE, Suite 402
Washington, DC 20002



FINAL REPORT OF INVESTIGATION A&I E17277**SMS 20170524#**

Date of Event:	5/24/2017
Type of Event:	RWP Event
Incident Time:	12:12 hrs.
Location:	Between Shady Grove (A15) & Rockville (A14) Chain Marker (CM) A2-916+20
Time and How received by SAFE:	12:30 hrs., Phone Call
Safety Officer Response:	No
Time of Safety Officer Arrival:	N/A
Time of Safety Officer Departure:	N/A
Rail Vehicle:	L3273-3272.4027-4026.5139-5138T
Injuries:	None
Damage:	None
Emergency Responders:	None

Executive Summary

On Wednesday, May 24, 2017 at approximately 12:12 hrs., a student Train Operator (T/O) and a Utility Line Platform Instructor (ULPI) were removed from service at Shady Grove Station (A15). Office of Track and Structure (TRST) personnel reported that Train ID 154 passed their location at speeds greater than 10 mph between Between Shady Grove (A15) and Rockville Station (A14). The TRST personnel were standing by in a place of safety at Chain Marker (CM) A2 916+20 at the time of event and no injuries were reported. An Advanced Mobile Flagger (AMF) was reportedly in place at A14 station and a briefing was performed with the T/O. Train ID 154 was also removed from service for post-incident inspection and Vehicle Monitoring System (VMS) download.

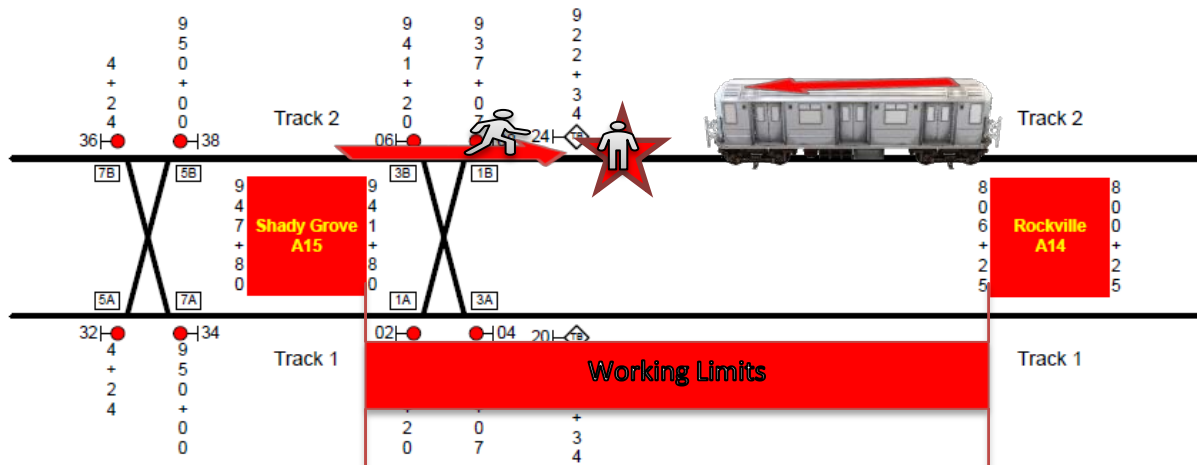
Notification

Title	Time	Comment:
FTA	13:12 hrs.	Email
TOC	13:12 hrs.	Email

Incident Site

Between A15 and A14 at CM A2 916+20

Field Sketch/Schematics



Investigation

Scope of Work:

TRST personnel were tasked with performing a track inspection as part of surge 16 preparation work starting at Shady Grove Station and terminating at Rockville Station Track 2.

Office of Track and Structure

Roadway Worker in Charge (RWIC)

Per the RWIC interview, a Track Inspection crew consisting of Two (2) Washington Metropolitan Area Transit Authority (WMATA) personnel and one (1) Contractor - Howard, Needles, Tammen & Bergendoff (HNTB) were granted foul time to traverse a Hot Spot/Blind Spot (CM A2-905+00 – 923+00) area as defined in the Roadway Access Guide of the Roadway Workers Protection Manual (RWPM, 2014) between A15 and A14 Stations, Track 2. Reportedly, the RWIC conducted the necessary job safety briefing before entering the roadway and positioned an AMF at the north end of A14 station (8-car marker), track 2 who was responsible for briefing outbound trains leaving the A14 station in route to A15 Station, Track 2.

Office of Rail Transportation (RTRA)

Train Operator

Per the T/O's statement, the AMF did not give instructions on governing speeds through the area when leaving A14. The T/O further stated, sounding the horn accordingly, and was given the proper signal from the RWIC to proceed through area. The T/O stated attending AMF training and had a AMF Script on their person at the time of incident.

Note: Since this was a student T/O at the time of incident, no action was taken as a result of this event.

Utility Line Platform Instructor

Per the ULPI statement, he was positioned in the passenger area on the affected consist during the incident; and did not hear the conversation between AMF and the T/O. The ULPI stated they alternated train operation over the past 2-days. As one operated, the other took a seat in the passenger area of the train.

The ULPI felt comfortable with the returning to duty T/O's train operation and as a result, stated that he was comfortable leaving the T/O in the cab by himself. Additionally, based on the T/O's 10 years of experience, the ULPI stated that he left the T/O alone in the operating cab. Moreover, the ULPI stated during the interview with SAFE that he wanted to provide more room for the already experienced T/O.

Note: There was Improper Operation and rule violation on the part of the U . The LPI program has since been revamped and more stringent qualifications have been established for new LPis. The ULPI no longer works for the Authority and has since retired. There is no documentation to support re-training for this employee.

Rail Operations Quality Control Training

Student Train Operator

The T/O spent 5 days in classroom instruction to include AMF training and assigned to yard with Training instructor performing yard operation task i.e. coupling/uncoupling, preparing trains for service.

Closed Circuit Television (CCTV)

After review of station platform footage, there is no video evidence supporting the AMF's statement. At no time did the AMF read the AMF Script to Train ID 154 while servicing the platform.

Human Factors

Post-Incident

After reviewing the personnel post-incident testing results, it was determined that the none of the personnel were in violation of the Drug and Alcohol Policy and Testing Program 7.7.3/5, therefore, excluding being under the influence of a controlled substance as a contributing factor.

Fatigue

Based on SAFE's review of the personnel involved 30-day work history, it was determined that the all personnel 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*.

Years of Service

Train Operator & Utility Line Platform Instructor

A ten (10) year veteran as a T/O, Train ID 154 T/O had just returned to work on May 17, 2017 after eleven (11) months due to a job-related injury. At the time of the incident, the T/O was undergoing instructional training with a ULPI who had approximately 3 years of train operator experience. Reportedly, this was the T/O's second day operating in revenue service on the red line under the instruction of the ULPI. Additionally, as reported, at the time of the incident, the ULPI was not inside the T/O cab with Train ID 154 Operator.

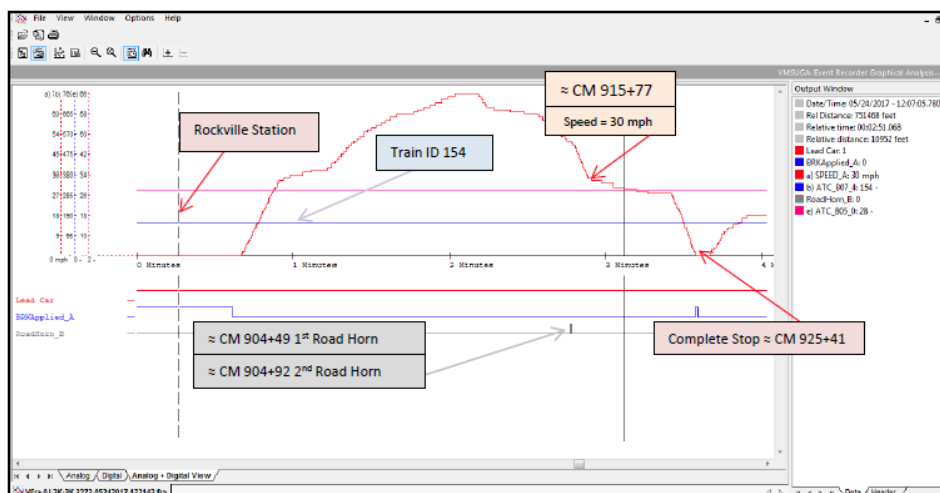
The AMF had 9 years of experience as a Track Walker, no incidents within the last 3 years, and was certified with a valid RWP Level 4 at the time of the event.

Automated Information Management System (AIMS)

Based on the AIMS system playback, during the incident the required prohibit exits were established on A15-08 signal, block track and human form was established to prevent train movement operating in reverse on Track 2 between A15 and A14.

Vehicle Program Services (CENV)

Per CENV analysis, The T/O sounded the horn approx. 1200ft prior to the location of the workers (CM A2-916+20). The speed of the train at CM 915+77 was 30 mph, which correlates with (redacted name) calculation of 25 mph at CM 916+20



Communications Section (COMM)

Upon further inspection, COMM did not report any anomalies with the radio system in the affected area.

Rule and Procedures

Refer to attachments MSRPH Operating Rule (O/R) 3.11, and MSRPH General Rule (G/R) 1.59 and Permanent Order R-17-03 (Advanced Mobile Flagger).

Weather

At the time of the incident, the temperature was 63°F. SAFE has concluded that weather was not a contributing factor in this incident (Weather source: National Oceanic Atmosphere Administration (NOAA) – Location: Washington, DC.)

Findings

- Roadway workers were “standing by standing clear” at the time of incident and at no time in a dangerous position.
- All 3 roadway workers were standing together at time of incident in a place of safety
- ULPI was not formally trained in LPI course. ULPI stated he took on the responsibility upon request from Terminal Supervisor because no certified LPIs were present at terminal location. Based on interviews, the AMF reported reading the AMF Script to the Train Operator. However, CCTV footage did not support the AMF’s claim
- Based on CENV data, the T/O sounded the horn approximately 1200 ft prior to reaching TRST personnel
- Based on calculations using track circuits positions and time points when trains entered and exited track circuits boundaries, Train ID 154 was operating approximately 25 mph when passing roadway workers at CM A2-916+20
- Based on the AIMS system playback, during the incident the required prohibit exits were established on A15-08 signal, block track and human form was established to prevent train movement operating in reverse on Track 2 between A15 and A14

Conclusion

Based on salient facts as part of this investigation, SAFE concludes, the result of this event was due to human error.

1. The AMF failed to read the AMF script to student T/O per AMF procedures written in Permanent Order R-17-03 R-17-03 “*Advanced Mobile Flagger (AMF Procedures)*”

April 28, 2017". This was a contributing factor in this improper operation through a speed-restricted area. **Note: See Attachment 3**

2. The LPI was not certified at the time of incident and was not positioned within the cab area to instruct the T/O accordingly in accordance to MSRPH 3.11 and 1.59. The employee acting as an ULPI is no longer with the authority.

Immediate Mitigation to Prevent Re-Occurrence

- Train 154 was removed from service for post-incident investigation
- T/O, LPI, AMF, and RWIC removed from service for SAFE interview

Corrective Action Plan

1. WMATA shall take the appropriate action to include but not limited to holding a Safety Stand Down, and any other action deemed necessary to support prevention of repeated RWP event:
 - a. **During the time of this incident, WMATA held a Safety Stand Down with an emphasis on AMF operation. This stand down captured the RWP Level 2/4 population and the stand down was completed in the early part of June, 2017.**

Photos



Photo 1 – Incident location

Attachments

- 3.11 Students are permitted to operate rail vehicles when supervised by and in the presence of a qualified instructor or line platform instructor.

Attachment 1 – MSRPH O/R 3.11 rule violation



WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

METRORAIL SAFETY RULES AND PROCEDURES HANDBOOK

- 1.50 Employees are not permitted to ride in unused cabs except in the performance of their duties and then only after notifying the operator of the train.
- 1.51 Employees shall not loiter about station kiosks. Entry into station kiosks and use of kiosk telephones by employees other than Station Managers is restricted to emergencies, unusual occurrences, or required maintenance.
- 1.52 Employees shall not use unauthorized radios, electronic, audio, or video devices while on duty.
- 1.53 Employees shall exercise care in the use of WMATA property and resources, and shall make every effort to prevent damage or misuse.
- 1.54 Employees shall not willfully destroy or, through neglect, indifference, or misuse, cause loss of or damage to WMATA property, customer's property or fellow employee's property.
- 1.55 Employees shall immediately report the loss or damage of any WMATA property to their supervisor and/or other appropriate authority.
- 1.56 Employees shall not convert WMATA property to their personal use.
- 1.57 Employees shall not use or permit others to use Authority property, equipment or facilities unless authorized to do so.
- 1.58 Upon leaving WMATA employment, employees shall return all Authority property, or settlement in full must be made, prior to the employee's receiving final payment for services rendered.
- 1.59 Instruction of students is a regular function of those employees who are not permanent instructors but are qualified to instruct in a particular area. Instruction shall be performed in compliance with the approved WMATA training procedures.

Attachment 2 – MSRPH G/R 1.59 rule violation



Washington Metropolitan Area Transit Authority

ROADWAY WORKER PROTECTION MANUAL

PERMANENT ORDER

NO. R- 17-03 Advanced Mobile Flagger

Date: Friday April 28, 2017

TO: All Personnel

Permanent Order R-17-03 identifies the introduction and procedures of the Advanced Mobile Flagger (AMF).

Advanced Mobile Flagger (AMF) Procedures:

1. The AMF will be identified and assigned by the RWIC of the Mobile Work Crew.
2. The AMF is required to follow PPE guidelines per the Minimum PPE Standard for On-Track Safety in the RWPM.
3. In addition to the PPE required, the following equipment is also required when performing the duties of an AMF:
 - WMATA Approved Flashing Amber Lantern/E-Flare and Orange Flag

Attachment 3 – R-17-03 Advanced Mobile Flagger (AMF Procedures) April 28, 2017

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- WMATA Approved and Calibrated Working Radio
 - WMATA Approved Air Horn and Whistle
4. Under the direction of the RWIC, the AMF will position themselves at the next station ahead (in the direction the Mobile Crew will be walking). The AMF will take their position at the end of the platform (8 car marker or end gate) in the direction the train is traveling, and on the track the Mobile Work Crew is inspecting.
 5. Once the AMF has taken their position on the platform ahead of the Mobile Work Crew, they will place their Flashing Amber Lantern/E-Flare into its base and position it at the end of the platform (8 car marker or end gate) in the direction the train is traveling, and on the track their crew is inspecting. The AMF will hold the Orange Flag in their hand.
 6. The AMF must establish positive communication, i.e., via phone, radio, etc. to notify the RWIC that they are in place and the Flashing Amber Lantern/E-Flare and Orange Flag has been positioned.
 7. As the Class I/Class II vehicle approaches the AMF and their Flashing Amber Lantern/E-Flare and Orange Flag, the AMF is to ensure that the Class I/Class II Vehicle stops at their location. If the Class I/Class II Vehicle Operator does not blow two (2) short blasts of their mainline horn to acknowledge the presence of the AMF, the AMF must immediately give the WMATA Approved Hand Signal to stop utilizing the Orange Flag. The AMF must continuously give this Hand Signal utilizing the Orange Flag until the vehicle acknowledges them with two (2) short horn blasts, or comes to a complete stop.
 8. If the Class I/Class II Vehicle fails to stop at the AMF's location and is proceeding towards the Mobile Work Crew, the AMF must make an immediate transmission on the radio to the RWIC. AMF will advise the RWIC and all personnel to clear the Roadway immediately. The AMF will notify the RWIC that a Class I/Class II Vehicle is approaching them. The incident must also be reported to ROCC, at the first available opportunity, so that an investigation can commence.
 9. When the Class I/Class II Vehicle stops at the end of the platform (8 car marker or end gate), the AMF is to inform the Class I/Class II Vehicle Operator, verbally face-to-face, that there is a Mobile Work Crew ahead, by using the approved AMF Script, as follows:

Attachment 3 – R-17-03 Advanced Mobile Flagger (AMF Procedures) April 28, 2017

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