



Safety and Operations Committee

Board Information Item III-C

December 12, 2019

Investigation Update

Washington Metropolitan Area Transit Authority

Board Action/Information Summary

☐ Action ☒ Information

MEAD
Number:
202144

Resolution:
☐ Yes ☒ No

TITLE:

Investigation Update: Farragut West Oct. 7, 2019

PRESENTATION SUMMARY:

The Chief Safety Officer (CSO) will provide an update on the October 7, 2019 rail vehicle collision that occurred near Farragut West.

PURPOSE:

In advance of the final investigative report, the CSO will provide the Board and public with a briefing on the events and preliminary findings to-date of the rail vehicle collision near Farragut West.

DESCRIPTION:

WMATA continues to work toward strengthening the safety of the system for its employees and public.

The interested parties for this investigation include employees of the **689 Union** who are train operators and the **Washington Metrorail Safety Commission** in its role as State Safety Oversight Agency. The final report may require procurement actions to repair the damaged railcars or upgrade the stop and proceed software, but as of this report the parties assigned to that work have not been identified.

Key Highlights:

- On October 7, 2019 two out of service trains without passengers collided in the area near Farragut West
- Both operators were treated and released for non-life-threatening injuries

- Damage to rail cars remains under review
- Integrated review of data does not identify any system defects or anomalies
- Investigation is in the analysis phase
- Human Factors remain under review as part of ongoing investigation

Background and History:

On October 7, 2019 two out of service trains without passengers collided in the area near Farragut West. Operating conditions at the time of the incident did not identify any system disruptions or abnormal conditions. The following system aspects have been investigated:

Track: Inspections conducted on-scene did not identify anomalies or conditions which were out of tolerance. A review of inspection history did not identify defects or system anomalies, and tunnel lighting was fully illuminated.

Power: Inspections conducted on-scene did not identify anomalies or conditions which were out of tolerance. A review of inspection history did not identify defects or system anomalies.

Communications: Communication systems were operational and performing as designed per inspections and testing conducted on-scene and review of communications logs. A review of system history did not identify defects or system anomalies.

Signal System: Inspections and testing conducted on-scene did not identify anomalies or conditions which were out of tolerance. A review of data recorders did not indicate a failure of the system, and a review of system history did not identify defects or system anomalies.

Trainset: On scene inspections did not identify anomalies or conditions which were out of tolerance. A review of data recorders did not indicate a failure of the on-board signal

displays, and trainset testing did not identify defects or system anomalies. Detailed damage assessments continue.

Rail Operations Control Center: System playback review did not identify anomalies or other irregular conditions. A review of radio communications did not indicate any issues with transmission or reception, and communication quality appeared clear. All emergency protocols appear to have been followed.

In addition, personnel records indicated that the operators were up-to-date in all required qualifications and training, and toxicology tests for both operators were negative. Additional fact finding continues with the assistance of Metro’s Office of Inspector General. The probable cause and contributing factors are not finalized.

Moving forward, technological enhancements to add “Stop and Proceed Mode Acknowledgement” system to legacy fleet are in the procurement process, which will add another layer of protection. A Root Cause Corrective Action (RCCA) exercise is being conducted to identify opportunities to improve compliance with speed commands. Finally, a 30-day extension for the final report has been requested to finalize damage totals and to permit additional Human Factors fact-finding.

Discussion:

The Chief Safety Officer will present a preliminary review of the incident and findings to date as the investigation continues.

FUNDING IMPACT:

There is no impact on funding for the delivery of this update.	
Project Manager:	Theresa Impastato
Project Department/Office:	Executive Vice President and Chief Safety Officer

TIMELINE:

Previous Actions	October 10, 2019 – Briefed the Safety and Operations Committee on the incident

Anticipated actions after presentation	<ul style="list-style-type: none">• Continue the investigation into the incident of October 7, 2019• Implement necessary corrective actions as a result of the investigation
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Investigation Update: Farragut West October 7, 2019

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Executive Summary

- On October 7, 2019 two out of service trains without passengers collided in the area near Farragut West
- Non-life threatening injuries to two operators who were treated and released
- Damage to rail cars remains under review
- Integrated review of data does not identify any system defects or anomalies
- Investigation is in the analysis phase
- Human Factors remain under review as part of ongoing investigation

Findings - Engineered Systems

Track	Power	Communications	Signal System	Trainset	ROCC
<ul style="list-style-type: none"> • Inspections conducted on-scene did not identify anomalies or conditions which were out of tolerance • Review of inspection history did not identify defects or system anomalies • Tunnel Lighting was fully illuminated 	<ul style="list-style-type: none"> • Inspections conducted on-scene did not identify anomalies or conditions which were out of tolerance • Review of inspection history did not identify defects or system anomalies 	<ul style="list-style-type: none"> • Communication systems were operational and performing as designed per inspections and testing conducted on-scene and review of communications logs • Review of system history did not identify defects or system anomalies 	<ul style="list-style-type: none"> • Inspections and testing conducted on-scene did not identify anomalies or conditions which were out of tolerance • Review of data recorders did not indicate a failure of the system • Review of system history did not identify defects or system anomalies 	<ul style="list-style-type: none"> • On scene inspections did not identify anomalies or conditions which were out of tolerance • Review of data recorders did not indicate a failure of the on-board signal displays. • Trainset testing did not identify defects or system anomalies • Detailed damage assessments continue 	<ul style="list-style-type: none"> • System playback review does not identify anomalies or other irregular conditions • Review of radio communications does not indicate any issues with transmission or reception • Communication quality appears clear • All emergency protocols appear to have been followed

Findings Update - Operations and Human Factors

- Operating conditions at the time of the incident did not identify any system disruptions or abnormal conditions
- Personnel records indicated that the operators were up-to-date in all required qualifications and training
- Required toxicology test results for both operators were negative
- Involved personnel were all interviewed
- Additional fact-finding continues with the assistance of Metro OIG

Investigation Update - Current Status and Next Steps

- Probable Cause and Contributing Factors not finalized
- Metro attended a WMSC technical summit to review options to enhance safety
- Technological enhancements to add “Stop and Proceed Mode Acknowledgement” system to legacy fleet are in the procurement process
- Root Cause Corrective Action (RCCA) exercise is being conducted to identify opportunities to improve compliance with speed commands
- A 30-day extension for the final report has been requested to finalize damage totals and to permit additional Human Factors fact-finding

Questions

