



Inspection Form

Form WMSC-IR-1

Washington Metrorail Safety Commission

Agency/Department Information

| | | | | | | | | |
|---|---|----|--------------|-------------------------------|---------------------|-----------------------|----------------------|--|
| Inspection Date | YYYY | MM | DD | Report Number | 20200820-WMSC-MAL-2 | | | |
| | 2020 | 08 | 20 | | | | | |
| Rail Agency Name | Washington Metropolitan Area Transit Authority | | | Rail Agency Department | CMNT | Sub-Department | Greenbelt Building H | |
| Rail Agency Department Contact Information | Name | | Email | | Office Phone | | Mobile Phone | |
| | ██████████ | | ██████████ | | ██████████ | | ██████████ | |
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| | ██████████ | | ██████████ | | ██████████ | | ██████████ | |
| Inspection Location | Greenbelt Commissioning Facility – Building H, E99 5801 Sunnyside Ave, College Park, MD 20740 | | | | | | | |

Inspection Summary

| Inspection Activity # | 1 | 2 | 3 | 4 | 5 | 6 |
|---|----------|---|---|---|---|---|
| Activity Code | VM-WI-PI | | | | | |
| Inspection Units | 1 | | | | | |
| Inspection Subunits | 1 | | | | | |
| Defects (Number) | 2 | | | | | |
| Recommended Finding | No | | | | | |
| Remedial Action Required¹ | No | | | | | |
| Recommended Reinspection | No | | | | | |

Activity Summaries

| | | | | | | | | | | | |
|---|--|---------------------------|--------------------------------|------------|---------------------------------------|--------------------|----------------------|-----------------|----------------------------|-----------------|------------|
| Inspection Activity # | 1 | Inspection Subject | Virtual inspection | | | | Activity Code | | VM | WI | PI |
| Job Briefing Employee Name/Title | WMATA Inspection | | Accompanied Inspector? | N/A | Out Brief Conducted | N/A | Time | Virtual | Outside Shift | No | |
| Related Reports | N/A | | Related CAPS / Findings | | | | | | | | |
| Related Rules, SOPs, Standards, or Other | Ref | | Rule or SOP | | Standard | | Other / Title | | Checklist Reference | | |
| | MetroRail Safety Rules and Procedures Handbook (MSRPH). Section 4– Safety Rules. | | | | | | | | | | |
| Inspection Location | Main Track | Yard | Station | OCC | RTA Facility | WMSC Office | Track Type | At-grade | Tunnel | Elevated | N/A |
| | | X | | | | | | | | | X |
| Line(s) | E99 | | Track Number | N/A | Chain Marker and/or Station(s) | | From | | To | | |
| | | | | | | | N/A | | N/A | | |
| Vehicles | Head Car Number | | Number of Cars | | Equipment | | N/A | | | | |
| | N/A | | N/A | | | | | | | | |



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|----------------------------|---|----------------------------------|----|
| Description | <p>The WMSC Inspector conducted a virtual rules compliance inspection of the Greenbelt Commissioning Facility, Building H. The inspector requested numerous documents from daily activities performed at this facility for compliance with Metrorail Safety Rules and Procedures Handbook (MSRPH), as well as equipment maintenance activities, special tools, and documentation.</p> <p>The following documents were reviewed: <u>CENV Incident Reports from the Last 12 Months 20200713</u></p> <ul style="list-style-type: none"> ○ Reviewed CENV's incidents reports from the last 12 months and the following information is provided (See Attachment #1). ○ There is no tracking mechanism to show how lessons learned from incidents are being tracked or communicated to other departments to prevent similar incidents from re-occurring. CENV is requested to implement a process to track incidents by type and communicate this information to other departments to determine if these incidents can be prevented. ○ Item 91 – 7K train loss shunt on the Silver Line on 11-14-2019. CENV's incident report states "that Investigation is ongoing, test to be performed with ATC department". The report does not provide a status of the investigation such as, whether the test with the ATC department was completed at this time. Please provide WMSC with an updated CENV's incident report to include status of this incident. Please provide WMSC with a copy of CENV's and ATC's departments collaborated tests performed and test results of this investigation. <p><u>CENV's last twenty (20) completed engineering requests.</u></p> <ul style="list-style-type: none"> ○ Reviewed CENV's list of last twenty (20) completed engineering requests and the following information is provided. ○ The last twenty (20) completed engineering requests are dated before June 2014, which means that that no engineering request has been completed after 2014, or in over six (6) years, which is unacceptable. CENV is requested to implement a corrective action to ensure engineering requests are being assigned to engineers, tracked, and completed to meet the customer's timeline. CENV is requested to provide WMSC with a list and the status of engineering requests submitted and assigned to engineers over the last two years. Please provide a copy of each engineering request. <p><u>CENV's open critical engineering requests.</u></p> <ul style="list-style-type: none"> ○ Reviewed CENV's critical engineering requests and the following information is provided (See Attachment #2). ○ These engineering requests properly identify the requestor's name, contact information, priority level, affected railcars, description of the problem, supporting documentation, and the name of the assigned engineer. | Number of Defects | 2 |
| | | Recommended Finding? | No |
| | | Remedial Action Required? | No |
| | | Recommended Reinspection? | No |
| Remedial Action | N/A | | |
| Effective Practices | <p>Effective Practices</p> <ul style="list-style-type: none"> ○ Collaborating with other departments and tracking lessons learned is an excellent approach to reduce railcar incidents. | | |



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Attachment 1 – CENV Incident Reports from the Last 12 Months

| Incident # | Date of Incident | Incident Description | Train ID | Cars in the consist | Location and track | Affected Cars |
|------------|------------------|---|----------|---|--------------------------------|---------------|
| 89 | 11/12/2019 | Train Overran Twinbrook Station | 113 | L – 6042/6043 – 6173/6172 – 6159/6158 – T | Twinbrook Station | 6029 |
| 90 | 11/14/2019 | Train overspeeding while passing personnel on | 514 | L 7602-03+7489-88+7426-27+7683-82 T | Naylor Rd Station | 7062 |
| 91 | 11/14/2019 | Train Loss of Shunt on silver line | 607 | 7540-7541.7679-7678.7500-7501.7665-7664 | Different N line locations | All |
| 92 | 11/17/2019 | Train overran Red Signal | 607 | L7526-27X7407-06X7474-75X7631X30T | G98-32 signal | 7526 |
| 93 | 11/18/2019 | Customer fell between cars while walking through the bulkhead doors | 505 | L7470-71x7517-16x7636-37x7541-40T | N/A | 7636-7637 |
| 94 | 11/18/2019 | Train overran Naylor Road Station | 512 | L – 7414/7415 x 7559/7558 x 7604/7605 x 7673/7672 x – T | Naylor Road Station, Track # 1 | 7424 |
| 95 | 11/20/2019 | Train speed past mobile workers crew | 610 | L – 7444/7445 – 7649/7648 – 7664/7665 – 7567/7566 – T | G1-575+00 | 7444 |

| Briefly investigation results | Comments/Recommendations | Cause of incident |
|--|--|-------------------------|
| The data shows that when the train was traveling at approximately 54 mph and 2500 feet before entering Twinbrook Station platform, the MC was placed into B4 brake rate and the trucks wheels start to slide (wheels losing adhesion to the tracks), followed by the truck wheel slide control activation. The train passed the workers at about 14 mph. The limited speed is 15 mph. | The train was entering the station platform at about 32 mph with Master Controller still in B4 brake rate application, when the train passed the 1st F4 marker the MC emergency brake was applied. The train passed the 2nd F4 marker at about 25 mph and stopped at approximately 200 feet passed the platform 8 car mark No anomalies were found related to the train performance | Train Operator NTF |
| So far we did wheel concentricity check on four cars: 7678/79 and 7500/01. All wheels on 7678/79 are found out of round and Wheels 1 and 2 on 7500 are found out of round. No defect is found on 7501 | Investigation on going, test to be performed with ATC department | TBD |
| This stop and proceed process covered a total distance of 18.733 feet as calculated from the distance signal. Train id 607 responded as commanded and no indications of train malfunction. The videos were uploaded in the share drive. | No additional comments | NTF |
| The data does not show train issues at any time when the incident was reported. The requested videos were uploaded in the share drive for SAFE to review. | No comments | Customer issue |
| The data shows that the front of the train passed the end of the platform at a speed of 9.56 mph with the MC in EMERGENCY position. The train stopped at about 75 feet past the 8 car mark. Wheel slide conditions were detected and contributed to increase the stop distance. | CENV recommended to check the consist for flats as well as MC operations. | Track/weather condition |
| Train data shows that the train was moving at approximately 27 mph when the lead car was passing the reported location, the Master Controller position was in between P.L.R.A. No road horn was activated. The train was exceeding the 15 mph speed limit. | The data does not show train performance anomalies at the time of the reported incident. CMNT verified the good Road Horn operation. | Train Operator |

Attachment 2 – CENV’s Open Critical Engineering Requests

| # | ER # | Title | Car Series | System |
|---|------------|---|------------|------------|
| 1 | ER 1707013 | 6K HVAC Temperature Control card failures | 6K | HVAC |
| 2 | ER 1909022 | 6K Door Threshold Heater | 6K | Propulsion |
| 3 | ER 1910025 | 2K-3K Legacy Fleet Hand Brake Application | 2-3K | Brakes |
| 4 | ER 1912029 | 7K Removal Seal on White Light ACK Switch | 7K | Lighting |
| 5 | ER 2001005 | Solid State Relay used on the 6K HVAC | 6K | HVAC |
| 6 | ER 2003012 | (7K Stanchion Failure | 7K | Carbody |
| 7 | ER 2000601 | 7K Master Controller (MP) Dial Overlay Damage | 7K | ATC |

¹ The rail transit agency must provide WMSC with the necessary evidence (e.g. maintenance work order system records, photos, documentation, records, data, or other evidence) to close out the Remedial Action. Closeout of Remedial Actions may also be subject to ongoing WMSC verification inspections to ensure corrections are sufficient and effective.

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|---|--|--------------------|
| Inspector in Charge - Signature | | Date 08/20/2020 |
| Inspector in Charge – Name Manuel Lopez | Inspection Team Manuel Lopez | |