



## WMSC Inspection Report 20250115A

ISSUED 01/17/2025

### Inspection Details

Title: N01, McLean Station, 3 Month, 1012 B-1 Preventive Maintenance

Location McLean Station, Train Control Room

Date of Inspection: 1/15/2025

Time of Inspection: 9:30am to 12:26pm

Announced (Email to [REDACTED] Assistant General Superintendent, Signaling, on January 10, 2025, at 10:03am)

Risk-Based (WMATA Personnel (Employee or Contractor) Concern)

Automatic Train Control & Signals

### Overview

On January 15, 2025, a Washington Safety Commission (WMSC) Inspector conducted a risk-based inspection to review concerns that were raised by an anonymous WMATA employee via email in December 2024. The individual also included WMATA senior leadership and Metrorail's Communications and Signaling department on the email. The list of safety concerns raised by the individual pertained to the Preventive Maintenance (PM) procedure 1012 B-1 Alstom/GRS AFTC Test – Generation 3 and 4 being performed on Silver Line Phase 1 (stations N01 through N06) and the training surrounding this procedure and the tools needed to conduct the work. The purpose of the 1012 B-1 PM procedure is to verify that the train detection equipment, circuits, and systems are functioning (as intended) to ensure continuous train detection and safety of train movements.

The WMSC determined an in-field inspection should occur to review and validate the emailed safety concerns. In addition to in-field inspection, the WMSC has also reviewed the procedures that relate to the emailed concerns.

After conclusion of the inspection, the inspector conducted a debrief with Shift Supervisor, Toan Nguyen, in accordance with Program Standard Section 6.F.1.

### Defects and Corrective Actions

WMSC Inspections identify safety issues that may be classified as defects, findings, or recommendations. Findings and recommendations are defined by Program Standard Section 5.E.2 and 5.E.3 respectively. Ordinarily, issues identified in a WMSC inspection report are classified as



defects. Defects are specific safety issues of non-conformance/non-compliance that are identified and that require remedial action.

This inspection did not identify any findings or recommendations and therefore does not require a WMSC Corrective Action Plan in accordance with Program Standard Section 5.E.4.

### Observation 1

**Concern emailed to the WMSC:** “Procedure section 1.2 is not followed either.”: 1.2 Disable track circuits adjacent to the track circuit Speed Command Transmitter (SCT) under test. To obtain an accurate reading, additional adjacent track circuit transmitters may need to be disabled to eliminate unwanted/interfering signals. (Preventative Maintenance (PM) procedure 1012 B-1 Alstom/GRS AFTC Test – Generation 3 and 4.)

During the procedure, the inspector did not observe the alleged noncompliance of section 1.2 of the PM.

### Observation 2

**Concern emailed to the WMSC:** “Procedure section 2.3.3 is very hard to obtain. No clear or stable signal. Values are taking without seeing a clear and stable signal. Impossible to be accurate with this values.”: 2.3.3 Measure and record the track detection frequency at the Line+/Line- test points on the Power Amplifier Board at test points TP7 (Line+) and TP8 (Line-). The frequency must be within the upper and lower limits for the designated frequency. If the frequency is out of range, replace the associated Oscillator Card. (Preventative Maintenance Inspection (PMI) procedure 1012 B-1 Alstom/GRS AFTC Test – Generation 3 and 4.)

During the procedure, the inspector did not observe the alleged noncompliance of section 2.3.3 of the PM. Additionally, when the inspector asked WMATA personnel to explain the procedure’s steps in detail, WMATA personnel presented a firm understanding of the procedure, technology, data interpretation, and methodology for capturing the data.

### Observation 3

**Concern emailed to the WMSC:** “The values for 90% or more of the track circuits on phase 1 are never between (2- 4 )Vp-p [Voltage Peak-to-Peak.]”

During observation there were track circuits that were observed to be out of the 2-4 Voltage Peak-to-Peak range (Vp-p range). These values were flagged by the Maximo Mobile digital form and were subsequently added as corrective maintenance tickets in the Maximo database that are automatically generated to address this nonconformance. All of which are in accordance with Metrorail process as outlined in EIB-24-0015-SYS-PMIs Update 0.0 “Table 2 shows the field list for the 1012 PM inspection form. The inspector will select yes or no to indicate if the measurements were taken and, if yes, enter the required measurement values. If a measurement is out-of-tolerance, the inspector will see the measurement in the inspection form



summary and a CM work order will automatically be created for repair of the defective track circuit.”

#### Observation 4

**Concern emailed to the WMSC:** “We suggest that we should bring Alstom engineers to train the ATC, especially on the Silver line, and to revise the WMATA procedure so we can follow Alstom recommendation.”

The WMSC inspector discussed training with the Automatic Train Control Maintenance mechanics present during this observation. The mechanics perceived that the training was deficient in building technical competency for the work they were conducting, the outcomes and implications of doing the work incorrectly are not clearly explained, and that most training happened while on the job under the tutelage of a senior mechanic as opposed to a classroom or controlled setting.

#### Defect 1

Inspector noticed that the test lead termination points on one of the boards was damaged (see photo below). Although the defect did not prevent the measurements from being gathered, continued deterioration could affect the validity and ability of the data to be collected in the future. This concern was raised to the onsite supervisor for remediation (replacing the card).

#### Hazard Rating: 4D

#### Photo



Fig. 1 Test lead termination points



## Next Steps

Please respond by **Tuesday, January 21, 2025**, to acknowledge receipt and to convey responses to the WMSC regarding what, if any, actions will be or have been taken in response.