Washington Metropolitan Area Transit Authority

Board Action/Information Summary

Action Information	MEAD Number: 103269	Resolution: Yes No

TITLE:

Green Line Incident, Anacostia

PRESENTATION SUMMARY:

To inform the Safety and Security Committee about the investigation results on and recommendations from the Green Line incident that occurred on Wednesday, January 30, 2013.

PURPOSE:

To provide a report to the Board Safety and Security Committee on the conclusions of Management's investigation into the Green Line Incident and planned follow up actions.

DESCRIPTION:

The Green Line service disruption that resulted in a power loss on two trains had three components: an arcing insulator; the activation of multiple Emergency Trip Stations (ETS); and both Metro-directed and (passenger) self evacuations.

Key Highlights:

The investigation found that the agency's response to the trains with no power was faster than in prior incidents and improvements were evident in several key areas of emergency response. However, a number of further improvements are needed in compliance with incident command protocols, communications within command and control operations, providing adequate information to passengers onboard incident trains and improving bus staging for emergency and/or alternate transportation.

Background and History:

Shortly before 4:30 p.m. on January 30, 2013, an insulator outside of the Anacostia station began to arc. Customers were notified of the situation about five minutes later. Train service was suspended between Navy Yard and Anacostia stations to allow crews and emergency responders to service the incident area.

Discussion:

There are more than 100,000 insulators systemwide and last year alone Metro replaced 11,059 insulators as part of the Capital Improvement Program. Yet arcing insulators occur about twice a month when electrical current arcs because an insulator fails to buffer it, thereby generating smoke. Metro's response to arcing insulators is usually a routine matter that requires track crews to remove the insulator.

On January 30, 2013, just after 4:30 p.m., customers received notification (in less than five minutes) that an arcing insulator near Anacostia station required single tracking delays on the Green Line. Approximately 10 minutes later, DCFD and MTPD were on the scene and established incident command. MTPD had two officers on the scene when the initial call was dispatached.

Fire department personnel activated the first Emergency Trip Station (ETS), which deactivated third rail power in the area of the insulator, but this did not impact any trains. Shortly thereafter, track crews (escorted by MTPD) arrived at Anacostia and proceeded 900 feet into the tunnel to respond to the insulator. Meanwhile, the rail control center planned to single track trains around the affected area on track 1.

Trains #512 and #507 began moving toward Anacostia in the outbound direction. Due to a miscommunication between transit police on the scene and the transit police liaison in the rail control center, police on the platform at Anacostia were unaware of the planned train route around the area where the crew was working. When MTPD personnel observed train lights approaching on track 2, they believed there was an immediate life safety threat to the people repairing the insulator. MTPD activated the ETS in the second instance to remove 3rd rail power on track 2. That caused trains #512 and #507 to each come to a safe stop on rail without power. In both cases, emergency lighting remain on and public address systems were working.

Train #512 was closest to the Anacostia Station, just short of the platform. Several actions were taken over the next several minutes, including the control center directing the train operator to attempt to get one door on the platform, which was unsuccessful.

Within 15 minutes, all of the track personnel and emergency responders had cleared the railroad and the control center was preparing to restore power to move the two stalled trains. Approximately one to two minutes before power could be restored, the control center received reports that passengers had self-evacuated and were walking on the tracks and determined it was no longer safe to restore power. The investigation concluded that passengers self-evacuated from both trains #512 and #507.

While it did take time to safely deboard hundreds of passengers on #512 who did not self-evacuate, they were directed to the platform through the first train car by a train operator, rail supervisor and MTPD personnel. Deboarding began about 16 minutes after the train lost power and all passengers were off the train in less than one hour.

Metro rail supervisors were on the scene within four minutes of the onset of the incident and MTPD were already on the platform at Anacostia and responded to the train almost immediately. While some early onboard announcements were made, the investigation found that the operator of train #512 – who had only seven months on the job —and other Metro officials on the scene who failed to make their presence known to customers throughout the train, made inadequate announcements to share information with passengers.

Conditions were somewhat different on train #507, whose operator received unprecedented commendations from passengers for his extraordinary efforts to reassure passengers and keep people calm.

Several medical emergencies were reported to the operator via the intercom, mostly related to heat and stress. However, one passenger had a seizure and the operator rendered aid to her. When directed by rail control to change ends to try to move the train back toward Navy Yard, the operator walked through the train to identify any further medical conditions and to stop and talk with passengers on each car to further reassure them. This operator also used the PA to make train announcements frequently. While walking through the train, one passenger challenged the operator by demanding information about when power would be restored. Against the operator's urging, this passenger and others began self-evacuating. The operator deputized an off-duty Red Line operator who was assisting him to follow the passengers and try to escort them safely. MTPD and OEM personnel, along with rail supervisors in the tunnel, intercepted the self-evacuees and escorted them safely through the tunnel's vent shaft into an open field near Anacostia station, some were picked up by family and several were driven home by MTPD personnel. The United States Park Police (USPP) assisted with the evacuation to include deploying their helicopter over the open field, ensuring no Metro customers were left behind.

Most of train #507's passengers remained onboard, along with the operator, and deboarded at Anacostia -- about an hour and 20 minutes after their train lost power. Four customers were transported for further medical evaluations but they were uninjured.

The following day, Metro received 95 customer calls and emails about their experiences onboard the trains and in stations during the incident. Apart from the commendations for the operator of train #507, most were focused on the lack of sufficient information aboard the incident trains, as well as the lack of wayfinding, station manager information and announcements regarding bus shuttles. Customers (and employees who were interviewed) also indicated that bus shuttles were difficult to find, that staging areas were not identified and that crowding conditions on the streets and bus bays were alarming and quickly overwhelming. A number of customers noted that they were waived through the gates by Metro personnel and their Smartrip cards were not charged.

During the incident, ten Metro alerts were sent to customers – the first within five minutes of the initial single tracking report. The Metro alerts were updated frequently, and effectively turned the new dynamic kiosk signs red, relaying advisories about service status throughout the rush hour.

The incident communications protocol was activated eight minutes after train #507 lost power. During the ICP portion of the incident, Metro staff tweeted 79 times – less than every two minutes, with updates on service status. About half of the tweets were engaging customers in real time in response to information requests. Also, four news releases were issued – and the messages through all channels made clear, actionable messages that were consistent – including "avoid the green line." Media interviews were given at Anacostia and Navy Yard, as well as following the incident at the Metro's headquarters building.

Appropriate notifications were made to the Tri-State Oversight Committee, Federal Transit Administratoin, and National Transportation Safety Board.

The day after the incident, Metro issued an apology to customers via email and the

General Manager/CEO personally conveyed the apology in media interviews as well as to customers he reached out to at Navy Yard. Anacostia customers were greeted by Chief Taborn, Deputy Chief Pavlik, and Dave Kubicek.

FUNDING IMPACT:

The impact to the FY13 operating budget to be determined	
Project Manager:	Kubicek, Taborn, Dougherty, Bowersox
Project Department/Office:	Rail; Metro Transit Police; Safety; and Customer Service Communications and Marketing

TIMELINE:

Previous Actions	None
Anticipated actions after presentation	See Recommendations

RECOMMENDATION:

Follow up actions that will be taken include:

- Provide refresher training and drills to increase compliance with procedures for communications between Rail supervisors and MTPD on the scene
- Review process for coordination between MTPD OCC Liaison and ROCC
- Conduct joint training between incident command participants
- Reinforce proper procedures for MTPD following activation of ETS
- Increase and enhance bus transportation support
- Improve situational awareness for Bus managers in the field
- Develop dynamic sign capabilities to display local Station specific information
- Initiate enhanced training and drills for emergency response
- Review best practice models for passenger train evacuation (PTEP) to improve current practices
- Provide updated passenger emergency instructions

Arcing Insulator/Anacostia Station

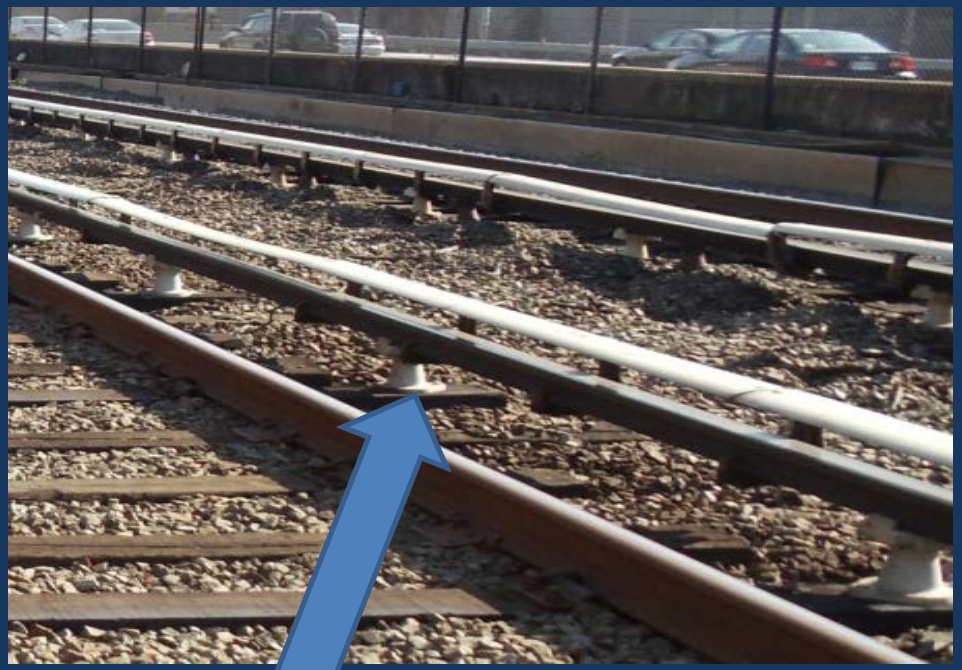
Safety and Security Committee
February 14, 2013

Incident Components

Green Line disruption resulted from three individual events:

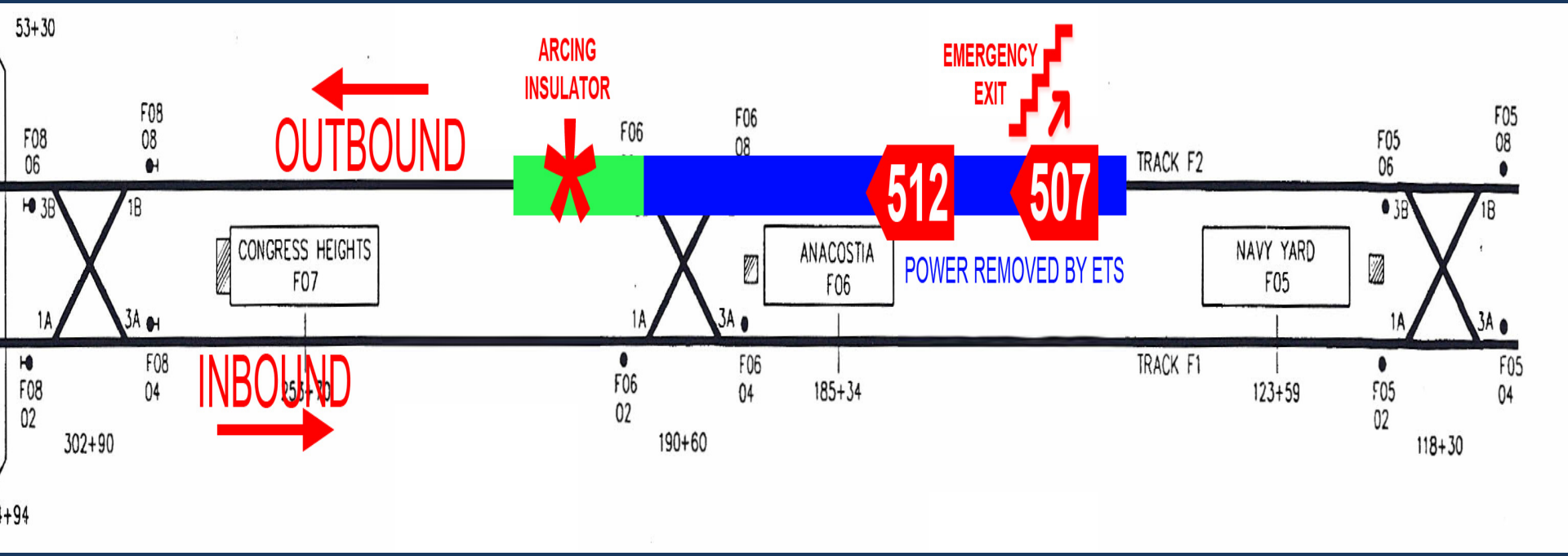
- An arcing insulator at Anacostia station
- Emergency trip station activations removed third rail power
- Passenger self evacuation to roadway

Third Rail Insulator for Traction Power



Arcing Insulator (when a failure occurs)

Incident Diagram



Exit Shaft During Incident

Customer Experience

- No reported injuries
- Train 507 Operator received ten commendations
- 85 complaints registered by phone and email from customers who were frustrated by the lack of onboard and in-station information, as well as delays
- Customers at Navy Yard and Anacostia waived through gates without charge

Customer Comments – Train 507

Customer 1

He was the perfect engineer for the situation. I sat two seats from the woman that had the seizure. He eventually found his way to her and escorted her near the back door so that she could get air. In this case, panic would have set in more than it did if it wasn't for [Train Operator's] caring, yet professional approach/personality.

Customer 2

Many riders in the train car I was in were very uneasy because of the lack of fresh air, crowdedness, body heat, and anxiety to get home. [Train Operator] was exceptional at calming the crowd, helping maintain sanity, and easing any confusion that existed in this confusion. I would hope he would be the conductor for any Metro train I ride.

Customer Comments – Train 507

Customer 3

[Train Operator] made the train ride during the no power issue in the tunnel very tolerable today. When passengers were getting frustrated and panicked, he kept everyone together. He was very professional and reassuring. I believe I speak for all passengers, we were very assured. Thank you.

Customer 4

Commend [Train Operator] on doing a good job with keeping everyone calm ... he kept giving us updates during that time. That was a positive thing for everyone involved.

Public Communications

- Total of 10 MetroAlerts issued
  - 4:40PM - 5:31PM - 6:04PM - 8:18PM
  - 5:00PM - 5:44PM - 7:17PM
  - 5:14PM - 6:02PM - 7:18PM
- Included clear guidance, e.g. “Avoid Green Line until resolved”
- 79 Tweets, combination of customer engagement and public updates
- Four news releases issued
  - 5:11PM - 7:12PM
  - 6:08PM - 7:18PM
- Metro on-camera interviews at Anacostia, Navy Yard and JGB

Public Communications

- Customer apology issued
- Station customer outreach by GM/CEO, DGM, MTPD Chief, and Deputy Chief at Navy Yard and Anacostia
- All customer contact responses completed within 48 hours

Findings

- MTPD failure to properly follow up directly with ROCC after ETS activation
- Inadequate on scene communications
- Inadequate coordination between MTPD OCC Liaison and ROCC within the Control Center
- Passengers aboard Train #512 received insufficient communication
- Some Station Managers did not relay adequate information to customers

Findings

- Passenger self evacuation created an immediate life/safety hazard and prolonged the delay for other customers
- Lack of capability to isolate radio communications with incident trains
- Insufficient buses available to accommodate demand
- Due to staging of emergency equipment at Anacostia, not able to effectively manage shuttle bus operation
- Shuttle bus operation was not effectively established at Navy Yard

Incident Response Improvements versus 2012

Actions Taken	Yes (✓)
ROCC immediately aware of loss of power	✓
ROCC's timely notification to MTPD & emergency responders	✓
Timely notification to customers onset of incident	✓
Improved public communications	✓
Improved internal communications	✓
Adherence to all NIMS/Incident command system protocols	
Improved top-side communications	
Adequate buses shuttles for passengers	

Recommendations

- Review incident command system protocol/procedures
- Conduct multi-departmental and multi-agency training and drills
- Evaluate composition and locations of emergency response teams
- Review signage program to enhance local dynamic messaging at station level
- Identify best practice models on train evacuation