



Interim Investigation Report on the Power Outage Events on the 29th August 2021 at NYCT Rail Control Center (RCC)

Key Findings Report

Events Narrative:

At 8:25 pm on the night of August 29, 2021, Con Edison power supply system experienced a momentary dip in power. After this event it was discovered that several pieces of mechanical equipment at the Rail Control Center (RCC) of New York City Transit (NYCT), stopped functioning. Maintenance staff at the RCC began working on the mechanical systems to put them back into service. The electrical system in the RCC was unaffected by the power Con Edison Power dip.

- At 9:06 PM, 41 minutes later, all electrical equipment connected to one of the power distribution units at the RCC lost power because someone pushed the emergency button on the unit. Electrical equipment connected to other distribution units in the facility retained power.

This power outage affected communication between the RCC and some NYCT trains of the "A" Division and the "L" line

- At 10:30 PM, 84 minutes later, the breakers on the power distribution unit were reset making power available to all loads connected to that power distribution unit.
- At 11:15 PM, 45 minutes later, all systems at the RCC were restored to normal.

Events Causes:

- 1 The loss of power from the power distribution unit at the RCC was due to human error. There is the strong possibility that the emergency push button was accidentally pressed since the plastic guard that would prevent accidental activation was missing.
- 2 Failure to restore the power for 84 minutes was due to:
 - a. Inadequate maintenance organizational structure at the RCC. Lack of a direct line of command and guidelines on prioritizing restorative activities lead to uncoordinated power restoration action.
 - b. Lack of a proper power distribution monitoring system, providing visibility of the status of key electrical components in the power distribution system.

Recommendations

As an immediate term improvement, it is recommended that the maintenance management structure and protocols pertaining to the RCC be reorganized

As a short-term improvement, it is recommended to investigate and install, where feasible, additional equipment that will provide alternate electrical circuits to feed all electrical load in the building

As a long-term improvement, it is recommended that NYCT install and manage a modern Building Management System (BMS) that will give detailed visibility of the status of the electrical distribution, mechanical and security systems.