

**Legislative Council Panel on Transport
Subcommittee on Matters Relating to Railways**

**Power outage incident and other minor incidents involving
station facilities occurred at South Island Line**

Purpose

The MTR South Island Line (“SIL”) commenced service on 28 December 2016. On the next day, there was a tripping of the circuit breakers (“CB”) in the power supply system, which caused some power disruption. The safety protection device of the Ship Impact Detection System (“SIDS”) at the Ap Lei Chau Bridge section was activated as a result, attributed to special deployment of trains and caused a 31-minute service delay. Besides, the incident also temporarily affected the normal functioning of some of the railway and station facilities along the line. This paper reports to Members the preliminary investigation results of the cause of the incident, and follow-up actions taken by the MTR Corporation Limited (“MTRCL”).

Sequence of incident

2. A Power Remote Control Device at the Wong Chuk Hang Depot malfunctioned at around 2:15 p.m. on 29 December 2016, causing the tripping of CB in the power supply system of SIL and affecting part of the power supply of the Depot and five stations along SIL. The function of the Power Remote Control Device is to allow staff at Tsing Yi Operations Control Centre to remotely control the switching of electrical devices of SIL. There are a number of such Power Remote Control Devices of the same model on SIL, controlling different facilities at stations along the line (such as escalators and air-conditioning system).

3. During the incident, the power supply of SIL trains was maintained by other devices. Nevertheless, as the power disruption also affected the normal functioning of SIDS at the Ap Lei Chau Bridge section and activated its safety protection mechanism, trains were prevented from entering that section. As a precautionary measure, operations staff of MTRCL conducted an inspection of the Ap Lei Chau Bridge according to established procedures (please refer to paragraph 5 below) and made corresponding deployment of train service. Six train trips on SIL were thus affected, with the longest delay being 31 minutes

during the incident.¹

4. During the incident, due to the malfunctioning of the Power Remote Control Device, some of the station facilities connected to the Device were affected by the power outage. Details are set out in Annex 1. Nevertheless, it should be emphasised that the incident was not related to the Fully Automatic Operation adopted for SIL and train safety was not affected by the incident.

5. MTRCL staff immediately inspected and took follow-up actions upon the occurrence of the incident, including the isolation of the concerned Power Remote Control Device at the power supply system. MTRCL staff manually operated the power supply system and gradually reactivated power supply to stations and station facilities about 16 minutes after the incident (please refer to Annex 1). All affected facilities resumed normal operation around one hour after CB tripping of the power supply system.

Contingency arrangement

6. During the incident, MTRCL kept disseminating latest train service information to customers through various channels, including public announcements in station and trains, Passenger Information Display System, MTR Website and MTR Mobile Apps “Traffic News”. At the same time, additional manpower was deployed to affected stations to provide assistance to customers and better manage the passenger flow. The SIL stations were generally in good order during the incident.

¹ According to the Service Performance Arrangement introduced in 2013 after the review on the MTR Fare Adjustment Mechanism, MTRCL will pay proceeds for service disruptions of 31 minutes or above caused by factors within MTRCL’s control (including equipment failure and human factor), which will be returned to passengers through the “10% Same Day Second Trip Discount” scheme. Details are as follows:

31 minutes or more but less than or equal to 1 hour	\$1 million
More than 1 hour but less than or equal to 2 hours	\$2 million
More than 2 hours but less than or equal to 3 hours	\$3 million
More than 3 hours but less than or equal to 4 hours	\$5 million
Each additional hour (or part thereof) exceeding 4 hours	\$2.5 million (subject to a maximum of \$15 million per incident)

7. MTRCL immediately reported the incident to the Electrical and Mechanical Services Department (“EMSD”) and Transport Department in accordance with established procedures.

Preliminary investigation results and follow-up measures

8. After the service hours on the day of the incident, a preliminary investigation of the incident was jointly conducted by MTRCL and the contractor of the power supply system. The investigation result revealed that one of the wires was in poor contact at the terminal of the Power Remote Control Device and caused the tripping of the system, leading to the situation as mentioned in paragraphs 2 to 4 above. The incident does not involve any quality issue related to the Power Remote Control Device.

9. Subsequent to the incident, MTRCL has re-connected the concerned wire and conducted a thorough inspection of the Power Remote Control Devices of the same model along SIL and other railway lines (a total of 43) to ensure proper functioning of all such systems. MTRCL has also set up an internal panel comprising members of operation and engineering teams to conduct a review in collaboration with an independent expert, with a view to avoiding reoccurrence of similar incident. On completion of the review, MTRCL will submit a report to EMSD. The cause of incident and corresponding follow-up measures would be made public.

10. During the early stage of the operation of a new railway line, operational hiccups may not be avoidable as it takes time for systems and parts to run in. MTRCL thanks the passengers for their understanding and patience during the incident. Separately, the three minor incidents regarding station facilities subsequent to service commencement as raised by Members (not related to the above-mentioned incident) are detailed in Annex 2. Since its commissioning on 28 December 2016, SIL on the whole operates smoothly in general and has a daily patronage of about 110 000.

MTR Corporation Limited
13 January 2017

**Impact on stations during the
SIL power outage incident on 29 December 2016**

Stations	Some of the affected facilities
Admiralty Station	13 escalators and air-conditioning system of the new station
Ocean Park Station	4 escalators, 2 entry/exit gates, 2 ticket machines and 1 self-service point
Wong Chuk Hang Station	2 lifts, 6 escalators, 17 entry/exit gates, lighting system (emergency lighting system was in operation) and air-conditioning system
Lei Tung Station	2 lifts, 2 escalators, 9 entry/exit gates, lighting system (emergency lighting system was in operation) and air-conditioning system
South Horizons Station	6 escalators and air-conditioning system

About 16 minutes after the incident, the MTRCL staff manually switched on the tripped circuit breakers of the power supply system and the affected stations facilities resumed normal operation gradually.

Minor incidents involving SIL station facilities

Date and time	Sequence of events	Findings and follow-up actions
28 December 2016 5:50 a.m.	At about 5:50 a.m. on 28 December, South Horizons Station staff noticed that the safety device of platform screen doors located at rear end of the Admiralty-bound platform was activated. Notification was thus generated by the system. After immediate inspection, it was confirmed that the platform screen doors were in normal operational condition and safety device was reset. At about 5:52 a.m., the aforementioned platform screen doors resumed normal operation. This incident lasted for about two minutes and did not affect train service.	It is believed that the safety device was inadvertently activated. The inspection revealed that the platform screen doors were operating normally.
28 December 2016 7:30 a.m. and 10:30 a.m. respectively	At about 7:30 a.m. on 28 December, Lei Tung Station staff noticed that the doors of a lift connecting station concourse and entrance B were not in smooth operation. As a precautionary measure, station staff temporarily stopped the lift and promptly notified the contractor to carry out an inspection. The lift resumed service at 8:00 a.m. after the inspection. At around 10:30 a.m., the same lift doors failed to operate smoothly again. The concerned lift resumed normal service at around 11:00 a.m. after detailed inspection by	After train service hours of the day, the contractor examined the lift again and replaced some of the mechanical parts as well as adjusted the operating system of the lift doors. Since then, the lift has been operating normally.

Date and time	Sequence of events	Findings and follow-up actions
	<p>the contractor. During the incident, 3 other lifts connecting station concourse and entrance B maintained normal service and the overall operation of the station was smooth.</p>	
<p>28 December 2016 7:30 a.m.</p>	<p>At about 7:30 a.m. on 28 December, Admiralty Station staff noticed that a downward escalator connecting the Island Line/Tsuen Wan Line platform and South Island Line interchange concourse stopped operation. The contractor was alerted immediately for inspection and repair. The escalator resumed normal service at around 8:40 a.m.. During the repair, passengers could use nearby escalators and lifts to proceed to the SIL interchange concourse.</p>	<p>Investigation revealed that the stoppage of the escalator was caused by a foreign object which activated the safety device of the escalator. The escalator resumed normal operation after the contractor removed the object and carried out necessary repair.</p>