

Panel on Transport

Subcommittee on Matters Relating to Railways

Meeting on 4 November 2010

**Information note on the notification system
of the MTR Corporation Limited**

The subject of railway incidents was discussed by the Subcommittee on Matters Relating to Railways (the Subcommittee) at its meetings on 4 December 2009 and 26 March 2010 in the last legislative session. Information provided by the Administration on the existing notification system is appended below for members' reference -

- (a) the MTR Corporation Limited (MTRCL) is required to notify the Electrical and Mechanical Services Department (EMSD)¹ of railway incidents. Under Mass Transit Railway Regulations (the Regulations), railway incidents are classified into "accidents" and "occurrences", as follows -
 - (i) for accidents² that occurred on the railway, railway corporations should immediately after the occurrence of the accident make a verbal report to Government; and
 - (ii) apart from accidents, the Schedule to the Regulations sets out notifiable occurrences, which cover seven types of occurrences "directly affecting persons" and 12 types of occurrences "affecting railway premises, plant and

¹ As approved by the Finance Committee on 11 January 2008, the Hong Kong Railway Inspectorate was transferred from Transport Branch of the Transport and Housing Bureau to EMSD and renamed as the Railways Branch on 1 February 2008, with a view to enhancing Government's regulatory role and functions regarding railway safety.

² Under Regulation 2 of the Mass Transit Railway Regulations (Cap. 556A), an accident is notifiable if it occurs on a part of the railway which has commenced operation for public use and -
(a) as a result thereof any person dies or suffers serious injury; or
(b) it involves a train (i) colliding with, or striking against, another train or any other object; or (ii) leaving the rails,
and doing so either on a line used for the carriage of passengers or goods or in circumstances where the normal operation of such a line is affected.

equipment". MTRCL should as soon as practicable after the occurrence complete and deliver a written report on the occurrence to Government.

- (b) Apart from the above requirement under the legislation, MTRCL also notifies Government of incidents which are of "public concern and media interest". This is to facilitate explanations to address public concerns about the safety-related incidents and to initiate follow-up actions where necessary.

2. At the request of the Subcommittee, the Administration has also provided supplementary information papers on the following issues concerning railway safety -

- (a) Notification of railway incidents when there is service disruption (**Appendix I**);
- (b) List of outsourced maintenance work of the MTR Corporation (**Appendix II**); and
- (c) Railway safety (**Appendix III**), including -
 - (i) background to the integration of the Hong Kong Railway Inspectorate into the Electrical and Mechanical Services Department, and arrangements relating to the monitoring of railway safety and railway incidents;
 - (ii) information on service delays of 15 minutes to 30 minutes, over 30 minutes to 45 minutes, over 45 minutes to 60 minutes, and over 60 minutes from 2005 to 2009; and
 - (iii) MTRCL's response to the issues raised by the Subcommittee at its meeting 26 March 2010.

The relevant papers are attached for members' easy reference

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

**Notification of Railway Incidents
when there is service disruption**

At the meeting of the Subcommittee on Matters Relating to Railways (Subcommittee) on 16 January 2009 during which the item on the MTR Kwun Tong Line service disruption was discussed, Members requested the Administration to provide a paper on the notification of railway incidents when there is service disruption. This paper provides the relevant information.

2. We have all along put in place an alert system for incidents which applies to all public transport operators including the MTR Corporation Limited (MTRCL). Under this system, MTRCL (as well as other public transport operators) issues an “Amber Alert” as an early warning in respect of an incident which could lead to a serious disruption of service; and a “Red Alert” is issued as a signal to indicate that a serious disruption has continued or is expected to continue for over 20 minutes, and emergency transport support services from other operators are required.

3. To facilitate relevant operators and agencies to gear up resources to assist affected passengers, MTRCL is required since 2004, to notify the Transport Department (TD) within 8 minutes on any service disruption incident that has occurred for 8 minutes or is expected to last for 8 minutes or more. Train service disruption incidents refer to those incidents that lead to a stoppage of service at a railway station or a stop (in respect of Light Rail), or on a section of a railway line, or an extension in end-to-end journey time on a railway line of 8 minutes or more.

4. Upon receiving notification, TD would liaise closely with MTRCL and provide assistance as necessary. The early notification has enabled preparatory work for emergency/support services to start at the earliest available opportunity. Apart from notifying TD, MTRCL is also required to disseminate at the same time the service disruption messages to passengers on the affected train and in the stations within 8 minutes.

5. The notification system has been working well. During the discussion of the MTR Kwun Tong Line incident at the meeting of the Subcommittee on 16 December 2008, Members expressed that MTRCL should further enhance the existing system with regard to notifying the media. We have followed up with MTRCL. MTRCL has agreed that in addition to the existing circumstances for notification to the media, it will also notify the media of those incidents that are related to train operation and are of public concern and which has resulted in or could potentially result in injuries or deaths. This has already been reported to the Subcommittee in January 2009.

**Transport and Housing Bureau
June 2009**

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

**List of Outsourced Maintenance Work of
MTR Corporation**

Purpose

This paper provides supplementary information on outsourced maintenance work, all of which are subject to regular inspections and checks by staff of the MTR Corporation (the Corporation).

Outsourced Maintenance Work

2. Since MTR commenced service in 1979, the Corporation has put in place a detailed monitoring system to ensure that its maintenance work, including outsourced maintenance work, meets the standards it adopts. It should be emphasised that the Corporation applies the same standards and requirements to maintenance tasks carried out both by MTR in-house staff and contractor staff. These standards are in line with good international practices and MTR engineers are responsible for monitoring and supervising work quality to ensure they comply with standards. Outsourced maintenance work is also subject to the same regular checks as MTR in-house maintenance work. There are daily/weekly and monthly performance reviews and annual asset surveys and three-yearly asset condition assessments. On top of the above, outsourced maintenance work is subject to additional scheduled and random inspections and checks by MTR dedicated staff at supervisory level. In fact, in respect of infrastructure equipment, there is a team of dedicated engineering staff whose work is mainly to ensure that the outsourced maintenance work meets the performance levels set out in the contracts with the contractors. These MTR in-house staff would make daily visits to various sites where system maintenance are in process and inspect the work being done.

3. In maintaining MTR train operations, contractor staff are required to possess the proper qualifications and must be certified to ensure they are equipped with the adequate skills and techniques similar to MTR staff doing the same jobs, and these requirements are specified in the relevant outsourcing contracts. In respect of specialized work such as the maintenance of fire services equipment, escalators and lifts, registration of contractors is also stipulated in the relevant legislation. The Corporation also follows up on the training of contractor staff through working meetings. While work-related skill and safety training are provided by the contractors themselves, the Corporation also helps brief contractor staff on the Corporation's operation and safety procedures.

4. The outsourced maintenance work of the Corporation's train operations includes:

- Infrastructure equipment (track, signaling, power distribution and overhead line) and trains of the Tseung Kwan O Line
- Automatic Fare Collection equipment of the following lines -
 - West Rail Line;
 - Tseung Kwan O Line;
 - Tung Chung Line;
 - Disneyland Resort Line; and
 - Airport Express
- Passenger information display equipment
- Closed circuit television equipment
- Station lifts and escalators
- Platform screen doors and automatic platform gates
- Fire services equipment
- Telecommunications equipment
- Gondola and gantries
- Baggage handling equipment for Airport Express
- Building services equipment
- Waste water treatment, plumbing and drainage
- Backup power supply equipment
- General station lighting
- Centralised control equipment for power supply switching for West Rail Line and East Rail Line

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

Railway Safety

Purpose

This paper provides information requested by Members at the meeting of the Subcommittee on Matters Related to Railways (the Subcommittee) on 26 March 2010 relating to the monitoring of railway safety, railway incidents, and arrangements between MTR Corporation Limited (MTRCL) and its contractors.

Monitoring of railway safety

2. The Government attaches a great deal of importance to the monitoring of railway safety. The Transport and Housing Bureau is responsible for overseeing the overall policy on railway safety and regulation of railway services. In 1990, the Hong Kong Railway Inspectorate (HKRI) was established to oversee the safe operation of railways by investigating into railway incidents, ensuring the adoption of appropriate safety practices by the railway corporations, assessing and approving new railways and major modifications, and assessing and following up the railway corporations' improvement measures.

3. In the light of the increasing number of new railway projects, the advancement in railway technology, the changes brought about by the merger of the Mass Transit Railway (MTR) and Kowloon-Canton Railway (KCR) systems, and increasing public expectation on continuous improvement in railway safety, we reviewed the role and functions of the HKRI in 2007 with a view to further enhancing the monitoring of railway safety by taking into account overseas experience and practices.

4. The review concluded that the manpower of the HKRI should be upgraded and enhanced and that the HKRI should be integrated into the Electrical and Mechanical Services Department (EMSD). As such, we proposed to strengthen the professional manpower of HKRI by upgrading its head from a Chief Electrical and Mechanical Engineer (CEME)(D1) to a Government Electrical and Mechanical Engineer (GEME)(D2) and creating two non-directorate engineering posts; and to integrate HKRI into EMSD. The proposal was aimed at further enhancing our regulatory functions by adopting more measures for monitoring of railway safety, steering the railway corporation to enhance adoption of safety preventive measures, ensuring the railway corporation adopts best international safety practices and

assessing and approving new railway projects to facilitate safe and timely implementation.

5. The integration of HKRI into EMSD was considered the most appropriate arrangement given the relevance of electrical and mechanical engineering in railway engineering systems such as signalling, trains and power supply. Indeed, EMSD had all along been providing technical support and advice when major railway incidents occur. Integration into EMSD meant that there would be more flexibility in deploying relevant expertise and resources for the purpose of overseeing railway safety. It would also facilitate the nurturing of expertise and experience and the rendering of in-house professional support to the team. After integration, the team continued to comprise professional staff from various engineering disciplines including civil engineering, electrical and mechanical engineering and electronics.

6. The above was discussed at the Panel on Transport in November 2007 and Members generally supported the proposal. The proposal was then approved by the Establishment Subcommittee of the Finance Committee and the Finance Committee in December 2007 and January 2008 respectively. After integration into EMSD in February 2008, the team was renamed as the Railways Branch. The Chief Inspector of Railways (the D1 post) was retitled as the Assistant Director/Railways (the D2 post).

7. While EMSD is responsible for monitoring railway safety, the Transport Department (TD) is responsible for monitoring railway services. In this regard, MTRCL is required to comply with the service standards stipulated by the Government. TD oversees whether MTRCL meets the requirements of the service standards by examining the returns submitted by MTRCL on its service performance, monitoring railway services and investigating the complaints received about railway services. TD also ensures that the services of all railway lines comply with the required standards. If MTRCL fails to meet any requirement, TD will demand the railway corporations to take remedial measures.

8. Apart from ensuring that effective and efficient railway services are provided, TD also has a co-ordination role when incidents occur through the Emergency Transport Coordination Centre (ETCC) which it operates. Through the ETCC, TD could co-ordinate with other transport operators to enhance their service and divert passengers, having regard to the extent of service disruption.

9. In case of railway incidents, both TD and EMSD will follow up with MTRCL and request for an incident report. They will conduct investigations, provide advice to MTRCL for preliminary identification of the cause of the incident and the immediate action required. EMSD and TD will monitor the progress made by MTRCL in identifying the cause and implementing improvement measures.

Other information as requested by Members

10. At the meeting of the Subcommittee on 26 March 2010, Members also requested for information relating to railway incidents with service delays lasting between 15 minutes to 30 minutes, more than 30 minutes to 45 minutes, more than 45 minutes to 60 minutes and more than 60 minutes from 2005 to 2009. The relevant information provided by MTRCL is at Annex A.

11. As regards other issues raised by Members on railway safety and communication arrangements between MTRCL and its contractors, MTRCL's response is set out at Annex B.

Transport and Housing Bureau
August 2010

From 2005 to 2009, train service delays of 15 minutes to 30 minutes, more than 30 minutes to 45 minutes, more than 45 minutes to 60 minutes and more than 60 minutes are set out at Table 1 to Table 4.

Table 1: Delays of 15 minutes to 30 minutes

	2005		2006		2007			2008	2009
	Pre-merger MTR	Pre-merger KCR	Pre-merger MTR	Pre-merger KCR	Pre-merger MTR	Pre-merger KCR	MTR	MTR	MTR
Infrastructure maintenance, Rolling Stock failure and Human Factor	15	12	17	10	7	4	1	38	25
Passenger Action and External Event	1	7	2	6	3	6	1	18	22
Subtotal	16	19	19	16	10	10	2	56	47
Total	35		35		22			56	47

Table 2: Delays of more than 30 minutes to 45 minutes

	2005		2006		2007			2008	2009
	Pre-merger MTR	Pre-merger KCR	Pre-merger MTR	Pre-merger KCR	Pre-merger MTR	Pre-merger KCR	MTR	MTR	MTR
Infrastructure maintenance, Rolling Stock failure and Human Factor	3	1	2	1	1	1	0	7	5
Passenger Action and External Event	0	0	1	2	0	1	1	1	4
Subtotal	3	1	3	3	1	2	1	8	9
Total	4		6		4			8	9

Table 3: Delays of more than 45 minutes to 60 minutes

	2005		2006		2007			2008	2009
	Pre-merger MTR	Pre-merger KCR	Pre-merger MTR	Pre-merger KCR	Pre-merger MTR	Pre-merger KCR	MTR	MTR	MTR
Infrastructure maintenance, Rolling Stock failure and Human Factor	2	1	2	1	1	0	1	3	2
Passenger Action and External Event	0	0	0	0	0	2	0	2	2
Subtotal	2	1	2	1	1	2	1	5	4
Total	3		3		4			5	4

Table 4: Delays of more than 60 minutes

	2005		2006		2007			2008	2009
	Pre-merger MTR	Pre-merger KCR	Pre-merger MTR	Pre-merger KCR	Pre-merger MTR	Pre-merger KCR	MTR	MTR	MTR
Infrastructure maintenance, Rolling Stock failure and Human Factor	1	0	0	0	0	1	0	2	1
Passenger Action and External Event	1	0	0	0	0	0	0	3	5
Subtotal	2	0	0	0	0	1	0	5	6
Total	2		0		1			5	6

**MTRCL's response to other issues raised by Members
at the meeting on 26 March 2010**

- (a) Assigning expert of the data transmission network supplier to monitor network performance
- Given the complexity of the East Rail Line data transmission network, the supplier's expert, who is the designer of the network, has the most comprehensive knowledge and understanding of the system. Therefore, the expert is most qualified to monitor the system and conduct audits on its performance.
 - Audits for the network are conducted annually. This practice has been in effect for 12 years.
 - The procedures for outside experts working within the MTR system have been tightened by monitoring of audits conducted by experts by MTRCL's staff when the audits are performed.
- (b) Outsourced maintenance work
- Since MTRCL commenced service in 1979, it has put in place a robust monitoring system to ensure that its maintenance work, including outsourced maintenance work, meets the established standards. It should be emphasised that MTRCL applies the same standards and requirements to maintenance tasks carried out by both MTRCL in-house staff and contractor staff. These standards are in line with best practices internationally and the engineers of MTRCL are responsible for monitoring and supervising work quality to ensure compliance. Outsourced maintenance work is also subject to the same regular checks as MTRCL in-house maintenance work.
- (c) Shuttle bus arrangement
- When serious disruptions to train service occur, MTRCL will arrange shuttle bus service to carry passengers in the affected sections. Apart from internal MTR buses, MTRCL has also entered into contracts with Public Omnibus Operators Association to provide shuttle bus services during serious train service disruptions.
 - MTRCL is exploring the feasibility of minimising the activation lead time and increasing the supply of shuttle buses by other operators.

(d) Communication with contractors

- MTRCL maintains regular and good communication with contractors, including when service disruptions occur. Regular meetings and reviews are held with service contractors to monitor performance and share lessons learned from specific experiences. Partnership workshops and sharing sessions are organised from time to time to ensure seamless cooperation. Contractor staff will also join drills organised by MTRCL to enable them to familiarise themselves with incident handling to facilitate smooth handling during service disruptions.

MTR Corporation
August 2010