

**Legislative Council Panel on Transport
Sub-committee on matters relating to railways**

West Rail service disruptions

Purpose

This paper sets out information in relation to the signalling system failures of West Rail (WR) which occurred on 21 and 22 May 2004.

Background

2. In the morning of 21 and 22 May 2004, WR encountered failures of the signalling system between Tsuen Wan West Station and Mei Foo Station, resulting in extended train journeys. For the incident of 21 May 2004, due to an inaccurate assessment of the degree of delay by the West Rail Operations Control Centre, KCRC did not inform the Transport Department in accordance with the established alert mechanism for railway incidents. KCRC has provided a report for the causes and remedial actions in relation to the incidents at Annex.

3. While the WR signalling system failures on 21 and 22 May 2004 did not affect the safety of the railway, Government is very concerned about their impact on passengers and the reliability of railway services. After the incidents, the Transport Department (TD) and the Hong Kong Railway Inspectorate immediately asked KCRC to rectify the signalling system failures and resume normal train services as soon as possible, submit a report of the incidents and implement remedial measures.

4. To ensure the effective operation of the alert mechanism, TD has issued letters to both railway corporations that they should strictly comply with the pledges laid down in the established mechanism. Under the existing arrangement, MTRC and KCRC are required to notify TD within eight minutes and the media as soon as possible on any service disruption incident that has occurred for eight minutes or is expected to last for eight minutes or more, so that the public could make preparation and TD could take necessary contingency arrangements.

5. The subject will be discussed by the Panel's Subcommittee on matters relating to railways at its meeting on 3 June 2004.

Environment, Transport and Works Bureau
May 2004

Legislative Council Panel on Transport
Sub-committee on matters relating to railways
West Rail incidents report

Purpose

This paper informs Members about the West Rail signalling system failures on 21 and 22 May 2004 which led to a disruption of service.

2. The problems occurred between Mei Foo and Tsuen Wan West stations and required trains to operate on this section at reduced speed. Throughout the incidents, train services were maintained but journey times were extended.

Incident of 21 May

3. At 6:09am on 21 May, the signalling system in the section between Tsuen Wan West Station and Mei Foo Station encountered a problem, leading to longer journey time for trains to Nam Cheong. Nevertheless, West Rail northbound services from Nam Cheong to Tuen Mun were unaffected.

4. During the affected period, average train frequency was at five- to seven-minute intervals. Notices were put up and public announcements were made at stations and inside trains to inform passengers of the service disruption. Additional staff were also deployed at stations to provide assistance to passengers.

5. The Control Centre did not accurately estimate that the delay would exceed eight minutes and therefore did not notify the media or the Transport Department in a timely manner.

6. The signalling problem was rectified at 10:10am and normal services on West Rail then resumed.

7. After close of traffic, maintenance staff carried out a full check of the signal cables between the Control Centre at Kam Sheung Road and Mei Foo Station (12 km in length). They discovered that the cable run between Tsuen Wan West Station and a tunnel niche in Tai Lam Tunnel might be unstable. This would not affect safety but, in the event of failure, would extend the travelling time by ten to 15 minutes. However, if train services were not provided, there would be greater inconvenience to passengers. It was therefore decided that West Rail would start service on 22 May at 5:45am.

Incident of 22 May

8. On the morning of 22 May, additional staff were deployed to monitor West Rail services. At 6:09am, the fault recurred in the section between Tsuen Wan West and Mei Foo which again required trains to operate at reduced speed and extended journey times by ten to 15 minutes.
9. The Control Centre notified the Transport Department of the incident within three minutes. It also immediately informed the media by facsimile and phone, and continuously updated passengers on the latest train service.
10. The signalling problem was rectified at 10:56am.
11. After emergency repairs, engineering staff assessed that it might be necessary to replace the two kilometres of signal cables between Tai Lam and Tsuen Wan. After close of traffic, engineering staff using sophisticated equipment conducted a detailed examination of the section of signal cables between Tsuen Wan West and Tai Lam Tunnel niche and found one of the cable terminal blocks had a poor contact. The terminal block was immediately replaced. The staff also confirmed that the cables and other terminal blocks of that section did not have any problems. That section's signal transmission has been stabilised since then.

Contingency measures

12. KCRC has drawn up contingency measures to deal with different emergencies. In the event of an emergency, the Corporation will endeavour to ensure passenger safety, minimise the affected area, and resume service as soon as possible. The Corporation will also deploy staff to assist passengers and emergency buses to provide support if necessary.

New reporting mechanism

13. KCRC has always had a reporting mechanism. When there is a disruption of train service, the Corporation will immediately inform passengers through public announcements at stations, inside trains and on platforms. Before 15 December 2003, if the Corporation assessed that the delay would last for 20 minutes or more, an 'Amber Alert' would be issued to the Transport Department

and other transport operators so that various parties would be prepared to implement contingency measures. If it was confirmed that the disruption would last for more than 20 minutes or that service had to be suspended, a 'Red Alert' would be issued to inform relevant parties to provide assistance.

14. Since 15 December 2003, KCRC has set up a new reporting mechanism, under which the Corporation is required to notify TD within eight minutes on any service disruption incident that has occurred for eight minutes or is expected to last for eight minutes or more.

15. This new reporting mechanism has been working well since its inception. Whenever there is a delay in train service, the public can get the most updated train service information from the electronic media. As at 20 May 2004, the new reporting mechanism has been activated 31 times for East Rail, West Rail and Light Rail.

Improvement measures

16. KCRC is carrying out a comprehensive check on all signal cable terminal blocks, which will take about one month to complete. To enhance the reliability of the signalling system, KCRC will also conduct a detailed investigation into every incident and implement appropriate improvement measures to minimise recurrence.

17. KCRC has a series of measures to improve the signalling system and to enhance its stability. The main improvement and modification works are expected to be completed before the end of this year. These improvement works will minimise the number of failures, and if an incident happens, minimise the affected area and the impact on train services, and accelerate recovery of services. The Corporation will also invite overseas experts to suggest ways to further improve the signalling system.

18. Moreover, KCRC has also immediately set up monitoring points at West Rail Tuen Mun, Kam Sheung Road and Nam Cheong stations to monitor train services and record journey times. In the long run, the Corporation will also improve computer software so that the Control Centre will have more information to make a more accurate assessment of an incident's impact on journey times.

19. KCRC also pledges to continue to follow the new reporting mechanism: that the Corporation will notify TD within eight minutes on any service disruption incident that has occurred for eight minutes or is expected to last for eight minutes or more.

20. KCRC has already set up an enquiry panel to look into the incident. If any staff members were found to be responsible, appropriate disciplinary action would be taken in accordance with the Corporation's procedures.

Conclusion

21. At no stage during the service disruptions of 20 and 21 May 2004 was safety compromised.

22. Since West Rail started operating on 20 December 2004, its overall performance has met all service pledges. It provides safe and reliable services and consistently achieves a service delivery rate of 99.7% and a punctuality rate of 99.4%.

23. West Rail's signalling system failures over the past five months were mainly hardware problems. Like other new railway systems, West Rail may experience service delay as a result of system failures during the initial stage of operation. After a run-in period, the system will become more stable. In addition, KCRC has established contingency procedures and systems to deal with different types of incidents. Staff are well trained and experienced in handling emergencies. KCRC will strive to improve continuously and provide safe and reliable services.

Kowloon-Canton Railway Corporation
May 2004