LC Paper No. CB(1)1981/05-06(01)

Report of the Review Panel on the Reporting of East Rail Incidents

July 2006

Foreword

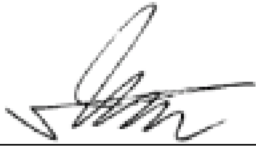
The Kowloon-Canton Railway Corporation runs a number of railway lines that play an important role in providing transport services for people in Hong Kong. Both the Government as well as the Kowloon-Canton Railway Corporation as operator, work together to ensure that quality transport services are delivered.

Railway safety is one issue of top priority. In accordance with the Kowloon-Canton Railway Corporation Ordinance and the established regulatory regime laid down by the Government, the Corporation has the responsibility for safe operation of the railways at all times. Amongst other things, the Corporation is required under the law to notify the Government of all safety related incidents occurring on the railways and report other general matters as agreed between the two parties. The Government's railway inspector, the Hong Kong Railway Inspectorate, then independently examines whether the Corporation has taken proper actions relating to the incidents and implemented effective rectification measures as required.

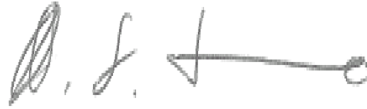
Notwithstanding the established notification and reporting regimes, the East Rail incidents have reflected an inadequacy in communication between the Corporation and the Government. There is a need to refine the notification and reporting regimes, enhance the interface between the Corporation and the Government, and take all possible steps to improve the conduct of investigation of incidents, the internal communication within the Corporation, and the culture of the Corporation.

During the review process, various parties involved have shared valuable contributions with us. We studied their views carefully and have taken them into consideration in coming up with our recommendations. We hope that these recommendations could help improve the communication between the Corporation and the Government when handling railway incidents in future.

(Mr Herbert Hui, JP)
Chairman



(Mr Stanley Hui, JP)
Member



(Mr Vincent Lo, BBS, JP)
Member

(Mr Otto Poon, BBS)
Member

Contents

		Page
Introduction		1
Executive Summary		5
Chapter 1	The Background	17
Chapter 2	The Incidents Under Review	25
Chapter 3	Was There a Delay in Notification/Reporting?	37
Chapter 4	Was There Enough Communication?	57
Chapter 5	Summary of Recommendations	69
Acknowledgements		(1)
Appendix		
	Acronyms and Abbreviations	(2)
Annexes		
	Annex 1 – Biographical Notes on Members	(4)
	Annex 2 – Participants in Meetings	(6)
	Annex 3 – Extracts from the KCRC Regulations	(8)
	Annex 4 – Extracts from the letter of 15 August 2005 from the ETWB to the KCRC	(13)
	Annex 5 – Organization Chart of the KCRC	(15)
	Annex 6 – Organization Chart of the HKRI	(16)

INTRODUCTION

1. On 21 December 2005, a southbound Kowloon-Canton Railway Corporation (KCRC) East Rail train detrained its passengers at an intermediate station, Fo Tan, because an abnormal noise was heard at the preceding University Station as the train was pulling out and at the same time a warning light indicating an auxiliary system failure was blinking in the driver's cab. After initial examination by the KCRC, the cause was traced to an underframe compressor which had become partially loosened because the welding at its mounting brackets had cracked. The KCRC notified the Government's railway regulator, the Hong Kong Railway Inspectorate (HKRI) the following day, and had a general discussion with them regarding the investigative actions to be taken. The deadline for submission of the follow up written report of the results of the investigation according to the established practice was 18 January 2006[1].

2. On 10 January 2006, the KCRC submitted a report of the investigation results to the HKRI which revealed that in the course of the investigations to find the root cause of the compressor incident on 21 December 2005, a number of cracks, mostly hair line cracks and mostly along the weld lines of various underframe equipment mounting brackets, had been found not only on the train involved in the compressor incident on 21 December 2005 but also on other East Rail trains as well. The KCRC also presented an account of its preliminary findings from the investigation, work done thus far and precautionary steps taken to ensure operational safety while the root cause was still being investigated.

3. The Government expressed concern that the KCRC had not informed the Government of the finding of further cracks earlier, and considered that the Corporation had violated the notification/reporting[2] requirements laid down in the KCRC Regulations and established practice. The HKRI had as a

[1] To submit within the 14th working day of the following month.

[2] "Notification" refers to the requirement as defined in the legislation and "reporting" refers to the non-statutory and more general requirement for the disclosure of information to the Government.

result been denied an early opportunity to discharge their duty to independently assess and monitor the safe performance of the railway facilities and systems in question.

The Appointment of the Review Panel

4. To address this concern, on 3 May 2006, the Secretary for the Environment, Transport and Works (SETW) appointed this Review Panel on the Reporting of East Rail Incidents to look into the East Rail incidents with a focus on issues regarding communication and, in particular, on issues concerning the Corporation's notification to the Government under the law and the Corporation's reporting of railway incidents and matters to the Government in general.

The Membership

5. The composition of the Review Panel is:

Chairman	Mr Herbert HUI Ho-ming, JP
Member	Mr Stanley HUI Hon-chung, JP
Member	Mr Vincent LO Wing-sang, BBS, JP
Member	Mr Otto POON Lok-to, BBS

6. Biographical notes on members of the Review Panel are at Annex 1.

The Terms of Reference

7. The Review Panel is appointed to:

(a) examine KCRC's procedures and processes leading to the reporting of the fleet-wide underframe equipment mounting problem of East Rail to the Government on 10 January 2006, including the

adequacy of its internal communication and its interface with the HKRI;

(b) identify deficiencies, if any, of such procedures and processes, and establish their causes and where the responsibility for each of them lies;

(c) advise on relevant improvement measures having regard to the findings in (b); and

(d) submit a report with conclusions and recommendations to the SETW.

Work Programme

8. The Review Panel reviewed the East Rail incidents with a focus on issues regarding communication and, in particular, on issues concerning the KCRC's notification to the Government under the law and the KCRC's reporting of railway incidents and matters to the Government in general. The technical issues were looked into in so far as they might have affected and influenced the communication between the two parties, but are not otherwise covered in this Report.

9. In addition to holding internal discussions, the Review Panel visited the KCRC Ho Tung Lau Maintenance Centre and the office of the HKRI on 11 May 2006 for background briefings. We invited written submissions from the two key parties, the KCRC and the HKRI. We held meetings with their respective representatives for discussion about how they handled the incidents during the period under review and how they interpreted the notification and reporting requirements (18, 19, 20 and 23 May 2006 and 28 June 2006). We also met with representatives of the Government's policy bureau responsible for transport matters, the Environment, Transport and Works Bureau (ETWB), which also has housekeeping responsibilities over the HKRI (1 and 8 June 2006). To complete the discussions, we met with the Independent Review Panel (IRP) comprising local experts appointed by the

KCRC who had reviewed the Corporation's technical aspects of work done regarding the finding of the cracks (18 May 2006). A list of the participants in the meetings is at Annex 2.

10. We examined the Corporation's notification and reporting obligations laid down by the Government and discussed at length within the Review Panel the interpretations of this unprecedented case of the finding of cracks. We then probed beyond these obligations to consider how specific institutional arrangements have limited communication between the Corporation and the Government before consolidating our views on the inadequacy of communication during the period under review.

11. This Report summarizes the considerations, conclusions and recommendations of the Review Panel.

Overview of the Report

12. Chapter 1 summarizes the background information regarding the notification requirements as laid down in the KCRC Regulations and the reporting requirements as agreed between the Government and the KCRC by administrative arrangements. Chapter 2 gives an account of the key events in the period under review. Chapter 3 describes our examination of the Government's considerations that the Corporation was late in their notification/reporting of the finding of further cracks. Chapter 4 probes beyond these notification/reporting obligations to consider how specific institutional arrangements have limited communication between the Corporation and the Government and offers our views on the inadequacy of communication during the period under review. The last Chapter 5 summarizes our recommendations.

EXECUTIVE SUMMARY

The Broad Requirements for Notification and Reporting

1. There are many types of incidents and events that happen on the railways. The KCRC is obligated to notify/report to the Government important information about these happenings. Over time, the scope of information that the Corporation is required to bring to the attention of the Government has expanded. Important information that requires notification/reporting now includes matters which have safety implications for the public, and matters with no safety implications but which are of general public concerns and media interests.

2. Notification requirements are laid down in the KCRC Regulations and Regulations 2, 3 and 4[3] are relevant to the case under review. Reporting requirements are laid down in the various administrative arrangements agreed between the Corporation and the Government.

3. The latest comprehensive updating exercise in relation to the notification and reporting requirements took place last August under the initiative of the ETWB. The bureau encouraged the Corporation to be more forthcoming in sharing information by suggesting in main:

(a) a liberal approach in interpreting the provisions of notification under the KCRC Regulations because the Regulations could not cater for all scenarios of incidents which have safety implications (paragraph 4 of the ETWB's letter of 15 August 2005 is relevant[4]); and

(b) reporting of more issues that are of public concerns and media interests and such reporting arrangements should be institutionalized by having an agreed list of examples of such

---

[3] Extracts are at Annex 3.

[4] Extracts are at Annex 4.

incidents worthy of reporting (paragraph 6 of the ETWB's letter of 15 August 2005 is relevant[5]).

4. We see that this updating exercise initiated by the bureau is not yet finished. The Corporation and the HKRI have not reached a common understanding of the liberal approach in interpreting the notification requirements, and the reporting arrangements of issues that are of public concerns and media interests have not yet been institutionalized.

5. The East Rail incidents occurred against the backdrop of these discussions as to notification and reporting requirements. The question is whether, after notification of the compressor incident which occurred on 21 December 2005, there was an obligation on the KCRC to inform the Government of the finding of further cracks during the course of its investigations to find the root cause of the compressor incident prior to 10 January 2006 when they in fact reported such finding to the Government.

The Incidents under Review

6. On 21 December 2005, a southbound KCRC East Rail train detrained its passengers at an intermediate station, Fo Tan, because an abnormal noise was heard at the preceding University Station as the train was pulling out and at the same time a warning light indicating an auxiliary system failure was blinking in the driver's cab. After initial examination by the KCRC, the cause was traced to an underframe compressor which had become partially loosened because the welding at its mounting brackets had cracked. The KCRC duly notified the HKRI as required under the KCRC Regulations the following day on 22 December 2005.

7. The Acting Chief Executive Officer (ACEO)[6] of the Corporation

[5] Extracts are at Annex 4.

[6] The ACEO was on leave from 20 to 30 December 2005. SDT was appointed the Co-ordinating Director for that time period, in addition to his capacity as SDT.

was on vacation at that time and the Senior Director-Transport (SDT)[7] was Co-ordinating Director. He instructed two Corporation staff members, Safety & Quality Manager (SQM(Atg))[8] and Rolling Stock Design and Systems Engineering Manager (RDSM) to follow up with a telephone conference call on 22 December 2005 to Senior Inspecting Officer (Railways)3 (SIO(R)3) of the HKRI to go over the compressor incident.

8. There is no record on either side of the telephone conference call. SQM(Atg) and RDSM recollected that both parties agreed that the KCRC would submit a written report after the results of the laboratory test on the compressor mounting were obtained and a fuller investigation of the incident was completed. On that basis, the Corporation proceeded to conduct an investigation into the root cause of the problem. The deadline for submission of the written report of the results of the investigation according to the established practice was 18 January 2006. On the other hand, SIO(R)3 recollected that he had in addition, instructed the Corporation to keep the HKRI informed and updated of any "abnormal findings" during the investigation process.

9. The Corporation then proceeded to search for cracks night and day. By 24 December 2005 the Corporation had found that nine out of 119 compressors had hair line cracks at the mounting brackets, but that the mounting security had all remained intact. By 28 December 2005, cracks on main equipment cases were also found. By 30 December 2005, cracks were further found in the mountings of motor alternators and compressor chokes. By 3 January 2006, cracks were found on the mounting brackets of additional types of underframe equipment. Most of the cracks found were short hair line cracks. Under the established crack management system, equipment with cracks longer than 68mm were removed from service. Shorter cracks were

---

[7] SDT is in overall charge of the KCRC Transport Division, which is responsible for the transport operations including East Rail and its extensions, West Rail, Light Rail, KCR Bus as well as Intercity and Freight Services.

[8] SQM is the normal point of contact for the HKRI on matters relating to the safe operation of the railway as required by the KCRC Ordinance and Regulations. SQM was on leave from 19 to 28 December 2005. RIM was appointed SQM(Atg) during this period. RIM's normal duties include the conducting of independent incident investigations and compilation of railway operating rules and procedures. The organization chart of KCRC is at Annex 5.

repaired by welding. All the cracks were monitored for their respective rates of propagation.

10. Throughout the process, the Corporation judged that while the root cause to the compressor incident on 21 December 2005 was not yet found, given that the majority of the cracks that they were finding were hair line cracks and that there was on-going meticulous monitoring of the rate of propagation of the cracks amongst other safety checks, the trains were safe for running. Nonetheless, the Corporation believed that safer was better than safe, and as a precautionary measure, decided on 22 December 2005 to apply industrial grade nylon straps to all compressors and eventually added metal brackets as well to other underframe equipment as a secondary security measure to ensure that the equipment would not fall off from trains even if their mounting brackets ever failed.

11. On 7 January 2006, after the Corporation had analyzed the results of the dynamic train test which showed abnormal cyclic stress on equipment mountings, the Corporation began to suspect that the cracks found in the equipment mountings of various underframe components might stem from common causes. The Corporation then decided to compile a detailed report of the investigations and findings over the weekend for submission to ACEO on 9 January 2006.

12. On 10 January 2006, the Corporation informed the HKRI of the findings of the investigation. On 11 January 2006, the HKRI issued a letter of warning to the Corporation, the first ever in the history of the HKRI, with the following concluding remarks "… the incident has been mismanaged and is a blatant violation of the legislation and the established practice ...".

Was There a Delay in Notification/Reporting?

13. From our review, we summarized that the Government considered that the Corporation's report of the finding of further cracks on 10 January 2006 was late because the Corporation should have:

(a) made a second notification under KCRC Regulations 3 and 4(3)(b) of the finding of further cracks when cracks were found to be widespread in underframe equipment. This second notification could have been made as early as 29 December 2005 and should in any event have been made by 6 January 2006 at the very latest;

(b) reported "abnormal findings" when further cracks were found as per the instruction of SIO(R)3 delivered at the end of the telephone conference call on 22 December 2005. This could have been as early as 24 December 2005. If the Corporation is indeed found to have failed to observe this instruction, the Corporation would be liable under Regulation 4(2); and/or

(c) reported when further cracks were found as matters of "public concerns and media interests" under paragraph 6 of the ETWB's letter of 15 August 2005.

14. In response, the Corporation pointed out that:

(a) notification of the compressor incident was duly and fully done on 22 December 2005 under KCRC Regulations 3 and 4(3)(b) and the follow up report on 10 January 2006 was early and ahead of the deadline of 18 January 2006 in accordance with the established practice;

(b) the finding of further cracks was not a notifiable incident under KCRC Regulations 3 and 4(3)(b);

(c) they do not recall that SIO(R)3 had given any instruction regarding "abnormal findings" on 22 December 2005; and

(d) the finding of further cracks could cause public concerns and attract media interests if the matter was not properly handled and the root cause of the problem was not promptly determined and addressed. To this end, the Corporation accorded priority and devoted considerable resources to carrying out an extensive

investigation to find the root cause of the problem first and foremost.

15. We ascribe the differences in opinion held to the following three main reasons:

(a) the difference in interpretation of the notification requirements in KCRC Regulations 3 and 4(3)(b);

(b) the difference in recollection of what was concluded at the end of the telephone discussion amongst representatives of the Corporation and the HKRI on 22 December 2005; and

(c) the difference in interpretation of the requirement to report matters that are of "public concerns and media interests" in paragraph 6 of the ETWB's letter.

16. Our observations on paragraph 15 (a) to (c) above and recommendations on the way forward are:

(a) while matters relating to the interpretation of the law properly belong to the judiciary, we recommend that instead of liberally interpreting the notification requirements in the KCRC Regulations as stated in the ETWB's letter, another approach for the Government is to keep the KCRC Regulations intact in so far as notifications are concerned, and separately invite the Corporation to report as much as could be agreed based on a new list to be drawn up. This would obviate going through a myriad of legal interpretations in the judiciary to resolve the issue;

(b)(i) our view is that the fact that neither the HKRI nor the Corporation kept a written record of the telephone discussion held on 22 December 2005 means that neither side's claims as to whether or not SIO(R)3 instructed the Corporation to inform and update the HKRI of any "abnormal findings" are conclusive;

(b)(ii) in future verbal instructions from the HKRI should be promptly followed by a written record of the instructions given so as to avoid misunderstanding of any telephone discussions;

(b)(iii) while the responsibility is on the Corporation to inform the Government fully and clearly, the HKRI should have been more proactive in seeking to know more about the incident, initiated follow up checks on the Corporation and conducted site visits to find out about the investigative processes that the Corporation was going to take, especially since the telephone discussion on 22 December 2005 arose from a rare incident. This would have put the Corporation on higher alert and enhanced the two-way communication;

(c) the Corporation and the Government should follow up and continue to work to agree on a list of specific examples of matters of "public concerns and media interests" to be reported under paragraph 6 of the ETWB's letter. This is a very worthwhile exercise because it is frontline operational railway staff who are aware of railway incidents and events. They have to be given clear instructions as to which incidents and events to report. If such matters are left to individual judgment and interpretation and if each and every report needs discussion at management level, reporting delays are very likely to occur;

(c)(ii) the Corporation and the Government should review the various reporting requirements side by side with the notification requirements, as well as the issues of how compliance is to be checked and monitored, in order to clarify, update, consolidate and streamline in one exercise; and

(c)(iii) the Corporation and the Government should review the standard notification/reporting forms to see if they could succinctly bring to the attention of the Government the crux of the issue concerned. The objective of the exercise is to upgrade from routine notification/reporting which might have degenerated over time to

quality notification/reporting which is of immediate use to the Government.

Was There Enough Communication?

17. We then probed beyond the notification/reporting obligations to consider how specific institutional arrangements have limited communication between the Corporation and the Government. We point to four institutional arrangements which have limited the communication flow:

(a) the existing code of practice agreed between the Government and the Corporation for the conduct of investigation of incidents;

(b) the line of reporting of the SQM;

(c) the interface with the HKRI; and

(d) the culture of the Corporation.

18. We recommend that:

(a)(i) in future, for investigation into more complex or serious incidents, there should be more awareness and flexibility to employ independent party/parties either to work with the Corporation or to lead an independent Incident Investigation Team. The independent parties could include the HKRI and other experts and professionals. This would improve on the present practice whereby the Corporation conducts the investigation first and then the Government checks on the results of the investigation, and would save time and assure public safety in a transparent manner;

(a)(ii) comparatively minor investigations should continue to be handled by the Corporation and be independently assessed by the HKRI. Minor investigation might however, during the course of collecting data and evidence, evolve into major investigations. Minor

investigation could also go on for a long time unchecked by the Government. The investigative process should therefore be institutionalized. For example, the Corporation should share logs of work in progress with the HKRI periodically throughout the investigative process until the final report is compiled. In this manner, the HKRI could also check on progress at regular intervals and spot any irregularities at an early opportunity;

(b) the Corporation's Safety and Quality Division's role and responsibilities could be improved and in particular be given more independence from the operation division so that SQM could provide an independent source of opinion to advise the Chief Executive Officer (CEO) in judging matters of safety and quality. The SQM for example, could report directly to the CEO. This would be better than the present arrangement whereby SQM reports to the SDT who then reports to the CEO. In this manner, the Transport Division would not be seen to be investigating its own operations and the necessary investigations could be carried out in a more objective light;

(c)(i) there should be more meetings and more two-way communication between the Corporation and the HKRI;

(c)(ii) as the regulator role of the Government towards the Corporation requires a continuous search for the right balances between controls and autonomy, from time to time the Government should take a look at the working arrangements between the HKRI and the operator and tweak for the right balances;

(d)(i) the Corporation should learn to become more sensitive to changing demands and changing circumstances and in the case under review, learn to be more proactive in bringing transparency in a more urgent manner to the HKRI and the public. The whole Corporation should look in detail at managing this change and build a solid foundation for it;

(d)(ii) the Chairman of the KCRC Managing Board and the CEO are two leaders crucial to sustain any initiatives for change in the Corporation;

(d)(iii) high level concerted effort of the Corporation to look into the twin issues of public safety and communication should be considered to boost attempts to enhance public confidence in the Corporation and devise a better communication strategy;

(d)(iv) the Corporation should create and explain to staff members a clear vision of the processes involved in changing the Corporation to become more proactive in the issue of transparency;

(d)(v) the Corporation should examine how best to take forward this change with the support of the next tier of Senior Directors. The joint effort should be a guiding coalition to drive the change relentlessly;

(d)(vi) the Corporation should provide training and development to staff members in the face of change;

(d)(vii) the Corporation should create and train the change agents to contribute to implementing the necessary change; and

(d)(viii) the Corporation should not let communication over railway accidents, service delays, or railway incidents dominate their communication with outside parties. Positive messages from the Corporation must also be made effectively and regularly. The trains run by the Corporation play a very important role in the lives of many Hong Kong people and visitors from overseas. There is no reason why there should not be better communication and explanations about the operation of trains, their built-in safety features and the intricacies of the risk management processes from time to time.

A Matter of Perception

19. We come to the conclusion after reviewing the events and issues that there was a matrix of relevant inter-related factors set against a rather special set of circumstances surrounding the incidents which led to the inadequacy of communication from the KCRC to the Government until 10 January 2006.

20. Our position is that we have high expectations of the Corporation as a public organization. This was a rare incident which the Corporation was investigating into, and the Corporation had initiated a number of checks and precautionary measures along the way. As the ETWB has since August 2005 encouraged the Corporation to be more forthcoming with sharing information, and the Corporation has agreed to make best endeavours in this regard, the Corporation should have been more sensitive and alert to the need for more communication throughout the process. They should have communicated more even if they considered this to be an issue of perceived public safety and not of real public safety. This is what we expect of a respected public organization.

21. If the HKRI had been alerted promptly, the HKRI could have carried out their duty at the earliest opportunity and have promptly assessed the issue of public safety, perceived or otherwise, regarding the continued operation of the affected trains. Furthermore, if the Government had been alerted earlier, behind the small team of the HKRI stands a body of resources that the SETW could have deployed if it had been considered necessary. Their collective knowledge might have helped to resolve the problem more quickly.

22. The best safety assurances by the Corporation with respect to their own operation of the railway are not acceptable to the public unless and until they are separately assessed by an independent monitor, in this case the HKRI. If the Corporation does not share the relevant information, the Government cannot be in a position to discharge its role.

23. For the HKRI, we also have high expectations of them as the railway regulator to ensure public safety in railway operations. If the HKRI

could also be more proactive, and seen to be so, the two-way communication between the parties would be different.

24. For the Corporation, we urge the Chairman of the Managing Board to continue to work on building the team to change the Corporation to become one that is more proactive in delivering transparency in a more urgent and timely manner to the outside world. As for the inadequacy of communication from the Corporation to the Government during the period under review, we do not hold any one staff member of the Corporation responsible for this as this would be unfair. We however ask those who were in the seats of responsibility during the time under review and who had the opportunity to communicate with the Government or who were in a position to obtain information from those under their supervision and inform the Government of the happenings, including the ACEO, SDT, SQM and SQM(Atg), to learn a lesson and to adopt the necessary change in the Corporation so that there will be better and improved communication with the Government and the public in future. The matter of perception is not to be underestimated and there is no room for complacency.

CHAPTER 1

THE BACKGROUND

The Role of the Key Parties

1.1 The original Kowloon-Canton Railway (KCR) started operation in 1910 and had been managed by a Government department for over seventy years. Following modernization of the KCR, the railway department was restructured in 1982 into a public corporation, the KCRC, under the KCRC Ordinance (Cap. 372).

1.2 The Government owns the Corporation and by legislation, the KCRC Ordinance and Regulations, defines the role and responsibilities of the Corporation. In particular, the Corporation as Hong Kong's railway operator is given primary responsibility for the safe operation of the railways, and the Government's railway regulator, the HKRI, acts as an independent monitor to oversee that the operator has put in place the necessary arrangements to ensure rail safety. In addition, the Transport Department (TD) oversees aspects of service delivery and reliability.

1.3 As information about incidents and events on the railways have to come from the operator on the ground, the Corporation has responsibility for sharing this information and for observing notification obligations required by the KCRC Regulations and administrative reporting obligations required by the Government. The Government relies on this information which is crucial for the monitoring of railway service quality, investigation of railway incidents and the deployment of emergency public transport services as appropriate.

1.4 The ETWB is the policy bureau which is responsible for policy matters on the development of transport infrastructure, the provision of transport services and traffic management, amongst other things. The bureau also oversees the operation of a number of departments including the Electrical and Mechanical Services Department, the Highways Department and the TD, and plays a housekeeping role in relation to the HKRI.

The Broad Requirements for Notification and Reporting

1.5 There are many types of incidents and events that happen on the railways and the scope of information that the Corporation is required to bring to the attention of the Government has been expanded over time. Important information that requires notification/reporting now includes matters which have safety implications for the public, and matters with no safety implications but which are of general public concerns and media interests.

1.6 Some issues are more serious than others. Serious incidents, such as "accidents" resulting in deaths or serious injuries, train collisions, or derailing of trains, have always been covered by law and urgent notification is required. Comparatively minor issues, "non accidents", are categorized as "occurrences". KCRC Regulations 2, 3 and 4 are relevant. Extracts are at Annex 3.

1.7 The KCRC has a sterling record in the area of safety and there have been many more notifications of comparatively minor "occurrences" than there have been of "accidents". This is also because the list of "occurrences" laid down in the law has time and again been found to be insufficient to address changing concerns, and additions to the information disclosure requirements have been made. One recent example relates to an incident when a train failed to stop at a designated station, either because of a signaling problem or a minor equipment failure, causing inconvenience but raising no safety concern. After media reports of passenger complaints, the Corporation and the Government agreed that in future such incidents would also be reported to the Government for reference and as an early alert in case of media or public enquiries.

1.8 In respect of this and other mutually agreed additions, the Government has not amended the notification requirements under the law but rather adopted administrative arrangements which have flexibly and promptly addressed changes in the requirements for the reporting of comparatively minor issues. The non-statutory and more general requirement for the disclosure of information to the Government is therefore referred to loosely as "reporting" rather than "notification" which is defined in the relevant legislation.

1.9 The latest comprehensive updating exercise in relation to the notification and reporting requirements took place last year when the ETWB Principal Assistant Secretary (Transport) 4 initiated it with the KCRC as led by the SDT. The exercise also covered the other railway operator, MTRCL, and the TD and the HKRI were also involved. The letter dated 15 August 2005 from the ETWB to the Corporation states:

> "2. While speedy incident recovery is one of the important tasks in incident handling, effective communication with Government, passengers and the public is indeed equally important. Being the regulator of railway services, we rely on the Corporation to notify us incidents which may impact on railway safety and services, as well as other incidents which may be of public concerns. This is crucial to Government's monitoring of railway service quality, investigation on railway incidents, and deployment of emergency public transport services as appropriate.
>
> 3. At present, the Corporation is required to notify the Government for incidents which entail safety implications. Specifically, the Corporation should notify the Government immediately incidents set out under Regulation 2, and as soon as practicable, a written report on such incidents and other occurrences set out in Regulation 3.
>
> 4. As the complexity of the railway systems increases with the advance in technology, it is impossible that the above regulations on "notifiable incidents" could cater for all scenarios of incidents which have safety implications if we were to apply a strict interpretation of the provisions. In this regard, while the governing regulations are still the valid basis on "notifiable incidents", we would like the Corporation to adopt a liberal approach in interpreting the provisions on "notifiable incidents". For the avoidance of doubt, if there is an incident which may have safety implications but, in your views, may not be covered by the provisions, the Corporation

should also notify Government such cases.

5. As regards incidents which may impact on service levels including but not limited to frequency of services, journey time, operating hours and capacity, the Corporation should notify the Transport Department under the agreed notification mechanism for service disruption that has occurred for 8 minutes of (sic. or) more. The Transport Department discussed with the Corporation earlier this year to fine-tune the mechanism and the agreed version is now attached again at Annex for your compliance.

6. However, from time to time, there are cases which are of public concerns and media interests which are outside the ambit of the "8-minute notification system". Depending on the nature of the incidents, the Corporation should notify the HKRI or the Transport Department as appropriate. For sensitive issues, the Corporation may also contact this Bureau direct. I should be grateful if you would institutionalise the reporting arrangement and let us have your suggestions on a list of specific examples of incidents which, the Corporation considers, should fall under this category. We recognise that your suggestions may by no means be exhaustive but will form a basis for us to have a common understanding on the nature of incidents which should be reported."

1.10 Notably, paragraph 4 of the letter put forward a "liberal approach" to interpreting the notification requirement. Paragraph 6 invited the KCRC to report incidents which are of public concerns and media interests and requested the Corporation to institutionalize the reporting arrangement.

1.11 The KCRC responded in the same month to ETWB confirming its commitment to make notifications/reports under the existing requirements, but the grey area created by the "liberal approach in interpreting the provisions on 'notifiable incidents'" was left untouched.

1.12 The Corporation also indicated that:

> "(3). Despite the lists for reporting are already quite comprehensive, the Corporation will use its best endeavors to keep the relevant Government Departments informed on occurrences which may arouse public concern."

(Our paragraph number inserted.)

This response is less focused than coming up with a list of specific examples because the Corporation experienced difficulty in compiling such a list. There was also no follow up to institutionalize the reporting arrangement. No time frame was agreed for KCRC's undertaking to report using its "best endeavors".

1.13 This exchange of correspondence underlines the complexity involved in establishing an up-to-date and comprehensive notification and reporting regime aimed at selecting only important and relevant matters and not overburdening the Government with reports of no consequence.

1.14 We see that this updating exercise initiated by the bureau is not yet finished. A common understanding on the liberal approach in interpreting the notification requirements has yet to be reached, and the reporting arrangements of issues that are of public concerns and media interests have not yet been institutionalized.

1.15 The East Rail incidents occurred against the backdrop of these discussions as to notification and reporting requirements. The question is whether, after notification of the compressor incident which occurred on 21 December 2005, there was an obligation on the KCRC to inform the Government of the finding of further cracks during the course of its investigations to find the root cause of the compressor incident prior to 10 January 2006 when they in fact reported such finding to the Government.

1.16 For ease of reference, we summarise the statutory requirements relating to notification and other miscellaneous administrative arrangements for reporting in the following paragraphs.

Statutory Requirement for Notification

1.17 KCRC Regulations 2, 3 and 4 are relevant. For the purpose of notification, railway incidents are classified into "accidents" and "other occurrences". The key features are as follows :

(a) an "accident" is notifiable "if it occurs on the railway" and "as a result thereof any person dies or suffers serious injury". It can also refer to an incident which "occurs on the railway" and "involves a train colliding with, or striking against, another train or any other object, or leaving the rails" and which in turn affects the normal operation of a line used for the carriage of passengers or goods;

(b) for "accidents" described in (a) above, the KCRC should "immediately after the occurrence" of the accident notify "by word of mouth" which includes such a notification by means of a telephone to the Chief Secretary for Administration (CS) or any other public officer the CS may appoint; and "as soon as is practicable" after the accident, complete and deliver to the office of the CS "a written report";

(c) "other occurrences" which are notifiable are set out in the Schedule to the KCRC Regulations. This covers seven types of occurrences "directly affecting persons" (paragraph 1 and paragraph 2 (a) to (f) of Part I of the Schedule) and 12 types of occurrences "affecting railway premises, plant and equipment" (paragraphs 1 to 12 of Part II of the Schedule). Every occurrence described in the Schedule is notifiable "if it occurs on the railway"; and

(d) for "other occurrences" described in (c) above, the KCRC should "as soon as is practicable" after the occurrence, complete and deliver to the office of the CS "a written report".

1.18 At the KCRC, the Safety and Quality Department headed by the SQM is responsible for the preparation and submission of notifications and other information to the Government. The point of contact on the Government side is the HKRI headed by the Chief Inspecting Officer (Railways) (CIO(R))[9].

Clarification of Mode and Timing of Notification to the HKRI

1.19 In an exchange of letters in February 2003, the HKRI and the KCRC agreed to a set of procedures to supplement the legislative provisions. These were:

(a) in relation to "accidents" which should be notified "immediately after the occurrence by word of mouth" under the KCRC Regulations, the HKRI agreed with the KCRC that the latter should:

(i) notify the HKRI by phone or pager within 20 minutes after the occurrence of the accident;

(ii) notify the HKRI of details by fax (or email) after handling the incident; and

(iii) submit within the 14th working day of the following month Forms A and B (standard forms agreed between the Government and the KCRC to include, amongst other things, the date, time and venue of the incident, and nature and circumstances of the incident);

(b) regarding "other occurrences" which should be notified "as soon as is practicable after the occurrence" in written form under the Regulations, the HKRI agreed with the KCRC that the latter should:

[9] CIO(R)'s main responsibilities include inspection and agreement of new works, monitoring safety of operating railways and investigation into railway incidents. The organization chart of HKRI is at Annex 6.

(i) notify the HKRI in batches by email before 0900 hours of the following day; and

(ii) submit within the 14th working day of the following month Forms A and B.

Reporting of Service Disruption

1.20 In 2004 and 2005, the TD agreed with the KCRC a reporting mechanism which essentially requires the KCRC to report service disruption that has occurred for eight minutes or more.

Reporting at Meetings between the KCRC and the HKRI

1.21 Face to face meetings complement the notification and reporting mechanisms. There are regular meetings between the two parties, scheduled at six monthly intervals between SDT and CIO(R), and three monthly intervals between SQM and CIO(R). The parties take it in turns for their representatives, the CIO(R) of the HKRI and either the SDT or SQM of the KCRC, to act as Chairman of the meetings. In between, extra ad hoc meetings are arranged as necessary.

CHAPTER 2

THE INCIDENTS UNDER REVIEW

2.1 We have reviewed the submissions from the KCRC and the HKRI and concluded that the following are the key events for the purpose of examining the communication issues in the time period between 21 December 2005 when the compressor incident happened, and 10 January 2006 when the KCRC informed the HKRI of its findings of the suspected cause of the compressor incident and the actions they had taken thus far. Much of the information has been drawn from the KCRC's submission, as the HKRI has no first hand information about what transpired during the relevant period. The selective presentation of the key events below reflects the Review Panel's interpretation of events.

2.2 We also examined briefly the two days immediately after 10 January 2006 which were drawn to our attention in the HKRI's submission and in meetings we had with various involved parties.

The Compressor Incident on 21 December 2005

2.3 The incident began at about 1645 hours on 21 December 2005 when a southbound KCRC East Rail train was departing from University Station and heading to Fo Tan Station. As the train was pulling out from the Station, the Platform Supervisor heard an abnormal sound from under the third car of the train. At the same time, the driver of the train noticed that a fault light of an auxiliary system was blinking. Both promptly reported to the East Rail Operation Control Center at Fo Tan. Not knowing what had happened and in line with instructions to accord top priority to passenger safety, the driver proceeded with caution to Fo Tan Station where all passengers were detrained and transferred to the following train to continue their journeys. The process of detraining was orderly and completed in a few minutes.

2.4 The train in question was then examined both on site and in the depot. It was found that there was one compressor which had become loosened from its mounting; two out of its three mounting brackets had cracked and were detached and the compressor was held by its third mounting bracket. This had activated the fail-safe system of the train, thus causing the fault light in the driver's cab to start blinking.

2.5 The track was also checked to ensure that there was no damage to the track and signaling equipment, and train service for the rest of the day was not interrupted. There were no complaints from the public, nor were there any media reports.

2.6 The incident was promptly reported through the KCRC Operation Incident Management System by pager, SMS, intranet and phone calls and up the KCRC hierarchy to the level of SDT. SDT is the person in overall charge of the Transport Division which is responsible for the KCRCs's transport operations including East Rail. SDT was Co-ordinating Director as well that day, and continued in this position until 30 December 2005. Other than the Chairman of the Managing Board, he was the most senior person in the Corporation at that time.

2.7 SDT and other staff inspected the train that night and agreed that all the compressors should be checked by the Visual Inspection and Hammering Test[10] to ensure that all were securely supported. These checks were completed before the start of traffic the following day to ensure that the trains were safe for operation. Furthermore it was agreed that the detached brackets of the compressor would be sent to a laboratory for metallurgical examination.

2.8 As an isolated incident, whilst rare it was not considered serious. The requirement for notification to the HKRI for such an "occurrence"[11] under Regulations 3 and 4(3)(b) of the KCRC Regulations, as supplemented by the arrangements agreed between the HKRI and the KCRC in correspondence in

---

[10] This technique could help locate large cracks quickly but smaller cracks could go undetected.

[11] "Occurrences" which are notifiable under Regulation 4(3)(b) are described in the Schedule to the KCRC Regulations. Paragraph 12 of Part II of that Schedule refers to any other failure of the permanent way or of any machinery, plant or equipment which endangers or could endanger the safe operation of the railway.

February 2003, is as follows:

(a) notify the HKRI in batches by email before 0900 hours of the following day; and

(b) submit within the 14th working day of the following month Forms A and B. In this case the deadline would have been 18 January 2006.

Notification and Reporting on 22 December 2005

2.9 The KCRC working level staff sent at around 0900 hours the "Daily Return of Notifiable Incident" to the HKRI describing the compressor incident and a brief word of follow up action. This was duly received by the HKRI and there is no dispute about this notification.

2.10 Beyond the statutory requirements and as instructed by SDT, SQM(Atg) also telephoned SIO(R)3 of the HKRI to go over the compressor incident. To supplement the technical discussions, SDT also instructed RDSM to join the telephone conference call. The telephone conference call lasted for about 15 minutes.

2.11 There is no record on either side of the telephone conference call. From the parties' verbal accounts of the call, we observe that there is a discrepancy about what was agreed at the end of the telephone conference call about the next steps.

2.12 SQM(Atg) and RDSM recollected that both parties agreed that the KCRC would submit a written report after the results of the laboratory test on the compressor mounting were obtained and a fuller investigation of the incident was completed. The Corporation submitted that the conclusion of this telephone discussion greatly guided their judgment, in particular that of SDT and his team, of the timing of when they would revert back to the HKRI.

2.13 On the other hand, SIO(R)3 recollected that he had in addition, instructed the Corporation to complete the fleet check with non-destructive test equipment as soon as possible and keep the HKRI informed and updated of any "abnormal findings". This was the basis of HKRI's subsequent consideration that the KCRC had not reported promptly the cracks found on compressors other than the one found to be loosened on 21 December 2005 and also the cracks found on equipment other than compressors.

A Systemic Problem

2.14 A search for cracks was then conducted by the KCRC night and day, and by 24 December 2005, the Corporation had found that nine out of 119 compressors had hair line cracks at the mounting brackets, but that the mounting security had all remained intact. By 28 December 2005, cracks on main equipment cases were also found. By 30 December 2005, cracks were further found in the mountings of motor alternators and compressor chokes. By 3 January 2006, cracks were found on the mounting brackets of additional types of underframe equipment. Most of the cracks found were short hair line cracks.

2.15 Under the established crack management system, equipment with cracks longer than 68mm were removed from service. Shorter cracks were repaired by welding. All the cracks were monitored for their respective rates of propagation.

2.16 From an isolated incident of cracks found on the welding bracket of one compressor on 21 December 2005, the problem had arguably turned into a systemic one of cracks being found fleet-wide in underframe equipment.

2.17 A systemic problem has much more serious potential consequences than an isolated incident. The HKRI considered that cracks once found on other compressors beyond the first one which became loosened on 21 December 2005, warranted at the very least reporting from the KCRC to the HKRI under "abnormal findings" as per their understanding of the telephone conversation between SQM(Atg), RDSM and SIO(R)3 on 22 December 2005. When cracks

were found on equipment other than the original compressor and other compressors, this should have been the subject of further reporting from the KCRC to the HKRI under "abnormal findings" as per the same telephone conversation.

2.18 The KCRC did not recall that the HKRI gave the instruction during the telephone conversation on 22 December 2005 regarding the reporting of "abnormal findings". The Corporation explained that the cracks were found because they spared no effort to look for them on a fleet-wide basis. The cracks did not happen as an "occurrence" or incident. From the Visual Inspection and Hammering Test, they diligently chose to move to a superior technique, the Magnetic Particle Inspection test, which actually required that they brush away the surface paint first, in order to make sure that even the finest and shortest hair line cracks would not be missed. They looked for further cracks as a result of the compressor incident on 21 December 2005, and so they considered that the subsequent checking and finding of cracks amounted to follow up action to, and was part of, the investigation process of the one single incident of 21 December 2005, which they had already notified to the HKRI on 22 December 2005.

2.19 The deadline for the follow up written report was 18 January 2006, but there was already a regular meeting scheduled between HKRI/KCRC for 10 January 2006. After having collected some preliminary finding from the investigation, the Corporation internally decided on 4 January 2006 that the finding would be consolidated for reporting to the HKRI by that meeting on 10 January 2006.

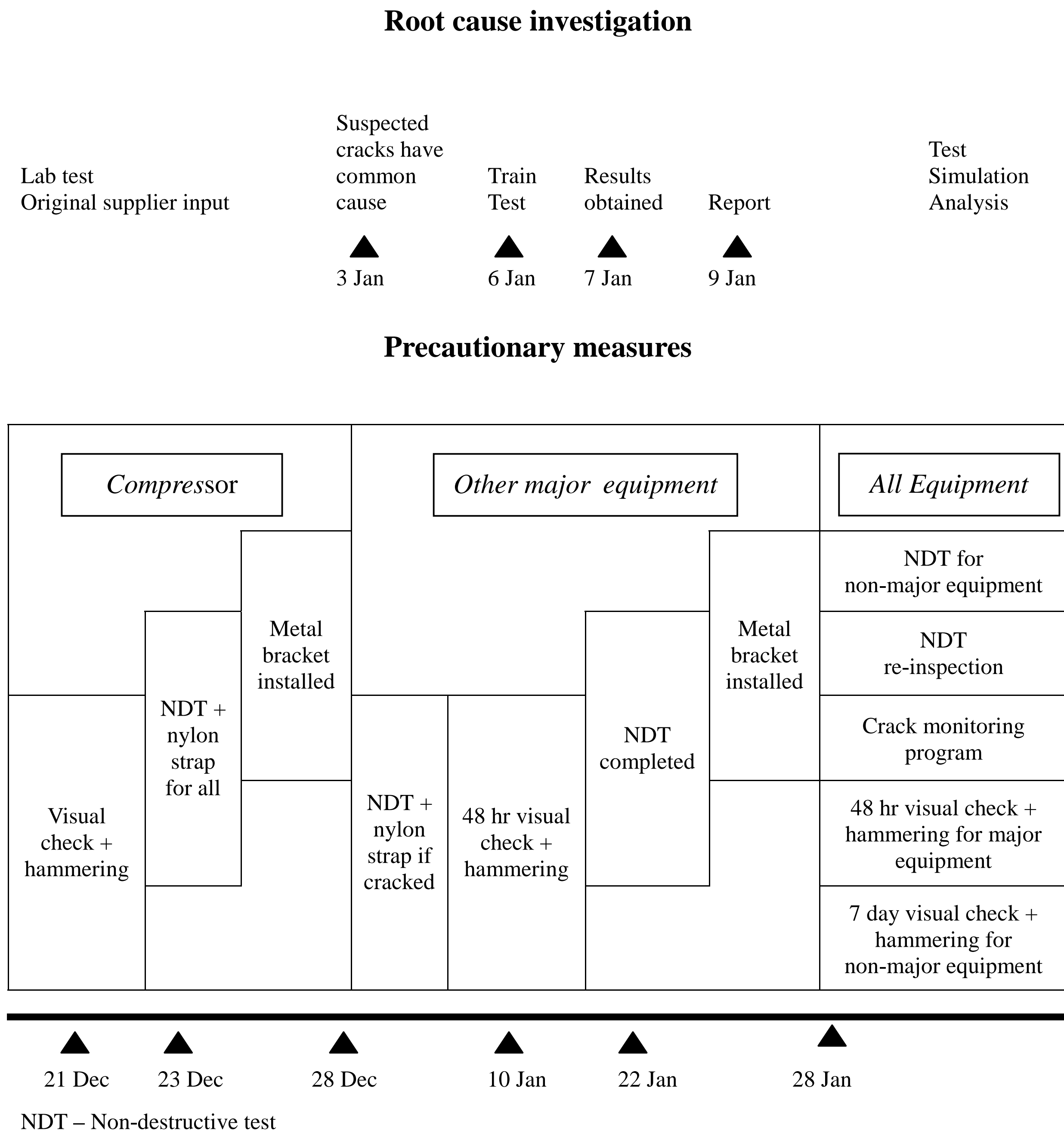
Extensive Investigation to Find the Root Cause of the Compressor Incident

2.20 While cracks are not of themselves rare in railways and trains, the finding of cracks on the welding of a mounting bracket which had led to the loosening of the compressor being supported by the bracket is a rare incident, and something not experienced before in Hong Kong.

2.21 The KCRC launched an investigation to find the root cause of the

problem starting on 22 December 2005. The first step was to find if there were other cracks, and if so, where. In parallel, there were various laboratory tests, checks by the contractor ETS-TestConsult Ltd and, upon advice from the car manufacturer Alstrom, train tests. A diagram summarizing the actions taken is in Figure 1. A significant amount of staff resources were committed to help with the workload generated.

Figure 1 - Actions taken to find out the root cause of the problem



NDT – Non-destructive test

Ensuring Railway Safety

2.22 The KCRC has a strong tradition of taking railway safety very seriously; to the Corporation, "railway safety is a given". Every day and every minute the Corporation practises risk management to ascertain if and when trains are safe to be put into service. After the compressor incident on 21 December 2005, the Corporation judged that while the root cause was not yet found, given that the majority of the cracks that they were finding were hair line cracks and that there was on-going meticulous monitoring of the rate of propagation of the cracks amongst other safety checks, the trains were safe for running.

2.23 The Corporation established that welding brackets with cracks of 68mm in length or shorter retained 96% or more of their capacity to hold the bracketed equipment in place, while those with the longest crack of 160mm still retained 90% of their capacity. Nonetheless, the Corporation believed that safer was better than safe, and as a precautionary measure, RDSM in consultation with General Manager-Rolling Stock (GM-TR (Atg))[12] decided on 22 December 2005 to apply nylon straps to all compressors and eventually added metal brackets as well to other underframe equipment as a secondary security measure to ensure that the equipment would not fall off from trains even if their mounting brackets ever failed. These industrial grade nylon straps were able to withstand three times the weight of the compressor, which was about 0.5 tonnes. This grew to become a massive operation as more and more cracks were found and further precautionary measures were taken.

Turning Point for the Corporation

2.24 The KCRC submitted that it was only after they had analyzed the results of the dynamic train test on 7 January 2006, which showed abnormal cyclic stress on equipment mountings, that the Corporation began to suspect that

[12] GM-TR is responsible for the maintenance of and project works for all rolling stock. He was on leave from 19 December 2005 to 3 January 2006. EDM was appointed as GM-TR(Atg) for that period. His normal responsibilities include the first line maintenance of all EMUs and he has to ensure that all passenger trains released for mainline service are fit to run.

the cracks found in the equipment mountings of various underframe components might stem from common causes. The decision then was to compile a detailed report of the investigations and findings over the weekend for submission to ACEO on 9 January 2006 and then for submission to the HKRI.

2.25 The HKRI considered that the turning point should have been reached earlier, probably as early as 24 December 2005 when cracks were found in nine additional compressors, or in any event by 28 – 29 December 2005 when cracks were found in equipment other than compressors. The Corporation should have been alert then that these were "abnormal findings" and worth reporting to the Government.

Finalization of Full Report

2.26 The ACEO received the full report of the investigation on 9 January 2006 which summarized all findings and actions taken to tackle the issues, with recommendations on the approach to be adopted for further root cause investigations and the development of permanent rectification measures. He decided to alert the Chairman of the Managing Board who in turn decided to call an urgent special Managing Board meeting on 11 January 2006 to discuss the report.

2.27 The ACEO told us that informing the HKRI was not an item on his radar screen at that time. Notifications and reports had always been made as a matter of course at the working level. He received assurance that the compressor incident of 21 December 2005 had been notified on 22 December 2005 to the HKRI and in line with established practice, a full written report was due for submission by 18 January 2006.

2.28 The Chairman of the Managing Board shared similar sentiments with us. Notifications and reporting were made as a matter of course by working level staff and he would not intervene nor was this issue on his radar screen.

2.29 In order to discuss the investigation report fully, SQM approached CIO(R) and suggested that a special meeting between HKRI/KCRC would be held on 11 January 2006 to discuss this item but no details were given to the HKRI yet; the regular meeting with HKRI would still proceed as scheduled for 10 January 2006.

Reporting on 10 January 2006

2.30 On 10 January 2006, the KCRC formed an IRP comprising local experts to review the KCRC's actions taken thus far.

2.31 On the same day, ETWB received notice of the special Managing Board meeting scheduled for 11 January 2006, and the Chairman of the Managing Board explained the problem to Permanent Secretary for the Environment, Transport and Works (Transport) (PST) briefly over the telephone.

2.32 The regular HKRI/KCRC meeting between SQM and CIO(R) proceeded as scheduled in the afternoon of 10 January 2006. Upon receiving PST's instruction to find out more about the fleet-wide underframe equipment problem, CIO(R) asked for and received a report from the Corporation, SQM, RDSM and the IRP members, about what had transpired.

Letter of Warning

2.33 On the morning of 11 January 2006 before the KCRC Managing Board meeting, CIO(R) issued a letter of warning to the KCRC, the first ever in the history of the HKRI, with the following concluding remarks "… the incident has been mismanaged and is a blatant violation of the legislation and the established practice...".

2.34 SETW who is a Member of the Managing Board could not attend the meeting because of the conflicting demands of a meeting of the Legislative Council that afternoon. PST attended the Managing Board meeting on her

behalf.

2.35 At the Managing Board meeting held at noon, the Managing Board received the preliminary investigation report of the compressor incident on 21 December 2005 presented by the management and accepted the assessment results submitted by the IRP and the train manufacturer. The Managing Board concluded that the East Rail fleet was safe and could continue to operate.

2.36 When the meeting touched on the point of the endorsement by the HKRI of the Corporation's actions taken thus far, PST read out the HKRI's letter of warning.

2.37 That evening the KCRC received a media enquiry about the compressor incident on 21 December 2005. The KCRC issued a press release that night explaining the situation.

Responsibilities

2.38 Early in the morning of 12 January 2006, the Government issued a press release under the heading "Government urged the KCRC to enhance maintenance works". In the press release, the Government made clear that a letter of warning had been issued the day before "to strongly condemn the Corporation for mishandling the case". The Government had also set up "a designated expert team comprising the Railway Inspectorate Section and relevant Government departments" to inspect the trains concerned. The initial assessment was that the Government "concur(red) with the assessment of the independent experts appointed by the KCRC that with the mounting of equipment strengthened, the railway service has not posed immediate danger to passengers."

2.39 The KCRC held a press conference to field press enquiries. The Chairman of the Managing Board, ACEO, SDT and GM-TR were the main figures on stage. The Chairman said that he was willing to bear full responsibility for failing to introduce a culture of transparency and urgency of sharing information in the Corporation. The ACEO said that he failed to

recognize at the time when he received the preliminary report of the incidents that the problem of the cracks might spread, and he should have reported to the Managing Board at once, and for that failure he shouldered responsibility. SDT said that the Corporation would have been seen to be more proactive if they had informed the Government immediately when they got hold of the preliminary findings of the investigation. This would enhance the image of the Corporation in terms of transparency. The Government now considered that the Corporation had not done a good job, and he was willing to bear the responsibility. GM-TR said that he had hoped that by consolidating the information and data collected, the management would have a clear and comprehensive picture of the problem. He would shoulder responsibility for failing to let SDT and ACEO know clearly and promptly where the entire problem was. Thereafter the issue made media headline news for several days.

CHAPTER 3

WAS THERE A DELAY IN NOTIFICATION/REPORTING?

3.1 The key events that took place between 21 December 2005 and 10 January 2006 need to be considered in the context of the notification and reporting requirements for the KCRC to bring issues to the attention of the Government. The Corporation's notification of the isolated compressor incident on 22 December 2005 under KCRC Regulations 3 and 4(3)(b) to the HKRI was accepted and it is agreed that it was in order. The notification/reporting requirements for the subsequent discovery of further cracks, however, are disputed by the two parties, leading to a difference in opinion as to whether or not there was a delay in this notification/reporting. An overview of the debate between the Government and the Corporation is as follows:

3.2 The Government considered that the Corporation's report on 10 January 2006 of the findings of the cracks was late because the Corporation should have:

(a) made a second notification under KCRC Regulations 3 and 4(3)(b) of the finding of further cracks when cracks were found to be widespread in underframe equipment. This second notification could have been made as early as 29 December 2005 and should in any event have been made by 6 January 2006 at the very latest;

(b) reported "abnormal findings" when further cracks were found as per the instruction of SIO(R)3 delivered at the end of the telephone conference call on 22 December 2005. This could have been as early as 24 December 2005. If the Corporation is indeed found to have failed to observe this instruction, the Corporation would be liable under Regulation 4(2); and/or

(c) reported when further cracks were found as matters of "public concerns and media interests" under paragraph 6 of the ETWB's

letter of 15 August 2005.

3.3 In response, the Corporation pointed out that:

(a) notification of the compressor incident was duly and fully done on 22 December 2005 under KCRC Regulations 3 and 4(3)(b) and the follow up report on 10 January 2006 was early and ahead of the deadline of 18 January 2006; this deadline was counted on the basis of established practice with the HKRI;

(b) the finding of further cracks was not a notifiable incident under KCRC Regulations 3 and 4(3)(b);

(c) they do not recall that SIO(R)3 had given any instruction regarding "abnormal findings" on 22 December 2005; and

(d) the finding of further cracks could cause public concerns and attract media interests if the matter was not properly handled and the root cause of the problem was not promptly determined and addressed. To this end, the Corporation accorded priority and devoted considerable resources to carrying out an extensive investigation to find the root cause of the problem first and foremost.

3.4 We ascribe the differences in opinion held to the following three main reasons:

(a) the difference in interpretation of the notification requirements in KCRC Regulations 3 and 4(3)(b);

(b) the difference in recollection of what was concluded at the end of the telephone discussion amongst SQM(Atg), RDSM and SIO(R)3 on 22 December 2005; and

(c) the difference in interpretation of the requirement to report matters that are of "public concerns and media interests" in paragraph 6 of

the ETWB's letter.

3.5 Two of these reasons concern disputes over interpretation; one concerns a dispute over facts. Before we go into detailed analyses of the case before us, we need to be clear about what exactly were the Government's concerns.

The Government's Concerns

3.6 The Government's considerations were delivered by the different involved parties:

(a) the HKRI in the first ever letter of warning issued to the Corporation dated 11 January 2006;

(b) the top Government Minister in charge, the SETW, in the meeting of the Legislative Council Panel on Transport, Subcommittee on Matters Relating to Railways, on 18 January 2006;

(c) the HKRI in their written submission to us dated 8 May 2006;

(d) the HKRI in their meeting with us on 18 May 2006;

(e) the Legal Counsel employed by the Government who advised on 2 June 2006 the charges that could be brought against the Corporation after reviewing what had happened until June 2006; and

(f) the ETWB in their meetings with us on 1 and 8 June 2006.

3.7 While all considered that the Corporation failed to notify/report the finding of the cracks earlier than 10 January 2006, we note that there is no agreed date by which the Government considered that the Corporation should have brought the matter to the attention of the HKRI.

3.8 The letter of warning from the HKRI to the Corporation dated 11 January 2006 had the following concluding paragraphs:

> "I would also like to take this opportunity to warn you that it is the obligation of the Corporation under Section 4(3)(b) and 12 of Schedule II of KCRC Regulation to report to HKRI details of any occurrence with safety implications. So far, in my opinion, the incident has been mismanaged and is a blatant violation of the legislation and the established practice.
>
> We will consider appropriate follow up action in this regard."

3.9 The SETW at the meeting of the Legislative Council Panel on Transport, Subcommittee on Matters Relating to Railways, on 18 January 2006 summarized the Government's position:

> "SETW said that the HKRI was notified about the loosening compressor incident on 21 December 2005 …. The Administration had not received further reports on the incident in the days following. However, given the discovery of cracks on many of the underframe components on 22 and 23 December 2005 and the subsequent revelation that such was a fleet-wide problem, KCRC should have made arrangements to further notify the Administration about the gravity of the situation. She pointed out that according to regulation 2 of KCRC Regulations, an accident was notifiable if it occurred on the railway as a result of which any person died or suffered serious injury or that it involved collision which affected the normal operation of a rail line. It was also set out in the Schedule to the Regulations that notifiable occurrences would include occurrences affecting railway premises, plant and equipment which endangered or could endanger the safe operation of the railway.
>
> SETW further said that the Administration had to be notified early as it would need time to assess the safety of rail operation. However, further details of the incident were only made available

> at the KCRC's board meeting on 11 January 2006. It was based on the provisions of KCRC Regulations that the Administration had issued a warning letter to KCRC, reminding the Corporation that it should report on the incident which was a notifiable occurrence."
>
> (Extracted from minutes produced by the LegCo secretariat.)

3.10 In the HKRI's first written submission to us on 8 May 2006, in reply to our enquiry about the considerations of the HKRI on the timeliness of the Corporation's report of the finding of the cracks, the HKRI reiterated that the Corporation had failed to notify under the KCRC Regulations, and stated that the Corporation had also breached the administrative arrangement reached under paragraph 6 of the letter from the ETWB to the Corporation dated 15 August 2005 which invited the Corporation to report matters which are of "public concerns and media interests".

3.11 At our meeting with CIO(R) on 18 May 2006, we asked him to confirm the basis for his contention that there was a pre-existing understanding that the Corporation was required to update the HKRI once the isolated compressor incident of 21 December 2005 became a systemic problem. He referred to "the spirit of the legislation" and in a subsequent submission which the Review Panel invited him to make to explain "the spirit of the legislation", he pointed to the instruction that SIO(R)3 gave to the Corporation at the end of the telephone conversation on 22 December 2005 as an "explicit request" made by HKRI to the Corporation to report any "abnormal findings".

3.12 The KCRC denied that they had violated the notification requirements laid down in the KCRC Regulations and sought legal advice from two Legal Counsels in January 2006. This point was made clear at the same meeting of the Legislative Council Panel on Transport, Subcommittee on Matters Relating to Railways, on 18 January 2006 by the Chairman of the KCRC Managing Board. These two pieces of advice were delivered to us as part of the Corporation's written submission to us on 10 May 2006.

3.13 We asked the HKRI if they sought legal advice before delivering the letter of warning to the Corporation. Their reply dated 15 May 2006 explained to us why the Government did not seek legal advice prior to issuing the letter of warning but sought legal advice subsequent to it:

> "… HKRI was not notified until 10 January 2006 evening that there was an East Rail fleet-wide underframe mounting problem. The information available to HKRI at that time indicated that the problem was a systematic fleet-wide one and with safety implications. Due to the safety implications and urgency of the matter, and based on HKRI's expert judgment and the overriding principle of ensuring public safety, HKRI considered that while the urgency of the case rendered it not feasible to seek legal advice beforehand, it was necessary to immediately remind KCRC of its notification obligations and to take a series of immediate measures to ensure railway safety.
>
> On this basis, HKRI issued a warning letter on 11 January 2006 to remind KCRC that it should promptly notify the Government of any railway incidents with safety implications in accordance with the spirit and provisions of the KCRC Regulations and established practice.
>
> We have subsequently sought legal advice to ascertain the statutory notification obligations of KCRC in relation to this East Rail underframe mounting problem. The Department of Justice is now finalizing its legal advice."

3.14 Upon our request, the HKRI submitted to us the legal advice which the Department of Justice helped them obtain from a Legal Counsel. This legal advice was also shared by the Department of Justice.

3.15 We did not receive this submission until very late in the review process on 3 June 2006. We note that the Legal Counsel advised that the HKRI had a "formidable case" against the Corporation regarding their allegation that the Corporation had breached the notification requirements under

the KCRC Regulations, given that the ETWB's letter of 15 August 2005 had already advised the Corporation to adopt a "liberal approach" to interpret the notification obligations. However, as the interpretation of the statutory provisions has not been decided in the judiciary before, the Legal Counsel admitted that the key words "occurrence" and "failure" in this context are inevitably open to debate and he recognized some of the arguments put forward by the Legal Counsels of the KCRC. Regardless of whether or not the Corporation was obliged by the notification requirements under the law to notify the finding of the cracks, the Legal Counsel then pointed to the instruction that SIO(R)3 delivered at the end of the telephone discussion on 22 December 2005 and considered that assuming that the truth of SIO(R)3's statement was not disputed, he would conclude that the Corporation breached Regulation 4(2).

3.16 We offer our observations in the ensuing paragraphs on:

(a) the difference in interpretation of the notification requirements in KCRC Regulations 3 and 4(3)(b);

(b) the difference in recollection of what was concluded at the end of the telephone discussion amongst SQM(Atg), RDSM and SIO(R)3 on 22 December 2005; and

(c) the difference in interpretation of the requirement to report matters that are of "public concerns and media interests" in paragraph 6 of the ETWB's letter.

(a) Interpretations of KCRC Regulations 3 and 4(3)(b)

3.17 The KCRC notified the HKRI on 22 December 2005 of the compressor incident which happened on 21 December as an "occurrence" within paragraph 12 of Schedule II of the KCRC Regulations which is notifiable under KCRC Regulations 3 and 4(3)(b). However, we note that interpreting whether what happened after 21 December 2005 was also notifiable under Regulation 4(3)(b) as an "occurrence" within paragraph 12 of Schedule II of the

KCRC Regulations has not been done before, is complex and is subject to debate. Much depends on the interpretation of the key words "occurrence" and "failure".

3.18 Paragraph 12 of Schedule II is reproduced as follows:

> "12. Any other failure of the permanent way or of any machinery, plant or equipment which endangers or could endanger the safe operation of the railway."

3.19 The KCRC's view is that the discovery of cracks after 21 December 2005 is not notifiable. Their key consideration is that the discovery of cracks, which could have been an existing defect or weakness, or even the discovery of repeated defects, is not an "occurrence" as defined in the law. Their view is that the Regulations are intended to cover actual accidents or failures of equipment on the railway and not potential failures, i.e. defects discovered. The Corporation could not therefore be bound to notify any defective component or weakness discovered that could at some time in the future, if neglected, endanger safe operation. And even if the discovery of serious defects were thought to be an "occurrence", the subsequent taking of remedial steps to remove or combat the defects could not be yet another "occurrence".

3.20 Furthermore, the Corporation draws the distinction that the discovery of a propagating crack contained within otherwise intact metal is not the same as a "failure" of that component. It may still be capable of bearing its load even if prudence dictates either that it be monitored or at some stage repaired. There is no "failure" until the crack propagates, leading to a fracture of metal in the bracket. Only then does it "fail" to bear its load.

3.21 Even taking into consideration the ETWB's letter of August 2005 about adopting a "liberal approach" in interpreting the notification requirement, the Corporation considers that notification is made on the basis of incidents, and the discovery of defects could not be categorized as an "occurrence".

3.22 On the other hand, the Government takes a broad interpretation of the law along the lines of the ETWB's letter to the KCRC of 15 August 2005 regarding the adoption of a "liberal approach" in interpreting the notification obligation. Accordingly, the words "occurrence" and "failure" were given a broad interpretation. Cracks which the Corporation found over defined lengths under the crack management system and which had caused the compressors or equipment to be replaced and the cracks which were repaired were interpreted as "failures". In the opinion of the Government, the cracked brackets as well as the discovery of a number of cracks fleet-wide "could endanger the safe operation of the railway" in the sense that more crack propagation from cyclical loading might cause brackets to fracture and the sudden release of compressors which would then be dragged along by the motion of the train.

3.23 The Government's Legal Counsel further advanced the argument that "failure" should not be confined to failure that had actually happened but should also include the "discovery of defects" in any machinery plant or equipment which endangers or could endanger the safe operation of the railway.

3.24 This was also argued to be in line with the spirit of the legislation, as the provisions creating the notification obligation were drafted to avoid danger to the public and to enable the HKRI, acting as independent experts in the public interest, to monitor and oversee the safe operation of railways by the operator.

3.25 There were other fine legal points. Notably, the Government points out that the discovery in tests of the existence of cracks in the welds of several supporting brackets of compressors after 22 December 2005 was a different occurrence from the isolated incident on 21 December 2005. The cracks were discovered in the compressor brackets under the cars of trains necessarily "on the railway" of the KCRC. This must be so wherever the cars happened to be, either when the tests were carried out, or when the existence of cracks in other brackets were reported to the Corporation. The brackets are also interpreted as "plant or equipment" or essential components of "plant or equipment" i.e. the compressors.

3.26 A summary of the legal opinion expressed by both sides is at Figure 2 below.

Figure 2 - Summary of legal opinion

	Legal opinion of the Legal Counsels appointed by the KCRC	**Legal opinion of the Legal Counsel appointed by Government**
Definition of notifiable "occurrence" under the KCRC Regulations	• The KCRC Regulations are intended to cover an accident or actual failure of machinery or track. • The results of prudent preventative maintenance (as submitted by the KCRC) in relation to the other trains in its fleet following the incident on 21 December 2005 are not notifiable occurrences.	• The word "occurrence" should be given a broad and not an unduly narrow construction. • The word "occurrence" is unquestionably broad in its ordinary meaning, as is shown by the wide category of matters set out in the Schedule. Though sometimes defined in the Schedule as a particular type of accident, or as a sudden and discrete event, the reference to "failure" (as occurrences) can include the discovery of something which renders a component unfit for its purpose. "Failure of a tyre which is unfit to run" is an example mentioned in Part II of the Schedule. • The inspections on welds of compressors brackets in a number of similar cars in the fleet were not "routine preventative maintenance", but investigatory work specially put in hand as a direct result of the incident

	Legal opinion of the Legal Counsels appointed by the KCRC	**Legal opinion of the Legal Counsel appointed by Government**
		of 21 December 2005.
Definition of the word "failure" in paragraph 12 of Part II of the Schedule to the KCRC Regulations	• The word "failure" refers to an actual – rather than merely a potential – failure of the plant or equipment in question. • The word "failure" should be distinguished from the word "defect". • "Failure" of machinery, plant or equipment suggests that it has ceased to perform its function, not that it has a defect which weakens it or gives rise to an early need for maintenance or replacement. • For the KCRC to be obliged to report the results of its investigations and preventative maintenance, the word "failure" would have to be construed as having the same meaning as the word "defect".	• The word "failure" should be given a broad and not an unduly narrow construction. • The use of the word "fracture" as compared with the reference to "failure" in Part II of the Schedule suggests that "failure" is intended to have a wider meaning than "fracture", broad enough to include the discovery of a serious defect that might at any time cause a fracture. • The obvious public purpose served by requiring any kind of "failure" with implications for public safety to be notified overrides the semantic analysis of the literal meaning of the word "failure". • The brackets attached to compressors are regarded as "plant or equipment". In several instances, there had been "failure" of the brackets. The brackets "failed" the criterion for crack length that the KCRC adopted to discriminate between those

	Legal opinion of the Legal Counsels appointed by the KCRC	**Legal opinion of the Legal Counsel appointed by Government**
		unserviceable and those that might continue in service.
Interpretation of "endanger or could endanger the safe operation of the railway"	• If, during the course of preventative maintenance, a fault is detected and appropriate remedial action is taken to prevent the fault endangering the safe operation of the railway, it cannot be said that there has been "a failure …. which could endanger the safe operation of the railway." • In the event that a defect was discovered in a piece of equipment and it was replaced, there would be no need for this fact to be reported since there would no longer be any danger to the safe operation of the railway.	• The cracked brackets which were unfit for service by reason of the excessive length of the cracks present "could endanger the safe operation of the railway". • The discovery of so many cracks and so many cracks of excessive length in a sample of all the brackets in the fleet, further demonstrated the existence of a fleet-wide problem that "could endanger the safe operation of the railway".
Construction of the phrase "if it occurs on the railway" under Regulation 3 of the KCRC Regulations	• It is difficult to say that the discovery of a defect during preventative maintenance is an occurrence which "occurs on the railway".	• The cracks were discovered in compressor brackets under cars of trains necessarily "on the railway" of the KCRC. That must be so wherever the cars happened to be, either when the tests were carried out, or when the existence of cracks in other brackets was reported to the KCRC.

	Legal opinion of the Legal Counsels appointed by the KCRC	**Legal opinion of the Legal Counsel appointed by Government**
Was the discovery of hairline cracks in other equipment after 21 December 2005 itself a separate notifiable occurrence?	• The cracks discovered after the event of 21 December 2005 were unlikely to have amounted to "failure" for the purposes of the KCRC Regulations.	• The discovery of cracks in the weld of several brackets supporting compressors that occurred between 23 and 29 December 2005 was a serious event that presented a new threat to public safety. It was a different occurrence from the isolated incident on 21 December 2005.

Our Observations on the Interpretations

3.27 We have been presented with divergent views from the Legal Counsels of the two parties on the interpretations of the law concerned. Our observation is that while the ETWB's letter to the KCRC on 15 August 2005 might have given the HKRI the impression that all incidents relating to safety are notifiable, there must remain limitations to a liberal interpretation of the KCRC Regulations. According to KCRC's Legal Counsels, notifiable failures are restricted to incidents that have occurred. The Government's Legal Counsel however interprets a "failure" as including the act of discovery of defects. We consider that not everything could be covered by even the most liberal interpretation, and a new boundary must still be drawn.

3.28 While matters relating to the interpretation of the law properly belong to the judiciary, we recommend that another approach for the Government is to keep the law intact for notifications, and separately invite the Corporation to report as much as could be agreed based on a new list to be drawn up. This would obviate going through a myriad of legal interpretations in the judiciary to resolve the issue.

(b) Disputed Instruction from the HKRI

3.29 After the compressor incident on 21 December 2005, the Corporation notified the incident the following day in accordance with the agreed practice. The compressor incident was an "occurrence" notifiable under KCRC Regulations 3 and 4(3)(b). It fell within the category of "occurrences" described in paragraph 12 of Part II of the Schedule to the Regulations. The Corporation notified the HKRI as required in the "Daily Return of Notifiable Incident" sent the following morning. The written report in Forms A and B was due by the 14th working day of the following month which in this case would have been 18 January 2006.

3.30 In addition, the most senior member of management at the time, SDT decided on 21 December 2005 to instruct the normal interlocutor, SQM(Atg), to telephone the SIO(R)3 of the HKRI the following day to discuss the incident further with them verbally. In addition to SQM(Atg), SDT decided that RDSM should join the telephone conference call to give support during the discussion of technical points.

3.31 SDT's view at that time was that the compressor incident was a rare one, something that had never happened before in Hong Kong, the cause of which was unclear and which would require investigation to find the root cause. He instructed that the telephone conference call with the HKRI take place in order to draw this incident to the attention of the HKRI in case the "Daily Return" was not clear enough.

3.32 However, this telephone communication between the two parties turned out to be an important factor in determining the timing of the subsequent submission of the follow up report of the Corporation to the HKRI. This should not have been the case.

3.33 There is currently no procedure requiring that records be made of such telephone discussions. In this case, the KCRC finished the telephone conference call with the impression that, after having raised and discussed the compressor incident with the HKRI, the HKRI had not given any specific instructions as to follow up. The Corporation would, as they themselves

proposed, carry on to conduct a fuller investigation into the incident and revert to the HKRI in due course. SIO(R)3 of the HKRI said that he had specifically asked the Corporation to keep the HKRI informed and updated of any "abnormal findings", and by that he had meant this to include cracks found on further compressors and on equipment other than the compressors.

Our Observations on the Disputed Instruction

3.34 We note that the first part of the notification process, the "Daily Return", was sent by the Corporation's working level staff as a matter of course and that the senior management of the Corporation were not involved at this stage. Once the "Daily Return" was submitted, the written report had to follow within the due time frame and it would not have been possible to prevent this from happening. Had there been any intention to say, cover up, someone in the Corporation could have interfered to stop the notification from going out to the HKRI on 22 December 2005. Clearly, this did not happen.

3.35 Rather the Corporation made the extra effort to make the telephone call on 22 December 2005 to the HKRI over and on top of the statutory requirements for notification. We could not find any evidence that the Corporation had deliberately "forgotten" or "ignored" the HKRI's instruction about reporting "abnormal findings", so that they could justifiably not communicate with the HKRI during their investigative process. We consider that the steps that SDT took indicate the Corporation's openness with the HKRI. We understand that this was not the first time that the Corporation acted in such a proactive manner, and this underlined the readiness of the Corporation to promptly make available not just information about the incident but also technical details provided by RDSM who participated in the call.

3.36 On the other hand, SIO(R)3's instruction, if actually given, would also not have surprised us. It is entirely appropriate for the HKRI to ask for such follow up action. The instruction could have been given, but perhaps not strongly or clearly enough, and it might not have been picked up by SQM(Atg) and RDSM.

3.37 Our view is that the fact that neither side kept a written record of the telephone discussion means that neither side's claims as to whether or not SIO(R)3 instructed the KCRC to inform and update the HKRI of any "abnormal findings" are conclusive. We consider that in future, verbal instructions from a regulator should be promptly followed by a written record of the instructions given so as to avoid misunderstanding of any telephone discussions.

3.38 Especially since this all arose from a rare incident, if SIO(R)3 was concerned at the time of the telephone conference call that the problem might have fleet-wide implications, we also suggest that SIO(R)3 should have been more proactive in seeking to know more about the incident. The HKRI should have initiated follow up checks on the Corporation and conducted site visits to find out about the investigative processes that the Corporation was going to take. This would have put the Corporation on higher alert and enhanced the two-way communication.

(c) Interpretations of Paragraph 6 of the ETWB's Letter

3.39 Paragraph 6 of the ETWB's letter contains a very broad request with respect to the disclosure requirements of the Corporation. Paragraphs 5 and 6 are reproduced below:

> "5. As regards incidents which may impact on service levels including but not limited to frequency of services, journey time, operating hours and capacity, the Corporation should notify the Transport Department under the agreed notification mechanism for service disruption that has occurred for 8 minutes of (sic. or) more. The Transport Department discussed with the Corporation earlier this year to fine-tune the mechanism and the agreed version is now attached again at Annex for your compliance.
>
> 6. However, from time to time, there are cases which are of public concerns and media interests which are outside the ambit of the "8-minute notification system". Depending on

> the nature of the incidents, the Corporation should notify the HKRI or the Transport Department as appropriate. For sensitive issues, the Corporation may also contact this Bureau direct. I should be grateful if you would institutionalize the reporting arrangement and let us have your suggestions on a list of specific examples of incidents which, the Corporation considers, should fall under this category. We recognize that your suggestions may by no means be exhaustive but will form a basis for us to have a common understanding on the nature of incidents which should be reported."

3.40 We note that paragraph 6, in the light of the preceding paragraphs, refers to issues that have no safety implications but which might impact service levels or that are of public concerns and media interests. This is indeed a very broad catch all, so broad that the ETWB recognized it and the bureau invited the Corporation to suggest a list of specific examples of incidents which the Corporation considers should fall under this category. The Corporation could not come up with such a list and there was no more follow up on the issues.

3.41 At our meeting, we asked the Corporation why they had not informed the Government of the finding of further cracks under paragraph 6 of the ETWB's letter. They replied that when the cracks were found, there were no public concerns or media interests, and since there was no agreed list of examples to which paragraph 6 applied, they had always found it difficult to decide if a case warranted reporting under this paragraph.

3.42 Many events occur in the operation of railways. The Corporation raised with us during the meeting the difficulty they experience in determining the extent of reporting to the HKRI. When they took a "too liberal" an approach in reporting, the Corporation said that the HKRI had not been very pleased with the situation and the Corporation had had to scale down the reporting. In the case in question, when they had in effect adopted a "less liberal" approach than that which the HKRI expected, this had given rise to the consideration that the Corporation had failed to report.

3.43 In any event, the Corporation explained that they had considered that the finding of cracks could cause public concerns and media interests if the matter was not properly handled and if the root cause to the problem was not promptly determined and addressed. To this end, the Corporation accorded priority and devoted considerable resources to carrying out an extensive investigation to find the root cause of the problem first and foremost.

3.44 It turned out that the Corporation took more than two weeks after the compressor incident on 21 December 2005 to be in a position to report its initial conclusion drawn from the extensive investigations, that cracks found in the equipment mountings of various underframe components might have common causes. In the Corporation's presentation to us, they stressed that they used their best endeavors in this and that they had, in any event, reached their initial conclusion earlier than the deadline laid down of 18 January 2006. They pointed out that the cracks found in the early stage of the investigation had not raised particular concerns as such defects are not uncommon in relation to trains and railways. They had to take the time to look for leads, talk to experts, do the analyses of data and fully evaluate and understand the problem before they could review the available evidence to reach an initial conclusion to report to the Government on 10 January 2006.

Our Observations on the Interpretations

3.45 We consider that the exchange of letters between the two parties in August 2005 was a first step only and further communication is due. The East Rail incidents turn out to be an excellent test case, and the ETWB and the KCRC should follow up and continue to work to agree on a list of specific examples to be reported under paragraph 6 of the ETWB's letter.

3.46 While we appreciate that working out the details is likely to be challenging, it is in our view a very worthwhile exercise which should be completed as soon as possible to avoid any further misunderstandings. The list of specific examples is important because it is frontline operational railway staff who have first hand information on railway incidents and events. They have to be given clear instructions as to which incidents and events to report. This is

in line with past practice and, once institutionalized, the reporting of incidents by the Corporation to the Government should operate as a matter of course at the working level. If such matters are left to individual judgment and interpretation and if each and every report needs discussion at management level, reporting delays are very likely to occur. This is not an easy task. On examining the scope of the exercise, it should be appreciated that it is clearly very challenging to draw up a comprehensive and workable list covering all possible angles and issues of public concerns and media interests.

3.47 We further consider that it is worth the Corporation and the Government conducting a review of the various reporting requirements, side by side with the notification requirements, as well as the issues of how compliance is to be checked and monitored. There are the various administrative arrangements and exchanges of letters which set out the Government's requirements for the KCRC to communicate various matters in relation to the railway. These could require the Corporation to communicate with various contact points in the Government other than the HKRI as defined in the law. All these requirements should be reviewed, clarified and updated, consolidated and streamlined in one exercise.

3.48 Taking this a step further, the content of the communication should fully reflect the requirements laid down by the Government. The layout of the reports from the KCRC to the Government has over the years been agreed and set out in standard forms. We observe that there are many different forms, and that while the standard items such as the date, time, place and major points for example, whether or not there were casualties and whether or not there were service delays were clear, the description of the incident is largely left to the writer. Considerable weight is therefore attributed to the subsequent written reports which the Corporation has a longer time to prepare.

3.49 We are of the view that the standard forms should be reviewed to see if they could succinctly bring to the attention of the Government the crux of the issue concerned. The objective of the exercise is to upgrade from routine notification/reporting which might have degenerated over time to quality notification/reporting which is of immediate use to the Government.

CHAPTER 4

WAS THERE ENOUGH COMMUNICATION?

4.1 We probe beyond the notification/reporting obligations to consider how specific institutional arrangements have limited communication between the Corporation and the Government.

4.2 The KCRC accords top priority to ensuring the safety of train operations, and their position is that they carry full responsibility for the safe operation of the railway, even though the HKRI has the role of regulator. Throughout the handling of the compressor incident on 21 December 2005 and the investigative process thereafter to find the root cause of the problem, the Corporation stated clearly to us that they had judiciously and prudently assessed whether there were any risks which impacted the safety of the railway operations on a day-to-day and minute-to-minute basis. Their conclusion was that since the problem of cracks had been carefully contained and precautionary measures taken, safety had not been an issue; if they had had any doubts about this point, they would have alerted the HKRI immediately in accordance with past practice.

4.3 The Corporation was however aware that the finding of cracks could cause public concerns and media interests if not properly handled and if the root cause to the problem was not promptly determined and addressed. To this end, the Corporation accorded priority and devoted considerable resources to carrying out an extensive investigation to find the root cause of the problem first and foremost.

4.4 We are not in a position to make an independent risk assessment of safety considerations. However, our view is that the Corporation after having sized up the problem and decided to concentrate on conducting an investigation into the root cause of the problem, had not communicated adequately with the HKRI in the process. We point to four institutional arrangements which have limited the communication flow:

(a) the existing code of practice agreed between the Government and the Corporation for the conduct of investigation of incidents;

(b) the line of reporting of the SQM;

(c) the interface with the HKRI; and

(d) the culture of the Corporation.

(a) The Conduct of Investigations

4.5 We note that a large number of Corporation staff were involved in the investigation process. Tests performed included the Visual Inspection and Hammering Test and the Magnetic Particle Inspection test. A number of third parties, including the contractor, ETS-TestConsult Ltd, the car manufacturer Alstrom, and the IRP, were also involved to find the root cause to the problem. A deliberate plan to prevent communication simply did not exist.

4.6 We questioned the Corporation as to why they had left out the HKRI in the extensive investigative process. The Corporation explained that they had undertaken and were committed to conduct a full investigation into the problem; this was their job and this approach was in their view confirmed in the reporting over the telephone to the HKRI on 22 December 2005. They had therefore mobilized railway experts and staff to assist in the operation. The role of the HKRI, in their view, was not to assist with the investigation or to be involved in the investigative process, but to independently assess the results of the investigation. When the Corporation was still in the investigative stage, looking for evidence, it was not their practice to keep the HKRI informed at every turn of events. The responsibility of the Corporation was to complete the investigation as soon as possible and then compile a detailed written report for examination by the HKRI.

4.7 The HKRI in its submission to us, described its role in investigations into railway incidents:

> "HKRI will ask for an incident report from the railway corporations setting out the details including chronology of events and proposed rectification measures. Depending on the nature and seriousness of the incidents, HKRI will conduct site visits to gather more information and conduct investigations to examine the cause(s) and remedial measures as suggested by the railway corporations. For incidents with less immediate safety concerns (e.g. personal injuries cases when using escalators), the HKRI will monitor the trend of occurrence of such incidents and the effectiveness of follow-up actions by railway corporations."

Our Observations

4.8 We see that there is a need to improve on the existing code of practice agreed between the Government and the Corporation for the conduct of investigations of incidents. We have concerns about the Corporation conducting an extensive investigation into a rare incident, for which the investigative process could have taken a long time, without Government input.

4.9 In the case under review, the incident was rare and its root cause was unknown. In addition, nobody in Hong Kong had had experience in handling such an incident. As a result, the public could well have been expected to have been concerned for their safety, had they been aware that cracks had been found, notwithstanding that many were hair line cracks, in the underframe equipment of a number of trains, and that it had been deemed necessary to take precautionary measures to support underframe equipment to prevent it from loosening and falling off, potentially causing derailment and casualties. From a technical and risk management angle, railway experts both in the Corporation and outside could assess the possibility of such a disaster occurring at that time as being remote. However, public perception was likely to be otherwise until the root cause was determined and addressed in full.

4.10 We propose for consideration by the Government and the Corporation that in future, for investigation into more complex or serious incidents, there should be more awareness and flexibility to employ independent

party/parties either to work with the Corporation or to lead an independent Incident Investigation Team. The independent parties could include the HKRI and other experts and professionals. This team could also conduct independent assessment of the risk involved in each incident. This would improve on the present practice whereby the Corporation conducts the investigation first and then the Government checks on the results of the investigation, and would save time and assure public safety in a transparent manner.

4.11 Comparatively minor investigations should continue to be handled by the Corporation and be independently assessed by the HKRI. Minor investigation might however, during the course of collecting data and evidence, evolve into major investigations. Minor investigation could also go on for a long time unchecked by the Government. We therefore suggest that the investigative process should be institutionalized. For example, the Corporation should share logs of work in progress with the HKRI periodically throughout the investigative process until the final report is compiled. In this manner, the HKRI could also check on the progress at regular intervals and spot any irregularities at an early opportunity.

(b) Line of Reporting of the SQM

4.12 We note that the internal communication of the Corporation over the East Rail incidents was generally adequate. Nonetheless, we observe that the SQM who is responsible for investigation into incidents, and the preparation and submission of information to the HKRI is presently under the supervision of SDT. The advantage of this arrangement is that the SQM is under the supervision of the chief in command of operations. The SQM is therefore able to benefit from the support given by other technical staff members under SDT's direction when it comes to the compilation of accurate technical reports. The disadvantage however, is that the Corporation does not have internal checks and balances on the investigations conducted by the operation division.

Our Observations

4.13 We see that the Corporation's present arrangements for managing safety and making notifications/reports to the Government will be increasingly stretched as a result of the growing complexity of the railway operating systems, anticipated traffic levels, and the demands for transparency on an urgent basis. We recommend for the consideration by the Corporation that the Safety and Quality Division's role and responsibilities be improved and in particular be given more independence from the operation division so that SQM could provide an independent source of opinion to advise the CEO when judging matters of safety and quality. The SQM for example, could report directly to the CEO. In this manner, the Transport Division would not be seen to be investigating its own operations and the necessary investigations could be carried out in a more objective light.

(c) Interface with the HKRI

4.14 We notice that the scheduling of meetings between the KCRC and the HKRI at the levels of SDT/SQM/CIO(R) is at three to six monthly intervals, although ad hoc meetings are arranged as necessary from time to time in between. We believe that if these SDT/SQM/CIO(R) meetings had been held at more frequent intervals and if there were more two-way communication and interactions between the two parties, information about the progress of the investigative work carried out by the KCRC following the compressor incident would have been much better communicated than it actually was.

4.15 The HKRI has two officers, SIO(R)3 and IO(R)3, who are responsible for the KCRC East Rail as well as Ma On Shan Rail, the planned lines of Lok Ma Chau Spur Line and the Shatin Central Link, under the supervision of CIO(R). While the Government is quick and flexible in deploying additional resources from other departments, such as the Electrical and Mechanical Services Department and the Highways Department, to assist the HKRI with investigative work into railway incidents as necessary, the communication interface between the HKRI and the Corporation remains thin in our view.

Our Observations

4.16 We recommend that in order to make changes in the communication mindset of the two parties, new and better practices should be adopted to replace or reinforce the old way of doing things. In addition to more meetings between the two parties, the two–way communication must also be increased.

4.17 We further consider that the regulator role of the Government towards the Corporation requires a continuous search for the right balances between controls and autonomy. From time to time, the Government should take a look at the working arrangements between the HKRI and the operator and tweak for the right balances.

(d) The Culture of the Corporation

4.18 Individual corporations have their respective cultures largely arising from the background and traditions developed over the years and characteristics of particular industries. The railway industry as a whole is a conservative industry and the KCRC faces the same challenge as others in this business in the face of changing times.

4.19 We appreciate the traditional virtues and dedication we found in staff members of the Corporation in operating the railway, and their desire to do their best in their jobs so that “railway safety is a given”. The teamwork demonstrated by the Corporation’s staff is no doubt due largely to the training and discipline provided by management over the years. The Corporation also expressed that in conducting the investigations to find the root cause of the problem, they also strived to do their best. They felt that “in order that the report could provide the HKRI with a complete picture, it was felt better to complete the necessary tests to determine the initial causes of the incident and to provide reassurance to the HKRI that all was under control before making the submission”.

4.20 The Corporation however, was not very sensitive to changing demands and changing circumstances, and only adapting as the bureaucracy evolved. In the case under review, the Chairman of the Managing Board told us that he has been working on changing the Corporation on this very issue of becoming more proactive in delivering transparency in a more urgent and timely manner to the outside world since he was appointed Chairman, but it appears that progress had been slow and much of the culture of the Corporation had lagged behind a substantive change.

Our Observations

4.21 We consider that this culture to always strive for the best should be credited with driving the Corporation to succeed in establishing the cause of the problem, albeit in a preliminary manner, so promptly during the holiday season. However, we also see the culture of the Corporation evolving. They must change more rapidly in order to meet the changing demands for better communication. We recommend that the whole Corporation should look in detail at managing this change and build a solid foundation for it.

4.22 Communication takes time and effort, and the Corporation must recognize that investment in communication is worthwhile. Communication with the Government and the public is essential as the lesson learned from the East Rail incidents is that all the Corporation's good work could be spoiled by an inadequacy of communication.

4.23 First the leader is crucial. In the case of the KCRC, there are two key leaders, the Chairman of the Managing Board and the CEO, who are crucial to sustain any initiatives for change.

4.24 These two roles should be clearly defined. The Chairman has demonstrated vision and conviction in leading the changes to the management of the Corporation. He has also shown that he is willing to take risks when handling matters of uncertainty. The CEO should lead the management to support the change.

4.25 We note also that the Managing Board has at present five Committees established to assist the Managing Board in carrying out its work. These are the Audit Committee; the Strategic Human Resource Committee; the Finance Committee; the Capital Projects Committee; and the Property Committee. Conspicuously absent is a high level body to oversee issues of public safety and communication. We see these two issues as closely intertwined and deserving high-level attention. Issues of public safety necessarily require communication with the Government, the public and the media, and in any communication with outside parties, the issues of public safety should play a central role. We propose for the consideration by the Corporation that there should be high level concerted effort to boost attempts to enhance public confidence in the Corporation. A better communication strategy should be worked out and a fresh look taken at the work of the Corporate Affairs Department.

4.26 Second. Creating a clear vision is vital. The responsibility of the leaders is to articulate to staff members what the Corporation would look like during and after the change. Why should the staff be involved? What is in it for them? What are the concerns that will emerge and how will they be addressed? These are all important questions that a clear vision can address.

4.27 Third. Commitment of the top tier is a priority. Building a team supportive of change is a priority. We recommend that the Corporation examine how best to take forward this change with the support of the next tier of Senior Directors. The joint effort should be a guiding coalition to direct the necessary steps within the Corporation to implement this change by removing barriers and creating an environment where responsibility is spread throughout the Corporation.

4.28 Ultimately, any program for change that is meant to be sustainable must involve the entire Corporation. The aim of providing transparency in a more urgent manner will be a real change for the Corporation and one which it may find threatening. Staff members would no longer have the comfort of having done all the research and investigations and found all possible answers before they begin to tackle the enquiries by the Managing Board, the HKRI, the public or the media. Training and development would play an important role

in helping the guiding coalition to work towards a shared view on the best way forward. Middle managers would also have to be involved and kept informed at an early stage.

4.29 Fourth. Create and train the change agents. The management would also find it useful to invite volunteers from the Corporation to be trained as change agents. Capable of injecting energy and enthusiasm, these individuals would contribute greatly to implementing the necessary change.

4.30 We further urge the Corporation not to let communication over railway accidents, service delays, or railway incidents dominate their communication with outside parties. Positive messages from the Corporation must also be made effectively and regularly. The trains run by the Corporation play a very important role in the lives of many Hong Kong people and visitors from overseas. There is no reason why there should not be better communication and explanations about the operation of trains, their built-in safety features and the intricacies of the risk management processes from time to time. Everyone, from school children to old people, from regular train commuters to occasional overseas visitors, should be able to receive information from the Corporation. There are many ways for the Corporation to reach out to the public. These could include school visits to train depots, better use of the Corporation's website such as including more embedded video clips and regular press briefings. In our view, the importance of investment in communication cannot be underestimated.

A Matter of Perception

4.31 We come to the conclusion after reviewing the events and issues that there was a matrix of relevant inter-related factors set against a rather special set of circumstances surrounding the incidents which led to the inadequacy of communication from the KCRC to the Government until 10 January 2006.

4.32 Our position is that we have high expectations of the Corporation as a public organization. It took more than two weeks after the compressor

incident on 21 December 2005 for the KCRC to be in a position to report its initial conclusion drawn from the extensive investigations, that cracks found in the equipment mountings of various underframe components might have common causes. From the Corporation's presentation to us, they used their best endeavors. We accept that an investigative process to find the root cause of such a technical and rare problem is not straight-forward and that a meaningful conclusion could not be drawn overnight. With hindsight it is easy to lay blame as to why the conclusion was not apparent earlier. We do not comment as to the exact point at which the Corporation was in a position to exercise their professional judgment to come to a conclusion, albeit preliminary, about the root cause of the problem.

4.33 But our view is that as the ETWB has since August 2005 encouraged the Corporation to be more forthcoming with sharing information, and the Corporation has agreed to make best endeavours in this regard, the Corporation should have been more sensitive and alert to the need for more communication throughout the process. They should have communicated more even if they considered this to be an issue of perceived public safety and not of real public safety. This is what we expect of a respected public organization.

4.34 We notice that the Corporation had in the past on occasions alerted the HKRI about actions that they were planning to take. For example, in 2005, the Corporation alerted the HKRI about their plan to use six additional types of freight wagons in the East Rail and their plan to introduce a portable ramp for wheelchair passengers. These reportings were all done on the Corporation's own initiative. In the case under review, the Corporation could also have alerted the HKRI about their plan to apply nylon straps to the compressors and add metal brackets to other underframe equipment, and the outcome of the events would have been different.

4.35 Given how committed the Corporation was to finding the root cause of the problem and the extent of the resources it devoted to the exercise in order that the results of the investigation could be obtained in the shortest possible time, we consider that the Corporation should have continued to be proactive in sharing information with the HKRI. This sharing of information

should have continued in spite of the Corporation's impression of the outcome of the telephone conversation call of 22 December 2005 and despite the 18 January 2006 deadline which gave the Corporation a much longer period to report in full to the Government. The Corporation need not have waited to complete a detailed written report. This decision could have been taken entirely independently of the decision to alert the Chairman of the Managing Board and thus the Managing Board. These were two separate decisions which should not have interfered with each other.

4.36 If the HKRI had been alerted promptly, the HKRI could have carried out their duty at the earliest opportunity and have promptly assessed the issue of public safety, perceived or otherwise, regarding the continued operation of the affected trains. Furthermore, if the Government had been alerted earlier, behind the small team of the HKRI stands a body of resources that the SETW could have deployed if it had been considered necessary. Their collective knowledge might have helped to resolve the problem more quickly.

4.37 The best safety assurances by the Corporation with respect to their own operation of the railway are not acceptable to the public unless and until they are separately assessed by an independent monitor, in this case the HKRI. If the Corporation does not share the relevant information, the Government cannot be in a position to discharge its role.

4.38 For the HKRI, we also have high expectations of them as the railway regulator to ensure public safety in railway operations. If the HKRI could also be more proactive, and seen to be so, the two-way communication between the parties would be different.

4.39 For the Corporation, we urge the Chairman of the Managing Board to continue to work on building the team to change the Corporation to become one that is more proactive in delivering transparency in a more urgent and timely manner to the outside world. As for the inadequacy of communication from the Corporation to the Government during the period under review, we do not hold any one staff member of the Corporation responsible for this as this would be unfair. We however ask those who were in the seats of responsibility during the time under review and who had the opportunity to communicate with

the Government or who were in a position to obtain information from those under their supervision and inform the Government of the happenings, including the ACEO, SDT, SQM and SQM(Atg), to learn a lesson and to adopt the necessary change in the Corporation so that there will be better and improved communication with the Government and the public in future. The matter of perception is not to be underestimated and there is no room for complacency.

CHAPTER 5

SUMMARY OF RECOMMENDATIONS

5.1 Our recommendations to improve communication between the KCRC and the Government are :

Notification

5.2 There are divergent views from the Legal Counsels of the two parties on the interpretation of the notification requirements in the KCRC Regulations. We suggest another approach for the Government to consider which is to keep the KCRC Regulations intact in so far as notifications are concerned, and separately invite the Corporation to report as much as could be agreed based on a new list to be drawn up. This would obviate going through a myriad of legal interpretations in the judiciary to resolve the issue.

Reporting

5.3 The Corporation and the Government should follow up and continue to work to agree on a list of specific examples of matters of "public concerns and media interests" to be reported under paragraph 6 of the ETWB's letter. This is a very worthwhile exercise because it is frontline operational railway staff who have first hand information on railway incidents and events. They have to be given clear instructions as to which incidents and events to report. If such matters are left to individual judgment and interpretation and if each and every report needs discussion at management level, reporting delays are very likely to occur.

5.4 The Corporation and the Government should review the various reporting requirements side by side with the notification requirements, as well as the issues of how compliance is to be checked and monitored, in order to clarify, update, consolidate and streamline in one exercise.

5.5 The Corporation and the Government should review the standard notification/reporting forms to see if they could succinctly bring to the attention of the Government the crux of the issue concerned. The objective of the exercise is to upgrade from routine notification/reporting which might have degenerated over time to quality notification/reporting which is of immediate use to the Government.

Interface between the HKRI and KCRC

5.6 In future verbal instructions from the HKRI should be promptly followed by a written record of the instructions given so as to avoid misunderstanding of any telephone discussions.

5.7 The HKRI should be more proactive in the relationship with the Corporation. In the case under review, the HKRI could have sought to know more about the incident, initiated follow up checks on the Corporation and conducted site visits to find out about the investigative processes that the Corporation was going to take. This would have put the Corporation on higher alert and enhanced the two-way communication.

5.8 There should be more meetings and more two-way communication between the Corporation and the HKRI.

5.9 As the regulator role of the Government towards the Corporation requires a continuous search for the right balances between controls and autonomy, from time to time the Government should take a look at the working arrangements between the HKRI and the operator and tweak for the right balances.

Conduct of Investigation of Incidents

5.10 In future, for investigation into more complex or serious incidents, there could be more awareness and flexibility to employ independent party/parties either to work with the Corporation or to lead an independent

Incident Investigation Team. The independent parties could include the HKRI and other experts and professionals. This would improve on the present practice whereby the Corporation conducts the investigation first and then the Government checks on the results of the investigation, and would save time and assure public safety in a transparent manner.

5.11 Comparatively minor investigations should continue to be handled by the Corporation and be independently assessed by the HKRI. Minor investigation might however, during the course of collecting data and evidence, evolve into major investigations. Minor investigation could also go on for a long time unchecked by the Government. The investigative process should therefore be institutionalized. For example, the Corporation should share logs of work in progress with the HKRI periodically throughout the investigative process until the final report is compiled. In this manner, the HKRI could also check on progress at regular intervals and spot any irregularities at an early opportunity.

Internal Communication within the KCRC

5.12 The Corporation's Safety and Quality Division's role and responsibilities could be improved and in particular be given more independence from the operation division so that SQM could provide an independent source of opinion to advise the Chief Executive Officer (CEO) when judging matters of safety and quality. The SQM for example, could report directly to the CEO. This would be better than the present arrangement whereby SQM reports to the SDT who then reports to the CEO. In this manner, the Transport Division would not be seen to be investigating its own operations and the necessary investigations could be carried out in a more objective light.

Culture of the KCRC

5.13 The Corporation should learn to become more sensitive to changing demands and changing circumstances and in the case under review, learn to be more proactive in bringing transparency in a more urgent manner to

the HKRI and the public. The whole Corporation should look in detail at managing this change and build a solid foundation for it.

5.14 The Chairman of the KCRC Managing Board and the CEO are two leaders crucial to sustain any initiatives for change in the Corporation.

5.15 High level concerted effort of the Corporation to look into the twin issues of public safety and communication should be considered to boost attempts to enhance public confidence in the Corporation and devise a better communication strategy.

5.16 The Corporation should create and explain to staff members a clear vision of the processes involved in changing the Corporation to become more proactive in the issue of transparency.

5.17 The Corporation should examine how best to take forward this change with the support of the next tier of Senior Directors. The joint effort should be a guiding coalition to drive the change relentlessly.

5.18 The Corporation should provide training and development to staff members in the face of change.

5.19 The Corporation should create and train the change agents to contribute to implementing the necessary change.

5.20 The Corporation should not let communication over railway accidents, service delays, or railway incidents dominate their communication with outside parties. Positive messages from the Corporation must also be made effectively and regularly. The trains run by the Corporation play a very important role in the lives of many Hong Kong people and visitors from overseas. There is no reason why there should not be better communication and explanations about the operation of trains, their built-in safety features and the intricacies of the risk management processes from time to time.

Acknowledgements

The Review Panel would like to express its sincere thanks to all those who have contributed to the review, in particular, all who provided contributions through written submissions and/or attended meetings of the Review Panel. They include Mr Joshua Law, Permanent Secretary for the Environment, Transport and Works (Transport) and his team, and Mr Lo Kin Hung, Chief Inspecting Officer (Railways) of the Hong Kong Railway Inspectorate and his team; Mr Michael Tien, Chairman of the KCRC Managing Board, Mr Samuel Lai, Former Acting Chief Executive Officer of the KCRC, and other KCRC colleagues; Mr Edmund Leung, Chairman of the Independent Review Panel as well as Members of the Independent Review Panel.

We are also grateful to the Official Languages Division of the Civil Service Bureau for its translation service, and wish to record our appreciation to the Secretariat for their assistance during the review.

Appendix

Acronyms and Abbreviations

ACEO	Acting Chief Executive Officer
CEO	Chief Executive Officer
CIO(R)	Chief Inspecting Officer (Railways)
CS	Chief Secretary for Administration
EDM	EMU Depot Manager
EMU	Electric Multiple Unit
ETWB	Environment, Transport and Works Bureau
GM-TR	General Manager-Rolling Stock
HKRI	Hong Kong Railway Inspectorate
IO(R)	Inspecting Officer (Railways)
IRP	Independent Review Panel
KCRC	Kowloon-Canton Railway Corporation
MTRCL	Mass Transit Railway Corporation Limited
PST	Permanent Secretary for the Environment, Transport and Works (Transport)
RDSM	Rolling Stock Design & Systems Engineering Manager
RIM	Rules & Incident Investigation Manager
SDT	Senior Director-Transport

SETW	Secretary for the Environment, Transport and Works
SIO(R)	Senior Inspecting Officer (Railways)
SMS	Short message system
SQM	Safety & Quality Manager
TD	Transport Department

Annex 1

Biographical Notes on Members

Chairman

Mr Herbert HUI Ho-ming, JP

Mr Herbert Hui is the Chairman of the Hong Kong Institute of Directors and an established businessman with broad management experience. He also has extensive experience in public service. Mr Hui is the Vice Chairman of the Hong Kong Council for Academic Accreditation. He also serves on a number of Government Boards and Committees, such as the Board of Directors of the Hong Kong Science and Technology Parks Corporation, the Operations Review Committee of the Independent Commission Against Corruption and the Small and Medium Enterprises Committee.

Members

Mr Stanley HUI Hon-chung, JP

Mr Stanley Hui is the Chief Executive Officer of Hong Kong Dragon Airlines Limited and a respected figure in the management field. He is the Chairman of the Vetting Committee of the Professional Services Development Assistance Scheme. Mr Hui also serves as a Member of the Vocational Training Council, the Aviation Development Advisory Committee and the Immigration Department Users' Committee.

Mr Vincent LO Wing-sang, BBS, JP

Mr Vincent Lo is a Solicitor at Gallant Y T Ho & Co, Solicitors. He is a Member of the KCRC Managing Board. Mr Lo also serves on a number of Government Boards and Committees such as Member of the Committee on Museums and Social Welfare Advisory Committee.

Mr Otto POON Lok-to, BBS

Mr Otto Poon is the Managing Director of the Analogue Group of Companies. He has served on a number of Government Boards and Committees. Mr Poon is currently Chairman of the Energy Advisory Committee and a Member of the Council for Sustainable Development.

Annex 2

Participants in Meetings

Environment, Transport and Works Bureau

Mr Joshua Law	Permanent Secretary for the Environment, Transport and Works (Transport)
Miss Cathy Chu	Deputy Secretary for the Environment, Transport and Works (Transport)2
Mr William Shiu	Principal Assistant Secretary for the Environment, Transport and Works (Transport)4

Hong Kong Railway Inspectorate

Mr Lo Kin Hung	Chief Inspecting Officer (Railways)
Mr Edmond Ho	Senior Inspecting Officer (Railways)1
Mr Chris Fong	Senior Inspecting Officer (Railways)3

Independent Review Panel

Mr Edmund K H Leung	Chairman -	Former Chairman of the Hong Kong Institute of Engineers
Professor S L Ho	Member -	Chair Professor of Electricity Utilisation and Associate Head, Department of Electrical Engineering of the Hong Kong Polytechnic University

Dr K Y Sze	Member -	Associate Professor, Department of Mechanical Engineering of the University of Hong Kong
Dr Lawrence C M Wu	Member -	Associate Professor, Department of Physics and Materials Science of the City University of Hong Kong
Professor T M Yue	Member -	Professor, Department of Industrial and Systems Engineering of the Hong Kong Polytechnic University
Mr Eric S W Tam	Member -	Technical/NDT Manager of ETS-TestConsult Limited

Kowloon-Canton Railway Corporation

Mr Michael Tien	Chairman, Managing Board
Mr Samuel M H Lai	Former Acting Chief Executive Officer
Mr K K Lee	Senior Director-Capital Projects
Mr Y T Li	Senior Director-Transport
Mr William Leung	General Manager-Rolling Stock
Mr Alex Lau	Safety and Quality Manager
Mr Tony Lee	Rolling Stock Design and Systems Engineering Manager
Mr Frank Chow	Rules & Incident Investigation Manager

Annex 3

Extracts from Kowloon-Canton Railway Corporation Regulations, Chapter 372A, Laws of Hong Kong

2. Accidents which are to be notified

(1) An accident is notifiable under regulation 4 if it occurs on the railway 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.

(2) For the purposes of paragraph (1) a person suffers serious injury if he suffers amputation of a limb, a fracture or dislocation, internal injuries, loss of an eye, burns or any other injury of a kind which results in his being admitted to a hospital immediately following the accident for observation or treatment.

3. Other occurrences which are to be notified

Every occurrence described in the Schedule is notifiable under regulation 4 if it occurs on the railway.

4. Notification of accidents and other occurrences

(1) The Corporation shall give notice to the Chief Secretary for Administration of every accident which is notifiable under regulation 2 and occurrence which is notifiable under regulation 3.

(2) The Corporation shall also supply to the Chief Secretary for Administration such further information concerning such an accident or occurrence as he may require it to furnish to him.

(3) Notice shall be given under paragraph (1) as follows –

(a) in the case of an accident which is notifiable under regulation 2, immediately after the occurrence it shall be reported by word of mouth (which includes such a report by means of a telephone) to the Chief Secretary for Administration or to any other public officer he may appoint for the purposes of this sub-paragraph;

(b) as soon as is practicable after the accident or occurrence, a written report, in such form as the Chief Secretary for Administration may from time to time determine, shall be completed and delivered to the office of the Chief Secretary for Administration.

SCHEDULE
NOTIFIABLE OCCURRENCES

PART I
Occurrences directly affecting persons

1. Any accident connected with the operation of the railway or with the maintenance thereof, not being an accident which is notifiable under regulation 2, as a result of which an employee of the Corporation or of a contractor with the Corporation is unable, for a period exceeding 3 days immediately after the accident, to fully carry out his normal duties.

2. Any occurrence, not coming within paragraph 1, in which a person –

(a) falls off a platform or crosses a line whether or not he is struck by a train;

(b) falls out of a carriage during the running of a train;

(c) falls between a train and a platform;

(d) comes into contact with live overhead electric traction wires or other live electrical equipment;

(e) suffers injury, which is reported to the Corporation, by the opening or closing of carriage doors at a station or by the operation of an escalator, lift or moving path used by the public as part of the railway;

(f) suffers injury, which is reported to the Corporation, as the result of any action of an employee of the Corporation, or of a contractor with the Corporation.

PART II

Occurrences affecting railway premises, plant and equipment

1. Any failure of an axle, wheel or tyre on a train, including tyres unfit to run.

2. Any failure of any part of a power unit on a train which endangers or could endanger the safe operation of the railway.

3. Any fire, severe electrical arcing or fusing on a train or on any part of the railway or on any part of the railway premises or on premises occupied or used by the Corporation in the running of the railway.

4. Any accidental division of a train.

5. Any fracture of a rail in the permanent way.

6. Any buckling of a running track.

7. Any failure of a tunnel, bridge or elevated section or any part the same which endangers or could endanger the safe operation of the railway.

8. Any flooding of any part of the permanent way which endangers or could endanger the safe operation of the railway.

9. The loss of control of any passenger escalator, lift or moving path.

10. Any failure of a signal structure or of any part of the fixed electrical equipment which endangers or could endanger the safe operation of the railway.

11. The accidental entry of any road vehicle on to the permanent way.

12. Any other failure of the permanent way or of any machinery, plant or equipment which endangers or could endanger the safe operation of the

railway.

Annex 4

Extracts from the letter of 15 August 2005 from the ETWB to the KCRC

2. While speedy incident recovery is one of the important tasks in incident handling, effective communication with Government, passengers and the public is indeed equally important. Being the regulator of railway services, we rely on the Corporation to notify us incidents which may impact on railway safety and services, as well as other incidents which may be of public concerns. This is crucial to Government's monitoring of railway service quality, investigation on railway incidents, and deployment of emergency public transport services as appropriate.

3. At present, the Corporation is requited to notify the Government for incidents which entail safety implications. Specifically, the Corporation should notify the Government immediately incidents set out under Regulation 2, and as soon as practicable, a written report on such incidents and other occurrences set out in Regulation 3.

4. As the complexity of the railway systems increases with the advance in technology, it is impossible that the above regulations on "notifiable incidents" could cater for all scenarios of incidents which have safety implications if we were to apply a strict interpretation of the provisions. In this regard, while the governing regulations are still the valid basis on "notifiable incidents", we would like the Corporation to adopt a liberal approach in interpreting the provisions on "notifiable incidents". For the avoidance of doubt, if there is an incident which may have safety implications but, in your views, may not be covered by the provisions, the Corporation should also notify Government such cases.

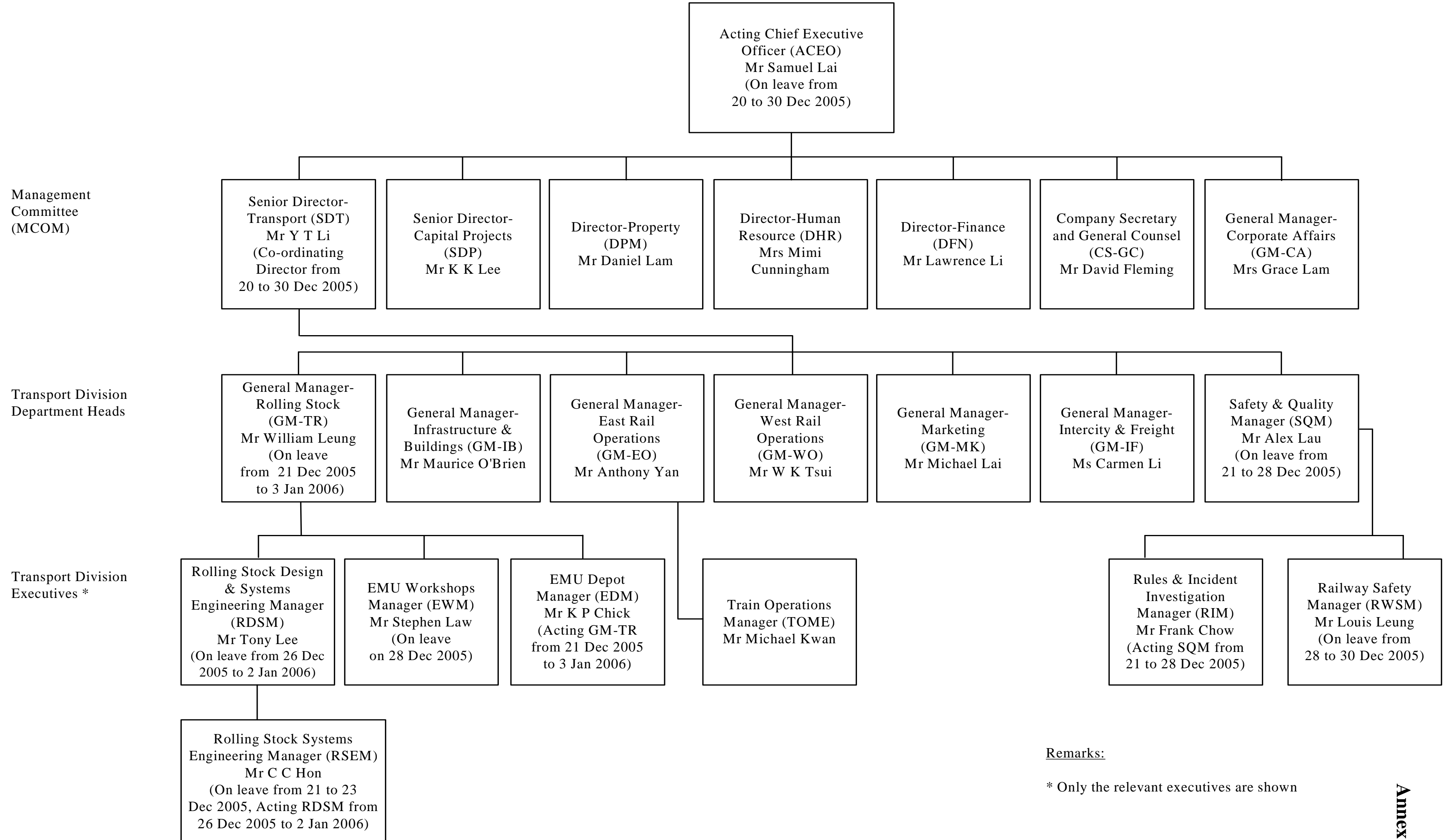
5. As regards incidents which may impact on service levels including but not limited to frequency of services, journey time, operating hours and capacity, the Corporation should notify the Transport Department under the agreed notification mechanism for service disruption that has occurred for 8 minutes of (sic. or) more. The Transport Department discussed with the

Corporation earlier this year to fine-tune the mechanism and the agreed version is now attached again at Annex for your compliance.

6. However, from time to time, there are cases which are of public concerns and media interests which are outside the ambit of the "8-minute notification system". Depending on the nature of the incidents, the Corporation should notify the HKRI or the Transport Department as appropriate. For sensitive issues, the Corporation may also contact this Bureau direct. I should be grateful if you would institutionalise the reporting arrangement and let us have your suggestions on a list of specific examples of incidents which, the Corporation considers, should fall under this category. We recognise that your suggestions may by no means be exhaustive but will form a basis for us to have a common understanding on the nature of incidents which should be reported."

Annex 5

Organisation Chart of the KCRC
(For the period from 20 December 2005 to 10 January 2006)



Annex 6

Organization Chart of the HKRI