

MTR to Enhance Arrangements for EPIC Qualification Examination Mechanism

The MTR Corporation today (31 August 2018) submitted an investigation report to the Government regarding the qualification examination mechanism for Engineer's Person-in-charge (EPIC) (Please see attachment). The report was compiled by a Review Panel set up by the Corporation to conduct a thorough investigation following allegations of cheating in EPIC examinations. As safety is always the top priority of the Corporation, these allegations were taken very seriously.

Regarding the allegation that a trainer of an EPIC refresher class helped examinees to pass an examination on 7 May 2018 by giving improper assistance, the panel interviewed all 40 participants of the refresher class and six other participants who attended the five classes conducted by the same trainer. The panel concluded that there was no evidence showing that the trainer had improperly given reminders or hints to the examinees during the EPIC refresher course examination.

In addition, the panel also interviewed other training officers and confirmed that there was no evidence showing that either one of them helped examinees to pass an EPIC Computer Based Examination (CBE) by correcting their answers before submission to the system, which was alleged to have happened in 2017.

As part of its investigation, the panel also reviewed the existing three-tier qualification mechanism, which consists of classroom training and associated examinations, job attachments, and oral examinations conducted by Qualified Examiners. The panel confirmed that the mechanism and review process are robust, effective, and practical. Nevertheless, the panel saw an opportunity to further enhance the arrangements for the EPIC examinations for continuous improvement. The panel made a series of recommendations, which had incorporated those advised by the Electrical and Mechanical Services Department to the Corporation, including:

- Replacing written paper examinations in EPIC refresher training with CBE
- Developing an assessment mechanism for the on-job attachments in the EPIC qualification and refresher training
- Conducting an annual review of all examination questions for the EPIC qualification, the results of which should be submitted to Operations Training Department's senior management for approval
- Giving consideration to the installation of CCTV in the training room

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- Adding an invigilator for every examination
- Setting examination guidelines for the invigilators to follow including the preparation of the examination and the control of examination questions
- Reviewing other similar qualification acquisition training, for instance hand signal-man, Lookout-man and Competent Person
- Arranging all 40 participants of the 7 May 2018 EPIC training class to re-sit the CBE
- Reassessing all EPIC qualified staff by CBE as soon as practicable

Most of the abovementioned recommendations have been substantially implemented. The remainder are underway and will be completed by mid-2019. Furthermore, to ensure fulfilment of the Corporation's stringent requirements, assessment of the on-job attachments has been made for all 40 participants of the concerned EPIC refresher class. The Corporation will liaise closely with relevant government departments on the implementation of the recommendations.

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About MTR Corporation

MTR Corporation is regarded as one of the world's leading railway operators for safety, reliability, customer service and cost efficiency. In its home base of Hong Kong, the Corporation operates ten commuter railway lines, a Light Rail network and a high-speed Airport Express link on which about 5.8 million passenger trips are made on a normal week day. Another 6.5 million passenger trips are made on the rail services it operates outside Hong Kong in the Mainland of China, the United Kingdom, Sweden and Australia. In addition, the Corporation is involved in a range of railway construction projects as well as railway consultancy and contracting services around the world. Leveraging on its railway expertise, the Corporation is involved in the development of transit-related residential and commercial property projects, property management, shopping malls leasing and management, advertising media and telecommunication services.

For more information about MTR Corporation, please visit www.mtr.com.hk.

Management Review Report on EPIC Qualification Mechanism

31 August 2018

1. Introduction

- 1.1. On 6 June 2018, an On-line News Report alleged that an Assistant Training Officer of the Operating Training Department (“**OTD**”) of MTRCL provided improper assistance to examinees to pass their Engineer’s Person In-charge (“**EPIC**”) refresher course examination on 7 May 2018. The News Report also alleged that OTD’s trainers provided improper assistance to examinees to pass a computer based examination (“**CBE**”) of an EPIC course in 2017.
- 1.2. MTRCL takes those allegations very seriously as safety is the top priority of the Corporation. MTRCL took immediate steps to form a Management Review Panel (“**MRP**”), led by the Head of Operating – South Region, to look into those allegations.
- 1.3. Based on the available information, the MRP identified the Assistant Training Officer and the EPIC refresher course held on 7 May 2018 in connection with the allegations. The panel then interviewed the officer and all 40 participants of the refresher course, as well as 6 sample participants of the other 5 classes conducted by the same trainer.
- 1.4. The MRP also conducted interviews with 2 other EPIC refresher course trainers and 3 EPIC Qualified Examiners (“**QE**”) and reviewed the examination papers, the training room setting and the examination arrangements with a view to identifying areas for improving the qualification mechanism.

2. EPIC Qualification Mechanism

- 2.1. EPIC is a qualification and a designation to persons who are able to prove themselves to be a “Competent Person”. It is a written approval from the Engineer for qualified persons to take and supervise possessions. EPIC must be readily identifiable when works are in progress.
- 2.2. Within the Operating Department, members of staff at the supervisory grade S20 are required to obtain an EPIC qualification through an established and robust mechanism, and to periodically renew their qualification through a re-qualification process. It is mandatory for the relevant staff to obtain the qualification. There was no such issue of application for the qualification initiated by staff as suggested in the News Report.
- 2.3. A 3-tier approach is adopted in the EPIC qualification mechanism under which relevant staff members have to:
 - (i) attend classroom training and pass the associated examination;
 - (ii) perform job attachment; and
 - (iii) pass an oral examination conducted by a QE.

- 2.4. For oral examinations conducted by a QE, questions are set to check examinee's knowledge of workflow for possession, protection arrangements, hazard identification, communication, critical information knowledge (e.g. relevant work instructions) and location specific information; and where appropriate, the QE may require an examinee to do a role-play to ensure that the examinee is familiar with the relevant job duties and requirements.
- 2.5. To acquire an EPIC qualification, the relevant staff are required to:
- (i) complete an OTD 5-day EPIC course comprising a 4-day classroom training and an 1-day practical experience;
 - (ii) pass a CBE within one hour with 40 multiple-choice questions selected on a random basis from a pool of questions, 10 of which are critical questions and must be answered correctly to pass the examination;
 - (iii) take up a job attachment as an EPIC for 3 working shifts; and
 - (iv) pass an oral examination conducted by a QE.
- 2.6. To renew and retain an EPIC qualification:-
- (i) For staff in train or station operations, regulators and operations trainers, they have to complete a half-day refresher course every year and pass the associated written examination;
 - (ii) For engineering staff, they have to complete a 2-day refresher course once every 2 years and pass the associated written examination;
 - (iii) The relevant staff have to pass a written examination with 40 multiple-choice questions to be answered within one hour, 10 of which are critical questions and must be answered correctly to pass the examination;
 - (iv) Both operating and engineering staff have to complete at least 2 EPIC duty practices and pass an oral examination conducted by a QE.

3. Investigation

3.1. Review of EPIC Qualification Mechanism

3.1.1. The MRP reviewed the mechanism for both the initial acquisition of an EPIC qualification and the re-qualification and concluded that the existing 3-tier mechanism (i.e. classroom examination, job attachment or job practice, and examination by a QE) is effective and practical.

3.1.2. The MRP noted that the current examination questions would be updated when there were any material changes of the relevant rules. For continuous improvement and maintenance of good quality, the MRP recommended that an annual review of the questions be conducted and the review result be endorsed by OTD senior management. Similar reviews of questions for other qualifications' examination are also recommended.

3.1.3. The MRP also noted that a written examination is adopted for EPIC refresher courses instead of CBE which has a constraint to allow only a maximum of 20 participants at one time. Unlike CBE where questions are selected randomly by a computer, all questions of a written examination follow the same order. As a more prudent approach, the MRP recommended replacing written examinations with CBE in EPIC refresher courses and developing assessment mechanism during on-job attachments as a part of the EPIC qualification and refresher training.

3.2. **EPIC Refresher Course Examination on 7 May 2018**

3.2.1. The MRP identified the Assistant Training Officer who could recall that the audio extract from the video footage of the News Report matched some of his actions in the EPIC refresher class held on 7 May 2018. However, no evidence was available to indicate that the officer had helped participants correct their answers before they submitted their written examination papers. During the MRP's interviews with all 40 participants of the 7 May 2018 class, none of them responded that they were aware of any abnormality in any of the classes or had received any copies of the examination questions or answers before the examination. In particular, the majority of them recalled that throughout the examination, the trainer did not have any dialogue with any individual examinees.

3.2.2. Also, no evidence could show any pressure on training officers regarding the passing rate of the examinations. The training officers' appraisal performance rating has no connection with the passing rate. Further, the number of MTRCL staff holding EPIC qualification is well sufficient for operational purposes.

3.2.3. Nonetheless, for re-assurance of the required EPIC knowledge of the examinees of the 7 May 2018 class, an immediate oral examination was carried out by one of the 2 senior management members, namely the Chief of Operating (“**CO**”) and the General Manager – Safety and Quality (“**GM-S&Q**”), on 11 and 12 June 2018. All those participants passed the oral examination for the EPIC qualification.

3.2.4. To further eliminate any doubt on the 40 participants' competency, the MRP recommended that all those participants take the EPIC CBE (instead of another written examination) in addition to the said oral examination conducted by either CO or GM-S&Q.

3.2.5. Similar re-assessment would also be arranged for all other staff with the EPIC qualification.

3.2.6. For more effective control and monitoring in examination, the MRP recommended exploring the possibility of adding one invigilator during examinations and setting guidelines of examination for the invigilators to follow as well as installing a CCTV system in the examination room.

3.2.7. The MRP also recommended establishing guidelines and practice notes to standardise the delivery of training and examination with a view to enhancing the training quality.

3.3. Computer Based Examination (CBE) in 2017

3.3.1. Regarding the allegation that a training officer helped examinees pass their CBE in 2017 by correcting their answers before submission, no further supporting details could be obtained. The MRP also found that it is very difficult (if not impossible) to cheat without being noticed as the examinees are each assigned with a computer and are separated by partitions; also, the computers display only one question at a time and the examination questions are randomly drawn by the individual computers. In the circumstances, the MRP concluded that the allegation could not be substantiated.

4. Conclusions and recommendations

4.1. No evidence was available to indicate that the Assistant Training Officer had provided improper assistance to participants during the examination on 7 May 2018.

4.2. As to the allegation of a training officer helping examinees by correcting their answers before submission in a CBE in 2017, no further supporting details could be obtained. Upon reviewing the room setting and arrangements for the CBE, the MRP found that it is very difficult, if not impossible, for examinees to cheat without being noticed and concluded that the allegation could not be substantiated.

4.3. Notwithstanding the aforesaid findings, for continuous improvement, the MRP recommended the following improvement measures, some of which have been completed/implemented as indicated:-

Item	Actions	Target Completion Date
4.3.1	Replace written paper examinations with CBE in EPIC refresher training	June 2018 (completed)
4.3.2	Develop assessment mechanism during on-job attachments as a part of the EPIC qualification and refresher training	September 2018

Item	Actions	Target Completion Date
4.3.3	Conduct annual review of all examination questions for the EPIC qualification with the review results approved by OTD senior management	July 2018 (completed)
4.3.4	Give consideration to the installation of CCTV system in the training room	September 2018
4.3.5	Add an invigilator for every examination	August 2018 (completed)
4.3.6	Set guidelines of examination for invigilators to follow including the preparation of the examination and the control of examination questions	August 2018 (completed)
4.3.7	Review other similar qualification acquisition training e.g. hand signal-man, Lookout-man and Competent Person	September 2018
4.3.8	Arrange all 40 participants of the 7 May 2018 EPIC training class to take the CBE	July 2018 (completed)
4.3.9	Re-assess all EPIC qualified staff by CBE as soon as practicable	June 2019