

# 機電工程署 EMSD

香港特別行政區政府 機電工程署  
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Electrical and Mechanical Services Department  
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Our reference 本署檔號 : EMSD CRA/4-35/2/1 Part 4(E.5)(L/M)

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Your reference 來函檔號 : CB4/PAC/R70

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By Fax (2543 9197)

22 June 2018

Public Accounts Committee, Legislative Council  
Legislative Council Complex  
1 Legislative Council Road  
Central, Hong Kong

(Attn.: Mr Anthony CHU)

Dear Mr CHU,

**Public Accounts Committee**  
**Consideration of Chapter 8 of the Director of Audit's Report No. 70**  
**Sha Tin Section of Route 8**

Thank you for your letter of ref. CB4/PAC/R70 dated 12 June 2018 requesting our responses to the questions listed in the Appendix of the letter.

Please find our responses to the questions in the attached Appendices. The soft copy of our responses has also been sent to the e-mail addresses listed in your letter separately.

Yours sincerely,



(WONG Sek Cheung)  
for Director of Electrical and Mechanical Services

Encl.

- c.c. Secretary for Development (Fax no.: 2147 3691)
- Secretary for Transport and Housing (Fax no.: 2537 6519)
- Secretary for Financial Services and the Treasury (Fax No.: 2147 5239)
- Commissioner for Transport (Fax no.: 2802 2361)
- Director of Civil Engineering and Development (Fax no. 2246 8708)
- Director of Highways (Fax no.: 2714 5203)
- Director of Architectural Services (Fax no.: 2810 7341)
- Director of Audit (Fax No.: 2583 9063)

**Public Accounts Committee  
Consideration of Chapter 8  
of the Director of Audit's Report No. 70 ("Audit Report")  
Sha Tin Section of Route 8  
Responses from the EMSD**

*(IV) For the Electrical and Mechanical Services Department  
The Administration was requested to provide the following information:*

*(a) according to paragraph 4.11(c) of the Audit Report, a Government Monitoring Team, comprising officers from four departments, namely, TD, HyD, EMSD and ArchSD, is responsible for monitoring the TSCA operator's performance. In this connection, please advise:*

*(i) the responsibilities and purview of each department. Is there any written document delineating such responsibilities or purview. If yes, please provide a copy of such document;*

**Answer:** The Electrical and Mechanical Services Department ("EMSD") provides the Transport Department ("TD") with professional advisory, technical supports and monitoring services relating to electrical and mechanical (E&M) systems in the Management, Operation and Maintenance (MOM) contract for the Tsing Sha Control Area (TSCA). The EMSD monitors the operator's performance in operation and maintenance of all E&M systems and equipment. The responsibilities of the EMSD are stated in the Service Level Agreement ("SLA") between the EMSD and TD. Extract of the SLA delineating the EMSD's responsibilities is attached in Appendix 2.

*(ii) whether each department had, since the TSCA MOM contract was awarded to the current operator, held meetings with the current operator and/or other relevant departments, so as to monitor and review the performance of the operator. If yes,*

*please provide dates and records of the meetings; if not, why not;*

**Answer:** The EMSD has been holding meetings with the TSCA operator jointly with TD and HyD on a bi-monthly basis to monitor the operation and maintenance of E&M systems and review the performance of the operator since the commencement of the current TSCA MOM contract. The dates of the joint meetings held are as tabulated below:

Meeting No.	Date	Meeting No.	Date
1	24 Oct 2013	15	18 Feb 2016
2	19 Dec 2013	16	21 Apr 2016
3	20 Feb 2014	17	23 Jun 2016
4	17 Apr 2014	18	26 Aug 2016
5	19 Jun 2014	19	20 Oct 2016
6	21 Aug 2014	20	22 Dec 2016
7	23 Oct 2014	21	16 Feb 2017
8	18 Dec 2014	22	20 Apr 2017
9	12 Feb 2015	23	22 Jun 2017
10	23 Apr 2015	24	24 Aug 2017
11	25 Jun 2015	25	19 Oct 2017
12	20 Aug 2015	26	21 Dec 2017
13	22 Oct 2015	27	2 Mar 2018
14	17 Dec 2015		

(iii) *is there a laid-down mechanism for each department to monitor the performance of the contractor on areas under the purview of each department. If yes, please provide a copy of such mechanism; if not, how will the department carry out its monitoring responsibilities;*

**Answer:** The EMSD has resident staff at TSCA to monitor the performance of the operator. In addition to the joint meeting as mentioned in (ii) above, the EMSD also checks the monthly reports submitted by the operator and conducts site inspections to assess the performance of the operator. Furthermore, the EMSD prepares quarterly

**performance reports to reflect the operator's performance.**

*(b) with reference to paragraphs 4.16 to 4.18 and Table 17 of the Audit Report, please advise:*

*(i) whether EMSD and HyD had conducted any surprise check or record checking so as to monitor the manning level of E&M staff and highway maintenance staff under their respective purview;*

**Answer: The EMSD has been checking monthly reports submitted by the operator, conducting surprise inspections to check the attendance records of the operator's E&M staff and to count the number of operator's E&M staff on site, in order to monitor whether the operator has complied with the E&M staff manning level requirements as specified in the MOM contract.**

*(ii) between September 2013 and January 2017, whether there was staff shortfall of TSCA operator not subject to LD. If yes, the details;*

**Answer: In the E&M staff manning level requirements of the TSCA MOM contract, there are five staff not subject to LD. According to the monthly reports submitted by the operator, the shortfall of these staff (from September 2013 to January 2017) is tabulated below:**

<b>Rank</b>	<b>Shortfall Period</b>
<b>Engineer Manager (1 No.)</b>	<b>Jan 2015</b>
<b>Electrical &amp; Mechanical Engineer (1 No.)</b>	<b>Dec 2013 to Aug 2014 and May 2016 to Oct 2016</b>
<b>Electronics Engineer (1 No.)</b>	<b>No Shortfall</b>
<b>Vehicle Engineer (1 No.)</b>	<b>No Shortfall</b>
<b>Software Engineer (1 No.)</b>	<b>Sep 2013 and Jan 2015 to Mar 2015</b>

(c) *according to paragraph 4.23 of the Audit Report, out of the total manning level of 483 staff under the TSCA MOM contract, 80 staff are “leave relief” staff, and provided that the TSCA operator could deploy sufficient and competent manpower to each of the required duty shifts, the manning level requirement for “leave relief” staff is included in the contract for reference purpose only. In substance, the operator is required to deploy a total of 403 staff, of which 60 staff are not subject to LD for any shortfall. In this connection, please advise:*

(i) *what are the follow-up actions/sanctions that could be taken by the relevant departments if there is a shortfall in the staff that are not subject to LD for any shortfall;*

**Answer:** Although there are five staff members as mentioned in (b)(ii) above who are not subject to LD, the EMSD has also been closely monitoring the manning level of such staff members. Whenever there was shortfall of these staff members identified, the EMSD would urge the operator to rectify the shortfall promptly. To address this issue, the EMSD in collaboration with TD will study whether LD should be applied to all level of E&M staff in formulating the contract terms of the next MOM contract.

(ii) *at the public hearing, Acting Director of Electrical and Mechanical Services said that the contract allowed the contractor to outsource some E&M works if it could not employ sufficient E&M staff to make up the shortfall. Commissioner for Transport said that despite the outsourcing, LD would still be imposed if there was a shortfall of staff subject to LD. Please clarify the seemingly conflicting statements and provide an extract of the relevant contract provisions on LD;*

**Answer:** According to the TSCA MOM contract, the operator is allowed to outsource part of the scheduled E&M maintenance works when needed, with the prior consent of the TD and EMSD. The contract also stipulates that if the operator fails to employ the required number of E&M staff (non-key personnel), LD shall be imposed to the operator. The relevant LD clauses in the MOM contract are extracted in Appendix 3.

**Based on the legal advice obtained from the Department of Justice (DoJ) by the TD, the LD calculation method and principle was agreed in early 2017. The outsourcing of some E&M maintenance works by the operator should be treated as compensation of part of the E&M staff shortfall. In other words, the outsourcing arrangement is equivalent to deployment of certain number of E&M staff at certain ranks by the operator. However, if shortfall of E&M staff still exists after outsourcing some E&M maintenance works, LD will be imposed to the operator.**

(d) *with reference to Table 17 and paragraph 4.27(a) of the Audit Report, please advise:*

(i) *the reasons for the shortfall of E&M staff;*

**Answer:** According to the information provided by the TSCA

operator, they encountered difficulties in employing E&M engineering staff due to the tight employment market resulted from a high demand for E&M staff in a number of new or on-going major infrastructure projects in recent years.

- (ii) *whether EMSD has assessed the impact on the operation of TSCA by the shortfall of E&M staff, in particular the shortfall of staff in the rank of “E&M technicians”. If yes, the details; if not, why not;*

**Answer:** The operator has been taking mitigation measures, including (i) arranging staff to work overtime to compensate for the vacancies as far as possible and (ii) outsourcing part of the maintenance works. With the said mitigation measures in place and the EMSD’s close monitoring of the operator’s daily maintenance works, the operation and performance of the E&M systems in TSCA has in general remained satisfactory throughout the MOM contract.

- (e) *with reference to paragraph 4.33 and 4.34 of the Audit Report, please advise/provide:*

- (i) *as of December 2017, TD and EMSD had not ascertained the amount of LD from 1 March 2014 to 31 December 2016 and 1 October to 31 December 2017. Why was there such a delay?*

**Answer:** The TSCA MOM contract is the first contract of its kind to include LD provisions for the manning level. There was dispute from the operator as to how the LD should be imposed such as certain E&M maintenance works have been outsourced by him to compensate for part of the E&M staff shortfall. From November 2014 to January 2017, the EMSD had assisted the TD to seek legal advice from DoJ and resolve the dispute with the operator as to how the LD should be imposed. Upon settlement of the dispute, the

**EMSD began to calculate and provide the TD with the ascertained amount of LD in batches, from May 2017 to February 2018, for the period from the commencement of the TSCA MOM contract (i.e. September 2013) to December 2017. Based on the EMSD's ascertained amounts of LD, the TD had collected LD due to shortage of E&M staff from the operator for the said period in batches between May 2017 and March 2018.**

*(ii) records of imposing and collecting LD from the operator;*

**Answer: The TD will provide the Public Accounts Committee records of imposing and collecting LD from the operator.**

*(iii) whether TD, HyD, EMSD and ArchSD have cross-checked the accuracy of the information/records submitted by the operator in relation to the calculation of LD.*

**Answer: The EMSD has been assisting the TD to review and verify the calculation of LD to be imposed on the operator due to shortfall of E&M staff. The EMSD's work includes (i) checking of the calculation of the LD to be imposed, monthly reports, attendance records and relevant supporting documents submitted by the operator, (ii) cross-checking the operator's records against the EMSD's surprise check records, and (iii) requesting the operator to submit supplementary information where necessary.**



Extract of the Service Level Agreement between the EMSD and TD  
(April 2012 to March 2018) Delineating the Responsibilities of the EMSD

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1. Introduction

1.1 Part 1 of this SLA specifies the scope of services to be provided by EMSTF to TD on professional advisory, technical support and monitoring services at the following Control Areas and Tunnel Areas:-

- a) TMCA  
(for the period from 1 April, 2012 to 31 March, 2018)
- b) Tunnel Area of Aberdeen Tunnel, Kai Tak Tunnel, Lion Rock Tunnel, Shing Mun Tunnels, Tseung Kwan O Tunnel and Cross Harbour Tunnel  
(for the period from 1 April, 2012 to 31 March, 2018)
- c) TSCA  
(for the period from 1 April, 2012 to 31 March, 2018<sup>3</sup>)

1.2 The above Control Areas and Tunnel Areas are the same as that defined in the respective Management, Operation and Maintenance (MOM) Contracts. In addition, Systems/Tunnel Equipment (including "Systems" in Control Areas and "Tunnel Equipment" in Tunnel Areas) has the same meaning as that stipulated in the respective MOM Contracts.

2. Scope and Description of Services

In respect of Systems/Tunnel Equipment:-

- 2.1 To witness testing and commissioning and to advise on defects, outstanding and improvement works from operation, maintenance, system performance, safety and system reliability points of view;
- 2.2 To liaise and coordinate with the Operators<sup>4</sup> to attend operation and maintenance training to prepare for the provision of effective operation of the Control Areas and Tunnel Areas;
- 2.3 To attend relevant meetings to discuss progress of operation and maintenance activities so as to ensure smooth operation of the Control Areas and Tunnel Areas;
- 2.4 To monitor the Operators' preparation works and liaise with the Operators for taking up the operation and maintenance works on the Systems/Tunnel Equipment, and to advise TD on the Operators' proposals;
- 2.5 To monitor the Operators' performance and quality of work on Systems/Tunnel Equipment, including computer hardware and software, through examination of reports, log-books, and inspection on site; and to provide technical advice on contractual penalties, claims and disputes;

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<sup>3</sup> The current SLA for TSCA signed between TD and EMSTF in 2008 covered the period from 21 Mar 2008 to 31 Mar 2013. The commencement date of this part of the SLA for TSCA is revised to 1 Apr 2012 to make it in line with the other SLAs.

<sup>4</sup> Operators mean the "Operator" for Control Areas and "Contractor" for Tunnel Areas as stipulated in the respective MOM Contracts.

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- 2.6 To attend to emergency repair of Systems/Tunnel Equipment and conduct investigations on causes of failure for equipment breakdowns as situation warrants subject to mutual agreement between the Operators and the Government;
  - 2.7 To advise on the continued life expectancy of Systems/Tunnel Equipment, and to assess Operators' proposals for equipment/system replacement within the Control Areas and Tunnel Areas with unit cost exceeding a ceiling limit specified in the MOM Contracts, for which the Operators would be reimbursed;
  - 2.8 To monitor the Operators in updating the records on Systems/Tunnel Equipment, including the associated equipment manuals, spare parts inventory records and drawings;
  - 2.9 To provide professional advice on contingency plans, drills, fallbacks and responses to public enquiries or complaints as well as assisting TD in managing the Control Areas and Tunnel Areas in respect of operation and maintenance of Systems/Tunnel Equipment in case of emergencies;
  - 2.10 To assist in re-tendering exercises, if such case arises, for the MOM Contracts by providing technical inputs and advice on the preparation of contract documents and tender evaluation, including pre-qualification evaluation and similar evaluation for re-tendering exercise on the same contract;
  - 2.11 To arrange, coordinate, and witness technical assessment exercises on Systems/Tunnel Equipment to ensure smooth handing over of Systems/Tunnel Equipment to the Operators;
  - 2.12 To arrange, coordinate and witness final inspection for handing over the Systems/Tunnel Equipment from the Operators to the successor arising from renewal of the MOM Contracts;
  - 2.13 To monitor the Operators' performance and quality of work in maintenance of the Government Furnished Vehicles in Control Areas and Tunnel Areas as detailed in Appendix 1.
  - 2.14 To provide professional advice on the budgets submitted by Western Harbour Crossing and Tai Lam Tunnel;
  - 2.15 To provide professional advice on the equipment replacement submitted by Eastern Harbour Crossing and Tate's Cairn Tunnel; and
  - 2.16 To provide professional advice on mobile phone equipment / fixed telecommunication equipment installations.

**Extract of the LD Clauses in the MOM Contract  
(Salary information has been redacted)**

**91A. Deductions**

91A.1 The Operator shall ensure that at all times the actual number of his staff employed at a rank(s) set out in the first column of Table 1 in Schedule XXIII shall not be less than the number of staff at that rank(s) specified in Schedule XI and that in case a staff is working on shift at a rank which is set out in the first column of Table 1 in Schedule XXIII, the actual hour of that staff working on a shift shall not be less than the required working hour on that shift for that rank of staff as specified in Schedule XI. In the event of resignation, dismissal, or absence of any such staff during the shift hours set out in Schedule XI, the Operator shall promptly provide adequate and competent replacement. If the Operator fails to comply with this clause, without prejudice to any other provisions of this Contract and other rights and remedies of Government, Government may deduct a sum or sums calculated in accordance with Clause 91A.2 and Clause 91A.3 below from the monthly Management Fee or any other sum then due or which at any time thereafter may become due from Government to the Operator under this Contract or any other contract(s) made between the Operator and Government.

91A.2 If the Operator fails to employ the required number of staff at a rank set out in the first column of Table 1 in Schedule XXIII in accordance with Clause 91A.1 above, without prejudice to any rights, actions or remedies that Government has or may have against the Operator, the Operator shall pay Government, as liquidated damages and not as penalty, the sum for shortfall of staff at each rank to be calculated in accordance with the formula below-

$$\begin{array}{rcl}
 \begin{array}{l} \text{The sum for} \\ \text{shortage of} \\ \text{staff at a} \\ \text{rank in a} \\ \\ \text{calendar} \\ \text{month} \end{array} & = & \begin{array}{l} \text{No. of man-day of shortfall of} \\ \text{staff at that rank in that} \\ \text{calendar month falling within} \\ \text{the Term} \end{array} \times \begin{array}{l} \text{Average monthly basic} \\ \text{salary of the corresponding} \\ \text{rank stated in last column of} \\ \text{Table 1 of Schedule XXIII} \\ \\ \text{No. of days in that calendar} \\ \text{month} \end{array}
 \end{array}$$

The number of man-day of short fall of staff at a rank shall be counted starting from the effective date of resignation or dismissal of the staff and ending at the date immediately before the date of assuming duty of a new competent replacement staff, both starting date and ending date are inclusive.

91A.3 If the Operator fails to ensure that the actual hour of a staff working on a shift is not less than the required working hour on that shift for a rank of staff as specified in Schedule XI in accordance with Clause 91A.1 above, without prejudice to any rights, actions or remedies that Government has or may have against the Operator, the Operator shall pay Government, as liquidated damages and not as penalty, the sums to be calculated as follows-

<u>For the Shortfall of working hour of each staff of</u>	<u>Amount</u>
Assistant Operations Controller	HK\$ [REDACTED] per hour or any part thereof
Operations Supervisor	HK\$ [REDACTED] per hour or any part thereof
Traffic Officer I	HK\$ [REDACTED] per hour or any part thereof
Traffic Officer II	HK\$ [REDACTED] per hour or any part thereof
Senior Driver	HK\$ [REDACTED] per hour or any part thereof
Toll Collector	HK\$ [REDACTED] per hour or any part thereof
Electrical and Mechanical Technical Supervisor	HK\$ [REDACTED] per hour or any part thereof
Electronics Technical Supervisor	HK\$ [REDACTED] per hour or any part thereof
Electrical and Mechanical Technician	HK\$ [REDACTED] per hour or any part thereof
Electronics Technician	HK\$ [REDACTED] per hour or any part thereof

**SCHEDULE XXIII**

**Details on Remuneration for  
Designated Outgoing Operator's Staff for the First Contract Year**

**Part I - Average Monthly Basic Salary**

**Table 1**

Column 1	Column 2	Column 3
Rank of Staff	Number of Outgoing Operator's Staff at the rank in Column 1 given with first offer of employment for the purposes of the Contract	Average Monthly Basic Salary for employing the Outgoing Operator's Staff at the rank in Column 1 who are being offered an employment
Assistant Operations Controller	20	HK\$ [REDACTED]
Operations Supervisor	36	HK\$ [REDACTED]
Training Supervisor	1	HK\$ [REDACTED]
Traffic Officer I	60	HK\$ [REDACTED]
Traffic Officer II	88	HK\$ [REDACTED]
Senior Driver	8	HK\$ [REDACTED]
Driver	7	HK\$ [REDACTED]
Toll Collector	28	HK\$ [REDACTED]
Highway Supervisor	5	HK\$ [REDACTED]
Deputy Highway Supervisor	12	HK\$ [REDACTED]
Painter	2	HK\$ [REDACTED]
Driver/ Plant Operator	12	HK\$ [REDACTED]
Safety Officer	2	HK\$ [REDACTED]
System Analyst	2	HK\$ [REDACTED]
Electrical and Mechanical Technical Supervisor	15	HK\$ [REDACTED]
Electronics Technical Supervisor	10	HK\$ [REDACTED]
Vehicle Technical Supervisor	3	HK\$ [REDACTED]
Electrical and Mechanical Technician	53	HK\$ [REDACTED]
Electronics Technician	35	HK\$ [REDACTED]
Vehicle Technician	21	HK\$ [REDACTED]
Technical Clerk	1	HK\$ [REDACTED]
Software Programmer	2	HK\$ [REDACTED]
Assistant Building Officer	1	HK\$ [REDACTED]