APPENDIX 7

香港特別行政區政府
消防處

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消防總部大廈

FIRE SERVICES DEPARTMENT
GOVERNMENT OF THE HONG KONG SPECIAL ADMINISTRATIVE REGION
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7 January 2009

Ms. Miranda HON
Clerk to the Public Accounts Committee
Legislative Council
Hong Kong SAR of the PRC

Dear Ms HON,

The Director of Audit's Report on the
Results of value for money audits (Report No. 51)
Emergency ambulance service (Chapter 4)

I refer to your letter of today's date and enclose the additional information requested by the Public Accounts Committee, using the same numbering in your letter, as follows –

(a) Medical Priority Dispatch System (MPDS) – The Department is now working out the specific options and detailed proposals. When these become available, we will consult the Panel on Security of this Council as well as the public. However, it should be noted that the primary purpose of establishing the MPDS is to enable FSD to prioritize the dispatch of ambulances in accordance with the seriousness of the patients' condition. While a lower priority would be given to calls which are not of an emergency nature under the proposed system, no request for an ambulance would be denied. In order to encourage the public's proper use of the service, we agree that more information on the degree of urgency of patients should be collected through the implementation of the electronic ambulance journey records and the efforts on public education should be stepped up. Information on the MPDS is at **Attachment 1**

(b) Implementation of the electronic ambulance journey records – given the complexity of the project, we regret that we will not be able to advance the implementation of the electronic ambulance journey records before November 2009

(c) Timetable for implementation of joint education programme – The feasibility of a joint education programme to be launched together with the Hospital Authority and other ambulance service providers is being explored, which is expected to be completed in March 2009.

(d) Third Generation Mobilizing System – see **Attachment 2**

(e) Emergency ambulance calls and average age of ambulances – see **Attachment 3**

(f) Benchmarking study on the turnout time – Information search and data collection for the Turnout Time Study have been completed. This Department is carrying out data analysis. The report would be finalized by the end of March 2009.

(g) (i) & (ii) Criteria for deployment of ambulances and reasons for the lower percentage of emergency calls answered within target response time on night shift – **Attachment 4**

(h) This Department has requested the Lands Department to carry out site search for the temporary provision of a site in Sheung Shui for constructing an ambulance depot. A table showing details of the sites and results of site inspection is at **Attachment 5**

(i) Timetable for completing review of the urgent care ambulance service – The review of the efficiency and effectiveness of the urgent care ambulance service will commence shortly and be completed in March 2009.

(j) Further breakdown of Appendix E by 4 Divisions – To be provided

(k) FSD had not specifically stated that it would meet the baseline daily ambulance availability of "184 ambulances on the day shift and 100 ambulances on the night shift" if its bid was approved in the 2005 Recurrent Expenditure RAE submission.

(l) Estimated number and cost of additional manpower to achieve baseline DAA – To be provided as soon as possible

(m) In respect of the 2007 Recurrent RAE,

(i) when the resources for additional manpower were allocated to the FSD: April 2008;

(ii) when FSD started the recruitment process for hiring Ambulancemen**:** mid-2007 (to fill vacancies and anticipated new posts from 2007 Recurrent RAE);

(iii) when the new appointees commenced and completed training: there were three batches of new appointees in 2008 and the timing for their commencement and completion of training are set out hereunder:

- Batch 1 : 38 ambulancemen from 7 April to 5 October 2008;
- Batch 2 : 45 ambulancemen from 25 August 2008 to 22 February 2009; and
- Batch 3 : 39 ambulancemen from 13 October 2008 to 12 April 2009

(iv) maximum capacity of the training school : about 80 trainees

(n) Crow Maunsell Consultancy Report of December 2001 – The consultancy fee for the study is HKD1.08 million. A copy of the Report is at **Attachment 6**

(o) (i) & (iii) Additional ambulances and manpower resources requested/approved in the RAEs in 2005, 2006 and 2007 – see **Attachment 7**

(ii) To be provided as soon as possible

(p) Calls per ambulance per division in 2008 (as requested by the Chairman of PAC) – see **Attachment 8**

Grateful if you would deliver the above to Members of the PAC.

Yours sincerely,

(LO Chun-hung)
Director of Fire Services

c.c. Secretary for Financial Services and the Treasury
Director of Electrical and Mechanical Services
(Attn: Mr. SHE Siu-kuen)
Director of Audit

Note by Clerk, PAC:* *Attachments 6, 7 and 8 not attached.

Attachment 1

I furnish the following information for your reference:

(a) Medical Priority Dispatch System

As regards ambulance service, the target response time is 12 minutes and the Department has pledged to achieve this target response time in 92.5% of all emergency calls since November 1998.

The Fire Services Communication Centre receives emergency calls of all types, ranging from arm and leg fractures to highly critical conditions such as cardiac arrest. At present, emergency calls are not prioritized. There is a possibility that an ambulance that is supposed to respond to more critical calls is sent for a less serious case.

In order to provide better services to the general public with limited resources, the Department commissioned a consultancy firm to study the feasibility of the Medical Priority Dispatch System in Hong Kong. The study, which was completed in October 2005, recommends the implementation of the system in Hong Kong.

As pointed out by the study reports, the local ambulance service can improve its response time for critical calls and achieve the international best practice standards with the implementation of the system. The system has been widely adopted around the world. In practice, communications personnel will categorize and prioritize a call by asking the caller some specific interrogative questions set by the system software, and then make a decision on an appropriate response mode and give pre-arrival instructions for the case.

The reports recommend adopting five dispatch prioritization categories and implementing related deployment strategies so as to achieve the target response time. For the Echo category, which involves critical patients, the target is 9 minutes, which also applies to the Delta category, which covers life-threatening patients. The target for the Charlie category is set at 15 minutes, which includes serious but non-life-threatening patients. The Bravo category refers to non-life-threatening and less serious cases and the internal target is 20 minutes. The Alpha category includes non-emergency patients and the

internal target is 30 minutes.

The consultant recommends the performance pledge be set at 90% for the Echo, Delta and Charlie categories, and no targets except internal ones be set for the Bravo and Alpha categories.

According to the consultants, the anticipated call distribution under the system is as follows:

Category	Patient Conditions	% Estimate of Total No. of Calls
Echo	Critical	2%
Delta	Life-threatening	29%
Charlie	Serious but non-life-threatening	19%
Bravo	Non-life-threatening and less serious	28%
Alpha	Non-emergency	22%

According to the recommendations of the consultant, the implementation of the system will provide a significantly quicker response to those cases in which time is critical. For high priority calls such as heart attacks, ambulances will arrive three minutes faster than that is currently pledged. As pointed out in the consultancy reports, the current response time pledge is set at 12 minutes for all types of calls. The response time for critical calls has exceeded the suggested time under the international best practices.

In support of the system, the Hospital Authority believes that it is logical to ensure that priority of medical care should be provided to patients and casualties who are more critical through the adoption of a form of triage system.

As the Medical Priority Dispatch System involves a wide range of issues, it is of paramount importance that the Department should conduct a prudent and comprehensive study prior to implementation. To this end, the Department commissioned a consultancy firm in 2007 to study different response time scenarios under the system and accepted the findings of the study reports in early 2008. The Department and the Security Bureau are reviewing in depth

the findings and recommendations of the two reports. Legco members, medical institutions and organizations concerned, staff of all ranks of this Department, as well as the general public are to be consulted in 2009 before any concrete decision on the plan is made.

(d) (i) Summary of System Breakdown of the Third Generation Mobilizing System (TGMS) from June 2005 to December 2008

Date	Time	Affected Duration (minutes)	Total No. of Ambulance Calls Being Handled During the Period of System Fault	Total No. of Ambulance Calls Exceeding the Performance Pledge Due to System Fault	Remarks
17.8.2005	From 1834 hours to 1840 hours	6	17	1	The cause of the system breakdown was due to a software bug at the application server of the Computerized Mobilizing System. The fault was already fixed by the TGMS Contractor.
28.8.2005	From 1426 hours to 1428 hours	2	6	-	The cause of the system breakdown was due to a software bug at the database server of the Computerized Mobilizing System. The fault was already fixed by the TGMS Contractor.
21.8.2006	From 0305 hours to 0318 hours	13	2	-	The cause of the system breakdown was due to a software bug at the application server of the Computerized Mobilizing System. The fault was already fixed by the TGMS Contractor.

17.12.2007	From 0845 hours to 0928 hours	43	67	7	The cause of the system breakdown was due to a software bug at the application server of the Computerized Mobilizing System. The fault was already fixed by the TGMS Contractor.
29.12.2008	From 2313 hours on 29.12.2008 to 0024 hours on 30.12.2008	71	78	8	The cause of system breakdown was due to a bug in the software of Oracle Database 9.2 Enterprises Edition used at the database server of the Computerized Mobilizing System. The TGMS Contractor had modified the software to avoid recurrence.

Measures to improve the TGMS reliability

Given that the previous system breakdowns were solely involved software bug of the system, which had already been fixed by the TGMS Contractor after the incidents, the Contractor was advised to closely monitor the system performance and fine-tuning the software, including the application of software patches to fix any bug, if identified.

(d) (ii) Benefits after implementation of TGMS

The following benefits have been realized after implementation of the TGMS and therefore it is justified for its cost:

(I) Accurate and efficient resources deployment

TGMS identifies and locates real time resources automatically for immediate dispatch to the scene of incidents. It helps to achieve more accurate incident tasking and optimise resources management.

(II) Direct and effective operational information exchange

The automation features of TGMS can improve the efficiency in information exchange by means of graphics and text transmission through Wireless Digital Network and hence reducing the time spent on voice communication.

(III) Enhanced flexibility in resources identification and mobilization

Through open platform design, TGMS allows easy programme development and enhancement and has the flexibility to meet future operational requirements and demand for continuous improvement in fire and emergency ambulance services.

(IV) No additional staffing resources

With the introduction of the automatic call-out function at fire stations and ambulance depots and mobile data terminals on vehicles for address confirmation, console operators at the Fire Services Communications Centre will not have to broadcast mobilising instructions and to confirm incident addresses. Hence, the time spent by a console operator in handling an emergency call can be reduced and, as a result, they can be released earlier to handle the next call. Overall, TGMS will enable console operators to cope with the increase in the number of calls without the need for additional staffing resources.

Attachment 3

(a) Ambulance Calls in 2008

	Hong Kong	Kowloon	New Territories East and West	New Territories South	Total
Total Calls	118,455	223,216	196,843	105,097	643,611
Percentage	18.4%	34.7%	30.6%	16.3%	100%

Average age of ambulance

	Hong Kong	Kowloon	New Territories East and West	New Territories South
No. of Ambulances	48	68	71	45
Average Age	8.1	8.8	8.8	7.7

(g) (i) Deployment of ambulance resource

In deploying ambulance resources in each division, other than population, the following factors are also taken into consideration :

1. Demand of Emergency Ambulance Service in the area
2. Response Time Performance in the area
3. Available location serving as the base of ambulance and sufficient space for deploying additional ambulance resources
4. New development e.g. New Town, Border Control Point
5. Exceptional consideration e.g. off-shore islands, remote area etc.
6. Traffic condition
7. Risk factors e.g. Airport

(g) (ii) Lower percentage of emergency calls answered within target response time on night shift

The reasons for lower percentage of emergency calls answered within the target response time on the night shift are listed below

1. During night shift, the number of ambulances available will be reduced to about half of strength of day shift. Such being the case, the number of locations with ambulance resources at night shift will be less than day shifts. As a result, the travel distance is relatively longer.

2. As there were more ambulances on run and more ambulance calls in day shift, there were more available ambulances travelling on the road in its hospital-to-base journey. Thus, the probability of having an available ambulance passing by the address of a patient would be higher in the day-shift. As a result, the day-shift RTP in NT/E&W Division was slightly higher than the night-shift (91.5% vs 86.9%).

Attachment 5

Temporary Site for Sheung Shui Ambulance Depot

School	Address	Remarks
Kong Leng School	Ping Kong, Sheung Shui	Not recommended. The conditions of the existing school and connecting road are poor and the site is far away from Sheung Shui Town Area.
Kin Tak Public School	Lin Tong Mei, Sheung Shui	Not recommended. The access road within the school site is narrow and the site is far away from Sheung Shui Town Area.
Ping Yeung Public School (GLL N23948)	Ping Yeung, Sheung Shui	Not available. There is permanent/ temporary programme.
Wah Shan Public School (GLL T19599)	Wah Shan, Sheung Shui	Not available. There is permanent/ temporary programme.
Lung Shan School (GLL N8816)	Lung Yeuk Tau, Fanling	Not available. There is permanent/ temporary programme.
Sing Ping School	Sing Ping Village, Ping Che	Not available. There is permanent/ temporary programme.
SSSWH Fert & Rice Dealers Assn Public School	Ng Uk Tsuen, Sheung Shui	Not available. There is permanent/ temporary programme.