

**For discussion by  
LegCo Panel on Security  
on 28 January 2000**

**Paper No. : /2000**

## **LEGISLATIVE COUNCIL PANEL ON SECURITY**

### **Proposed Creation of a Chief Chemist Post in the Government Laboratory**

#### **Purpose**

This paper informs Members of a proposal to create a permanent directorate 1 Chief Chemist (CC) post to head the Drugs & Toxicology Group (D&TG), Forensic Science Division (FSD) of the Government Laboratory (GL), to be offset by the deletion of two Chemist posts from FSD.

#### **Background**

2. The Government Laboratory (GL) has an establishment of 369, including 6 directorate and 363 non-directorate officers. It comprises two operational divisions with very distinct responsibilities. The Analytical & Advisory Services Division provides services relating to environmental science and health science. The FSD is responsible for providing essential scientific investigation and analytical services to all departments concerned with law and order under the purview of the Secretary for Security. Headed by the Assistant Government Chemist/Forensic Science (AGC/FS) (D2), the Division comprises two distinct groups of service, namely the D&TG and the Physical & Biochemical Evidence Group (P&BEG). The P&BEG is headed by a CC. At present the D&TG is under the direct supervision of AGC/FS while one of the Senior Chemist (SC) there is designated as SC in-charge (i/c), assisting him in overseeing the daily operation of the Group in addition to his own role as a section head. Dedicated input at the directorate level is therefore needed for the operational leadership, supervision, planning and coordination of the D&TG. The current organization chart of the FSD is at Enclosure 1.

## **Improving and Maintaining the Quality of Output**

3. The FSD adopts two levels of checking of casework prior to its leaving the laboratory. The first level is technical checking which involves a detailed review of the entire file for technical accuracy and content. The second level is administrative checking which aims to review the professional assessments and decisions such as the accuracy of the result, complications that might have affected the result, and in the event of complex cases, the need for further investigations to improve work quality before finally endorsing the reports to be issued to clients.

### **(a) Casework Checking in the D&TG**

The SCs carry out technical checking of casework completed by the Chemists and then the SCi/c in D&TG and the CC in P&BEG conduct administrative checking. In the D&TG, the current arrangement is unsatisfactory, as administrative checking should have been carried out by an experienced and knowledgeable specialist with the expertise and authority beyond that of the senior professional level. Besides, since the SC i/c cannot administratively check the work of his own section which he has already technically checked as a section head, and owing to too high a volume of such work, some of the administrative checking is passed to the other SCs in the group. This consequently impinges on their time. On the other hand, it would not be feasible for the AGC/FS to carry out all administrative checking lest he should be so fully occupied that his other heavy and important commitments would be adversely affected. The present system has helped ensure that a high quality of work is submitted in a timely manner to the courts. However, it has created a bottleneck in the D&TG at the SC and in particular the SCi/c level, when there is no substantive CC to conduct technical checking of complicated cases and to undertake the bulk of the administrative checking work. Hence the D&TG has had difficulties in meeting the performance targets in recent years, despite the fact that the total number of cases handled only showed an increase of 10% over the past five years (please refer to Enclosure 2).

(b) Increasing Demands from Client Departments

The client departments of the D&TG, including the Judiciary, are now demanding services beyond the analytical level and have become increasingly reliant on their interpretation of findings and inferences derived thereupon. In the Controlled Drugs Section (CDS), professional staff are required to give interpretative presentations in courts on the effects, mode of consumption, and both normal and fatal dosage of illicit drugs, while in Forensic Toxicology Section (FTS), the professionals have to provide interpretation of drug effects and the toxic and fatal levels in relation to findings. It is necessary to vet, verify and interpret findings and decide on the need for conducting further investigations. For complicated issues, close liaison and research with counterparts locally or overseas are required. Given the serious legal consequences that might result in providing an incorrect interpretation, a CC, with the required professional achievement and the vested authority, is needed to supervise and coordinate these activities to cope with the increasing demand and the wide ranging issues requiring interpretative evidence.

(c) Increasing Scope and Complexity of Work

The scope of work of the D&TG has continued to expand over the years. Periodic revisions of the Dangerous Drugs Ordinance and the Pharmacy and Poisons Ordinance since 1994 have resulted in the addition of more controlled drugs to the lists. Following the enactment of the Control of Chemicals Ordinance in 1996, the CDS has to perform analysis of and give advice about precursor chemicals used in the manufacture of dangerous drugs and controlled items under the legislation. Since the enactment of the legislation on drink driving in 1995, the FTS has to perform analysis of samples to support its implementation and to commence related research on alcohol pharmacokinetics of the local people. Moreover, the emergence of new designer drugs and poisons in the fields of both controlled drugs and toxicology has exerted great pressure on the D&TG, requiring more frequent inter-sectional monitoring. With his present split duties as a group head and a section head, the SCi/c is unable to get adequately involved in the daily work of all sections under the D&TG and perform careful and timely evaluation of statistical figures and results to identify such trends. The absence of a dedicated and experienced group

head at CC level is therefore hindering further enhancement of the quality of service to clients in meeting new challenges.

### **International Liaison and Consultation**

4. The Government Laboratory actively participates in the United Nations Drugs Control Programme (UNDCP). For a long time the laboratory has been serving as a centre for training advanced UN fellows on drug analysis. Being selected as a validating laboratory under the UNDCP proficiency test programme for the analysis of controlled drugs and drugs of abuse in biological samples, the analytical results produced by the GL (together with a number of validating laboratories) are used as reference standards for vetting results from other laboratories. In addition the Laboratory has recently been nominated to be the reference centre in the Asia Pacific Region, responsible for collating information, solving technical problems, and coordinating efforts in the control of drug abuse. This necessitates frequent liaison, discussion and cooperation with drug analysts and laboratory administrators from countries all over the world, particularly for those in the Asia Pacific Region. The nature of the communication is such that it must be conducted by a person with the requisite position, professional standing and vested authority. At present the AGC/FS is doing much of the job. The proposed CC of the D&TG will be able to provide the AGC/FS with better support in these international liaison and coordination initiatives.

### **Creation of a CC Post**

5. Changes in the D&TG in recent years have resulted in an increased responsibility in the leadership level, interpretative complexity and a broader range of consultative and advisory duties required of a group head that go beyond the responsibility of a SCi/c and which now equate to those already acknowledged for the CC/P&BEG. Equally, the duties of the AGC/FS (as given in Enclosure 3), which have always prevented him from taking more than a supervisory role over the D&TG, have now broadened further giving him even less time to devote to the direct supervision of the Group.

6. The D&TG needs a Group Head who is directly involved in the daily operational management of his group. The appropriateness of a directorate officer heading a group has been well demonstrated since the creation of the CC/P&BEG in 1994. The CC/P&BEG is able to undertake all administrative checking of casework for the group and technical checking of the casework of SCs. This enables the SCs of the Group to undertake important cases, often of high public profile, themselves. Such technical leadership is very important in the operation of a section in that it draws on the right levels of experience and helps to broaden the skills and experience of more junior officers by actual demonstration. Since the CC/P&BEG is already heavily committed in the operations of his own Group, he has no spare capacity to help relieve the pressure in D&TG by taking up their administrative checking work.

7. Over the years, many measures have been taken internally in the D&TG to improve casework throughput, including critical reviews of casework procedures, increasing staffing establishment at certain levels and revising the operational structure of the sections. The establishment of professional/technical staff has increased from 47 in 1993 to 56 in 1998 whereas the number of sections has expanded from three to five correspondingly. On the other hand, continued efforts have been made to extend the use of computer systems, automation and advanced instruments in the D&TG. Particularly, in the CDS, efficiency in casework analysis has been greatly enhanced with the introduction of semi-automatic apparatus which, equipped with computers and auto-samplers, can conduct analysis round the clock for the identification and quantitative analysis of drugs. However, such efforts have only been partly fruitful in that they have shifted the pressure to the senior professional level where a bottleneck gradually develops. As a long-term solution to the problem, we propose the creation of one permanent post of CC (D1) to head the D&TG, offset by the deletion of two Chemist posts. No staff redundancy would arise from the proposal.

8. The job description of the proposed CC post is at Enclosure 4 and the revised job description of the AGD/FS is at Enclosure 5. The proposed organisation chart for the FSD is at Enclosure 6.

### Financial Implications

9. The proposal will generate savings in terms of notional annual salary cost at mid-point and a net reduction in the overall establishment of the GL -

		\$	No. of Post
	<i>New permanent post</i>		
	Chemist Chemist	1,213,200	1
<i>Less</i>	<i>Permanent posts deleted</i>		
	Chemist	(1,320,000)	(2)
		<hr/>	<hr/>
	Net savings	(106,800)	(1)

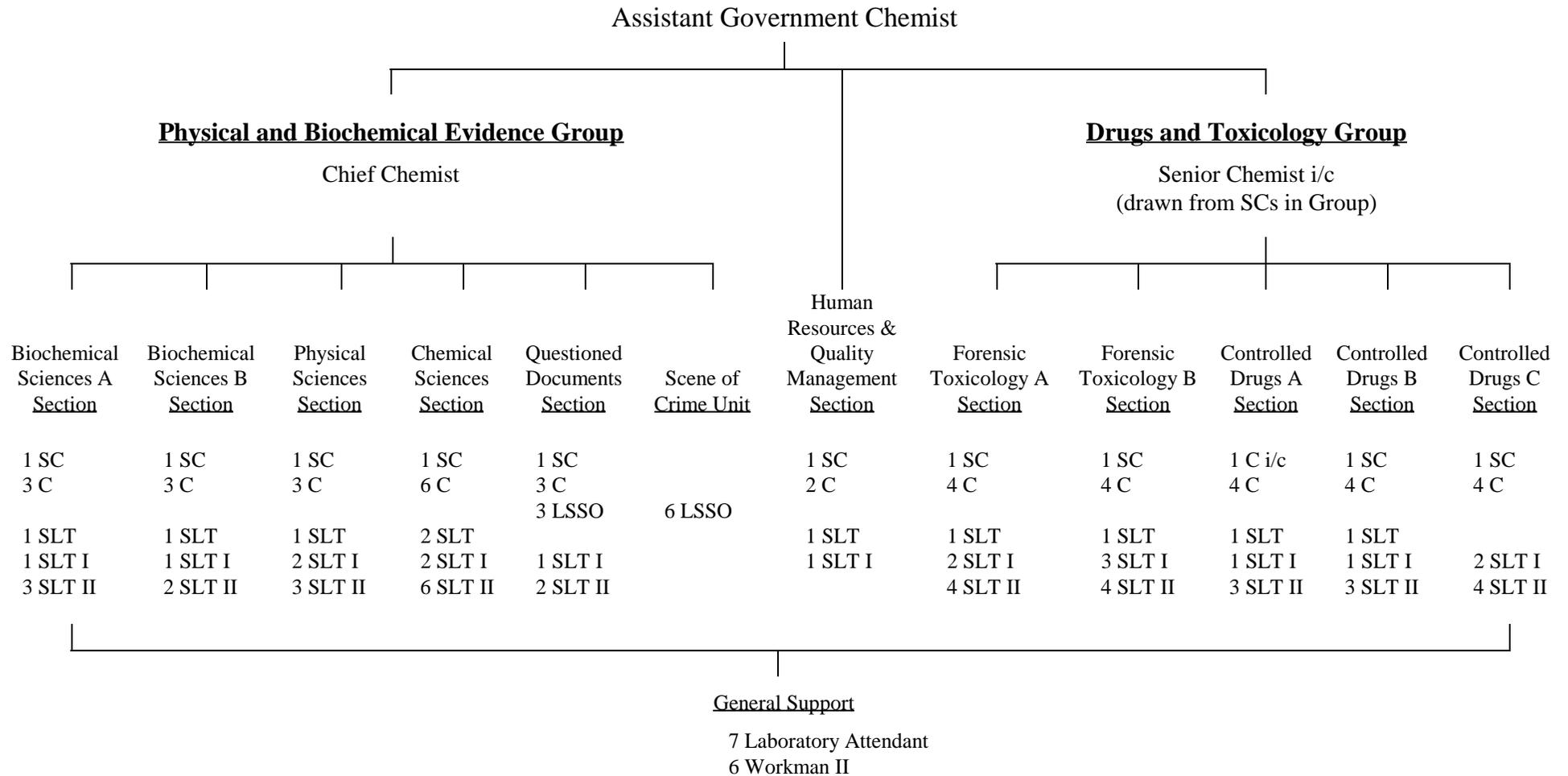
In terms of full staff cost, including salaries and staff on-costs, there will also be a net savings of \$69,732.

### Timing for Creation

10. Subject to the Panel's view, the proposal is planned to be submitted to the Establishment Sub-Committee at its meeting on 23 February 2000.

Government Laboratory  
January 2000

**Organisation Chart of Forensic Science Division**



Legend:

SC - Senior Chemist

C - Chemist

LSSO - Laboratory Specialist Services Officer

SLT - Science Laboratory Technologist

SLT I - Science Laboratory Technician I

SLT II - Science Laboratory Technician II

### Increase in Workload of the Drugs and Toxicology Group

		1993	1994	1995	1996	1997	1998	% increase
<b>Forensic Toxicology Section</b>								
Establishment		19	19	19	23#	24	25##	31
<b>Analytical Toxicology</b>	No of cases	2083	2256	2410	2690	2721	2943	41
Achievement (in working days) (Target=80% cases completed within 33 working days)		51	55	72*	80	88	59	
<b>Drink Driving</b>	No of cases	N/A	N/A	11	129	164	175	1490
Achievement (in working days) (Target=80% cases completed within 11 working days)		N/A	N/A	N/A	9	9	9	
<b>Controlled Drugs Section</b>								
Establishment		28	30	30	31	32	31	11
<b>Routine Drug Analysis</b>	No of cases	9119	13215	13598	14161	11212	9436	3.5
Achievement (in working days) (Target=80% cases completed within 11 working days)		11	10	21*	32	25	19	
<b>Complex Drug Analysis</b>	No of major seizure/'factory' cases	127	169	144	204	138	136	7.0
Achievement (in working days) (Target=80% cases completed within 44 working days)		69	50	68*	75	76	66	
<b>Total number of cases</b>		<b>11329</b>	<b>15640</b>	<b>16152</b>	<b>17055</b>	<b>14071</b>	<b>12515</b>	<b>10</b>

Note:

\* ICAC recommendations for working practice (i.e. requirement to have two officers working side by side during physical examinations of dangerous drugs) and ASCLD rules were introduced in July 1995.

# includes two staff for Drink Driving unit established in December 1995.

## includes one SC transferred from CDS.

### **Job Description of Assistant Government Chemist/Forensic Science**

Responsible to the Government Chemist for the day-to-day administration and assurance of output quality of all activities undertaken by staff and sections of the Forensic Science Division as well as the Human Resources and Quality Management Section.

#### **Specified Duties and Responsibilities**

1. Assist Government Chemist in formulation of general and specific policy objectives, priority management and future plans for the Forensic Science Division in particular, and overall development of the Government Laboratory in general, with the goal of achieving a comprehensive forensic investigative and analytical service which is unbiased, accurate and efficient.
2. Responsible for administrative management of the Forensic Science Division in terms of personnel and resources-
  - (a) Responsibility for coordination of work, staff deployment, information systems, assessment of accommodation needs, staff and equipment requirements of all activities conducted by the Division; and
  - (b) Allocation and monitoring of divisional resource funding (staff, capital equipment, recurrent expenditure) according to defined objectives, priorities and operational policies, and taking responsibility for such allocations producing value for money.
3. Take overall policy role for the assurance of a quality service by all specialist activities of the Government Laboratory through the Human Resources and Quality Management Section, distancing this vital function from routine operational management.
4. Take overall responsibility for all specialist services of the Division and be spokesman for those activities when public interest demands or in response to enquiries from other Government Departments.
5. To supervise the work of the Chief Chemist (Physical and Biochemical Evidence Group) to ensure efficient operation of the Group.
6. To take responsibility for the day-to-day operational management of the Drugs and Toxicology Group.

7. To be the final arbiter of technical reports issued by the Division; to be responsible for final (administrative) checking of casework reports of senior chemists of the Division.
8. To plan long term training strategy and career paths for professional and technical staff to ensure proficiency as analytical chemists and expert witnesses.
9. Assist in framing legal schedules in relation to activities of the Division and to initiate review when indicated by laboratory statistics or intelligence.
10. Represent the Government Chemist on committees or at meetings pertaining to Forensic Science matters, and participate on intra-laboratory promotion/ professional recruitment boards.
11. Liaise with Government Departments, private sector, and international agencies for consultative and advisory purposes on forensic matters, to raise the standards and promote the reputation and practice of forensic science in Hong Kong.
12. Act for Government Chemist when required.

**Proposed Job Description of Chief Chemist (Drugs and Toxicology Group)**

Responsible to Assistant Government Chemist/Forensic Science for the day-to-day operations of the Drugs and Toxicology Group which comprises five specialist sections, namely, Controlled Drugs A, B & C and Forensic Toxicology A & B.

**Specified Duties and Responsibilities**

1. To be responsible for the direct supervision of four senior chemists and to ensure the provision and maintenance of efficient and effective laboratory services to clients by training, periodic inspection, introduction of improvements where necessary and continuous review of performance and adequacy in all activities of the Group.
2. To make recommendations to the Division Head, and advise and assist in the development and formulation of policies, objectives, and priorities in relation to those scientific disciplines that come within the ambit of the Group.
3. To be responsible for controlling the budget, planning operations, monitoring and controlling supplies within the Group.
4. To participate in the peer checking system for casework conducted in the Group according to the requirements of the Division's accrediting body (ASCLD/LAB). In particular, to perform all administrative level checking of reports issued by chemists of the Group.
5. To conduct case conferences for major split cases (i.e. cases involving scientific analysis by two or more Sections) to ensure correct division of effort for maximum scientific value.
6. To co-ordinate instrumentation usage and other resources within all sections of the Group to ensure maximum efficiency of use, purpose and cost effectiveness.
7. To organise and lead the scientific research and development work of the Group and to plan and develop projects to meet client's special needs.
8. To represent the Assistant Government Chemist/Forensic Science as spokesman for activities undertaken by the Drugs and Toxicology Group.
9. To act for the Assistant Government Chemist/Forensic Science when required.

## **Revised Job Description of Assistant Government Chemist/Forensic Science**

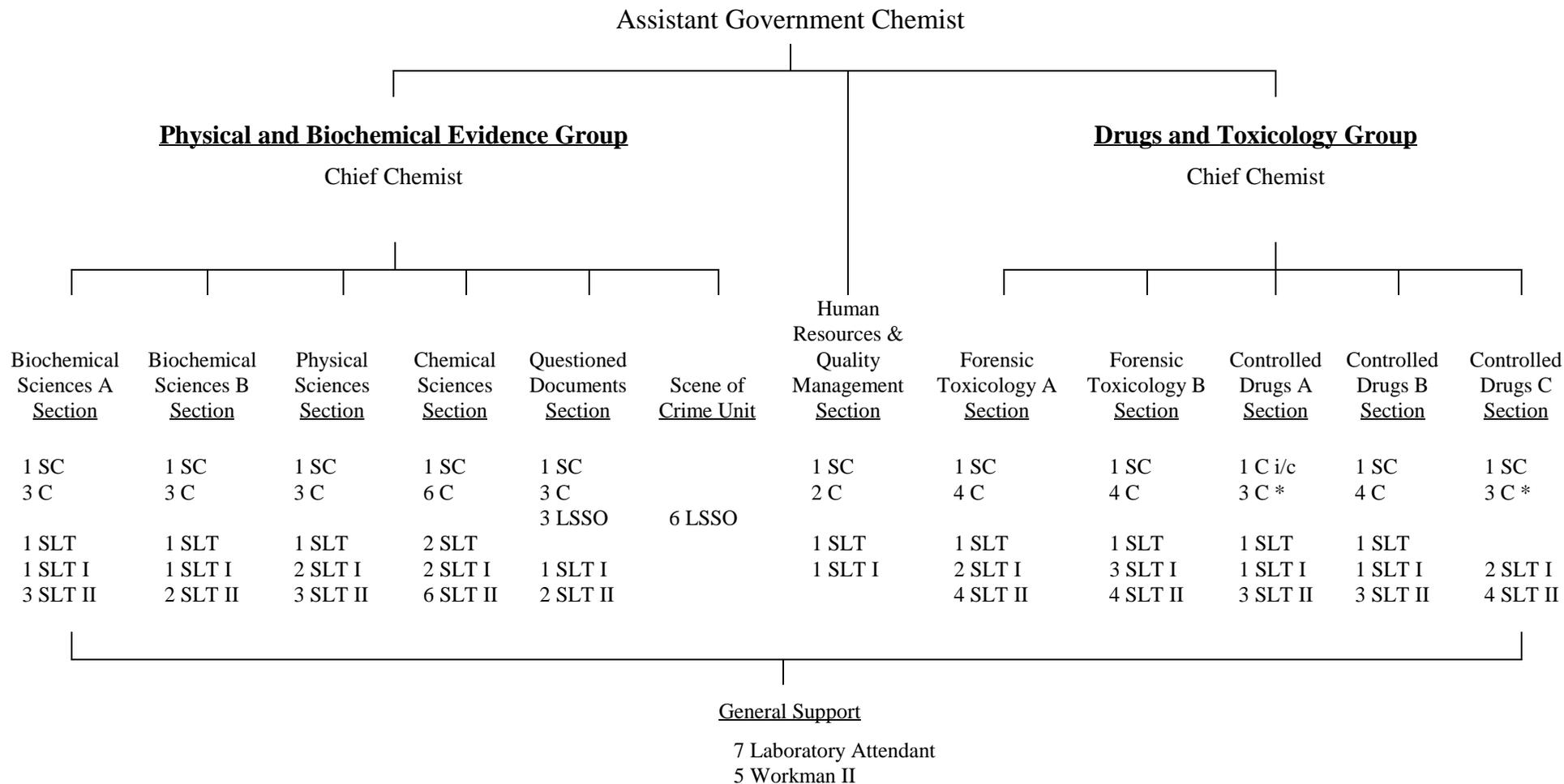
Responsible to the Government Chemist for the day-to-day administration and assurance of output quality of all activities undertaken by staff and sections of the Forensic Science Division as well as the Human Resources and Quality Management Section.

### **Specified Duties and Responsibilities**

1. Assist Government Chemist in formulation of general and specific policy objectives, priority management and future plans for the Forensic Science Division in particular, and overall development of the Government Laboratory in general, with the goal of achieving a comprehensive forensic investigative and analytical service which is unbiased, accurate and efficient.
2. Responsible for administrative management of the Forensic Science Division in terms of personnel and resources-
  - (a) Responsibility for coordination of work, staff deployment, information systems, assessment of accommodation needs, staff and equipment requirements of all activities conducted by the Division; and
  - (b) Allocation and monitoring of divisional resource funding (staff, capital equipment, recurrent expenditure) according to defined objectives, priorities and operational policies, and taking responsibility for such allocations producing value for money.
3. Take overall policy role for the assurance of a quality service by all specialist activities of the Government Laboratory through the Human Resources and Quality Assurance Section, distancing this vital function from routine operational management.
4. Take overall responsibility for all specialist services of the Division and be spokesman for those activities when public interest demands or in response to enquiries from other Government Departments.
5. To supervise the work of the Chief Chemist (Physical and Biochemical Evidence Group) to ensure efficient operation of the Group.
6. To supervise the work of the Chief Chemist (Drugs and Toxicology Group) to ensure efficient operation of the Group.

7. To be the final arbiter of technical reports issued by the Division; to be responsible for final (administrative) checking of casework reports of senior chemists of the Division.
8. To plan long term training strategy and career paths for professional and technical staff to ensure proficiency as analytical chemists and expert witnesses.
9. Assist in framing legal schedules in relation to activities of the Division and to initiate review when laboratory statistics or intelligence information indicates review is necessary.
10. Represent the Government Chemist on committees or at meetings pertaining to Forensic Science matters, and participate on intra-laboratory promotion/ professional recruitment boards.
11. Liaise with Government Departments, private sector, and international agencies for consultative and advisory purposes on forensic matters, to raise the standards and promote the reputation and practice of forensic science in Hong Kong.
12. Act for Government Chemist when required.

## Proposed Organisation Chart of Forensic Science Division



Legend:

□ Proposed new Chief Chemist post

\* One Chemist post deleted

SC - Senior Chemist

C - Chemist

LSSO - Laboratory Specialist Services Officer

SLT - Science Laboratory Technologist

SLT I - Science Laboratory Technician I

SLT II - Science Laboratory Technician II