

Environmental Report 2012



Government Laboratory

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Foreword

I am delighted to present the Environmental Report 2012 of the Government Laboratory. This report summarized the environmental performance and reviewed issues related to our Environmental Management System in the Year 2012.



Environmental protection has long been a major policy area of the Hong Kong Special Administrative Region Government. The Laboratory, one of the Government's departments, is obligated to help implement the environmental policy agenda laid out by the Chief Executive. On the other hand, we appreciated that it could also contribute to the "green" living environment for the Hong Kong people.

As in the past, the Laboratory always strives for continuous improvement in the environmental performance and minimizing the impact of its operation on the environment. Further, the Laboratory fully committed to continual saving of resources and enhancing the awareness on environmental protection of the staff.

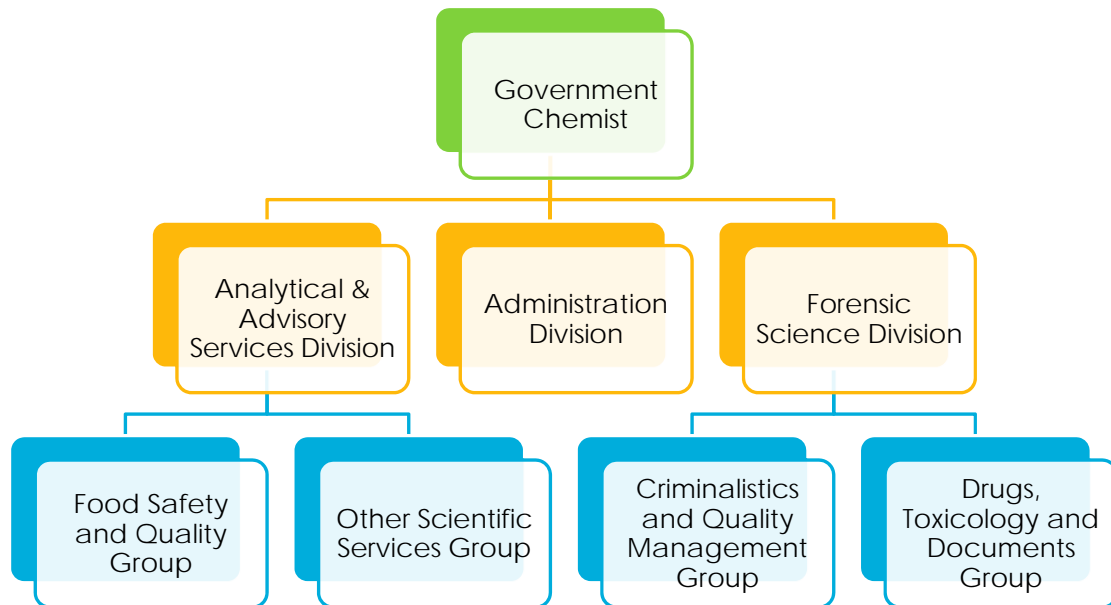
With the concerted effort made by the public and the government, I am confident that we could achieve a better living environment in Hong Kong.

Dr. Chau-ming Lau, JP
Government Chemist
May 2013



Our Laboratory

Government Laboratory was established to provide analytical, investigatory and advisory services to support departments and bureaux of the HKSAR Government in law enforcement, public health and safety, environmental protection, government revenue, consumers' interests and implementation of government policies. Similar services are also provided for other statutory bodies. The Laboratory is headed by the Government Chemist and the organization of the Laboratory is shown as below:

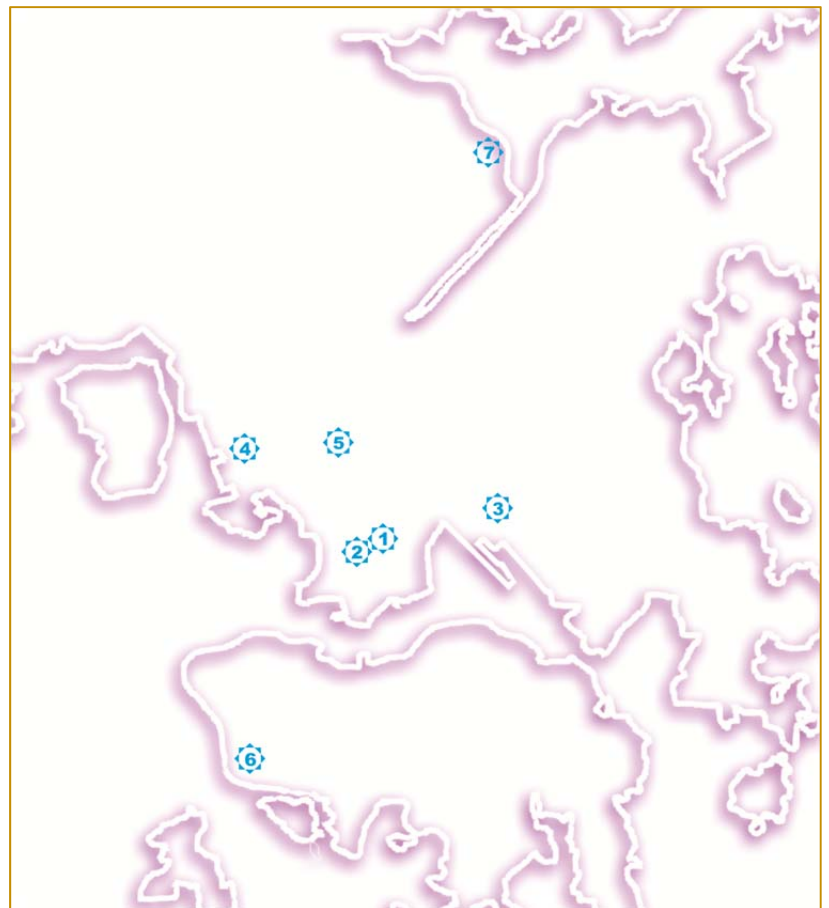


Establishment & Office Location

As at March 2013, the Government Laboratory has an establishment of 487 staff, comprising 7 directorate-grade, 446 non-directorate-grade and 34 non-civil service contract staff members. The actual expenditure for 2012-2013 was \$380 million. The Laboratory consisting of 27 Sections operating across seven locations in Hong Kong.



- 1) Headquarter, Homantin Government Offices, Chung Hau Street, Kowloon;



- 2) King's Park Meteorological Station, King's Park Road, Kowloon;
- 3) Public Works Central Laboratory Building, Cheung Yip Street, Kowloon Bay.
- 4) Lai Chi Kok Government Offices, Lai Wan Road, Lai Chi Kok;
- 5) The Public Health Laboratory Centre, Nam Cheong Street, Shek Kip Mei;
- 6) Food Safety Laboratory, Victoria Road, Pokfulam.
- 7) Biotech Centre, Hong Kong Science Park, Shatin.



Environmental Policy

Government Laboratory is committed to managing environmental matters as an integral part of its activities. It is our policy to ensure environmental integrity of all processes and facilities at all times and at all places. We do so by adhering to the four principles of our environmental policies:

Compliance

- We comply with all applicable environmental laws and regulations. To ensure that the waste generated during its operation is in compliance with regulatory requirements, the Laboratory has implemented a programme to monitor the level of pollutants in the air emitted and effluent discharged from the Laboratory.

Prevention

- We implement management system and procedures designed to prevent activities and / or conditions that pose a threat to the environment. There are established procedures for managing chemical waste disposal and handling of environmental emergencies.

Continual Improvement

- We continually seek opportunities to improve our adherence to these principles. All the Sections in the Laboratory have been encouraged to set up environmental objectives and targets relevant to their operations. Sustained efforts have been made to reduce the consumption of chemicals and / or the release of harmful substances to the environment.

Communication

- We communicate in the Laboratory's annual report our commitment to environmental quality to our staff and clients. Training in safety and environmental operation were given to new recruits. In addition, continuous training on handling environmental emergencies was provided regularly.

Management System

Staff Responsibility

The Laboratory's Environment, Safety and Security Committee (LESSC) is responsible for deciding the environmental policy, overseeing its implementation and monitoring environmental performance. The Committee is under the direction of a directorate-grade officer and meets quarterly. It comprises officers appointed by the Government Chemist and staff representatives.

Section Heads and the Departmental Secretary are assigned to be the Laboratory's Environment, Safety and Security Inspectors, who are responsible for ensuring the compliance with the established environmental policy, guidelines and measures on environmental matters by all staff.

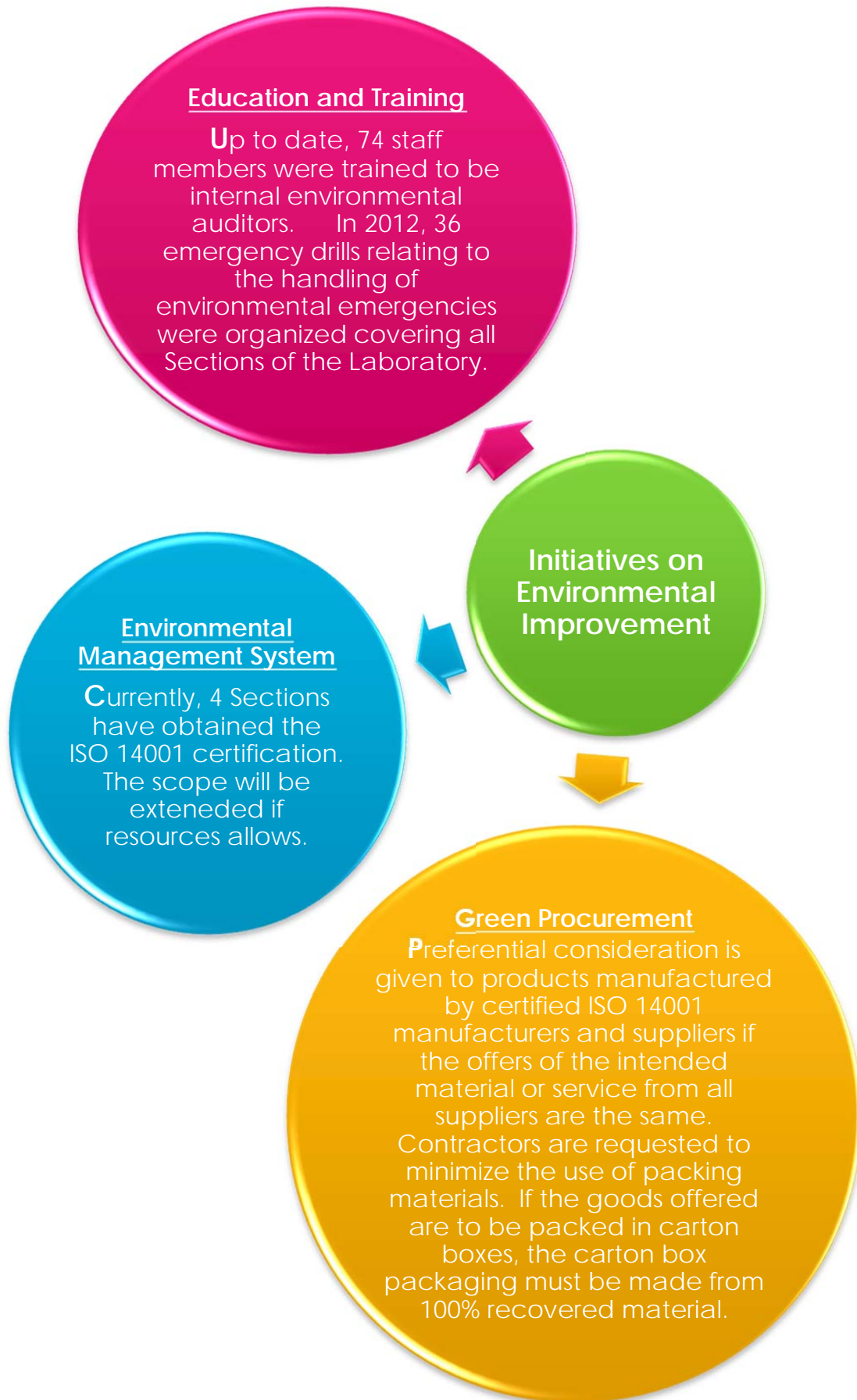
An Environmental Management System Working Group (EMSWG) was established to look after environmental matters and oversee the implementation of international environmental management standard ISO 14001 in the Environmental Chemistry A & B, Residues and Trace Elements Sections. The EMSWG is under the leadership of the Environmental Manager and comprises representatives from the four Sections and the Quality Management Section.

Education and Training

Training in safety and environmental operation were given to new recruits, which included the general laboratory safety practices, handling of chemicals and equipment, and procedures for handling chemical spills. In addition, training on handling environmental emergencies like handling of chemical spills to minimize contamination to the environment was provided regularly.

Regular Environmental Audits

The annual internal audit was conducted in December 2012 for the Environmental Chemistry A & B Sections, the Trace Elements Section and the Residues Section. In addition, the Hong Kong Quality Assurance Agency (HKQAA) conducted external audits for these four Sections in March 2013. These audits served to verify that the environmental policy and relevant operating procedures are implemented effectively.



Achievements and Progress

The Laboratory has set up objectives, targets and programmes for environmental protection. The environmental programmes that were implemented and in progress in the year 2012-2013 are shown below:

- Modification of extraction method for the determination of perfluorinated compounds in biota samples resulted in reduction of electricity consumption in sample preparation. The programme has been completed.

Reduce the
Consumption
of Electricity



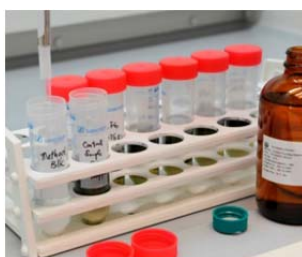
- To assess the possibility of replacing existing disposable plasticwares with bio-degradable plasticwares. The programme is in progress.

Minimize the
Generation of
Plastic Waste



- Reduction of Karl Fischer reagent was achieved by adopting another test method for determination of water content of consumer products. The programme has been completed.

Reduce the
Use of
Chemicals



Resources Consumption

The LESSC of the Laboratory prepared the environmental guidelines and frequently reminded the staff to observe the green housekeeping measures stipulated in the guidelines. In this connection, the consumption of electricity, paper and envelope were monitored annually as environmental performance indicators. Figures for year 2011 and 2012 are given below for reference. As noticed, both the paper and envelope consumptions have dropped in 2012. However, the slightly increase in the electricity consumption[†] was mainly attributed to increase in workload of food testing in the year such as overtime work for handling outbreak samples.

Resource	2011	2012
Electricity (10 ³ kWh)	12334	12675
Paper (kg)	2718	2504
Envelope (unit)	6156	5947

[†] Electricity consumption for the whole Homantin Government Offices which includes the Highways Department and the Government Laboratory.

Chemical Waste

According to the ISO 14001 Environmental Management System, the Laboratory required to provide measures to monitor waste generation to our environment. Therefore, the level of pollutants in the effluent discharge and air emission were monitored in order to ensure the compliance with relevant regulatory limits. Chemical wastes generated in the Laboratory were collected for treatment by an authorized agent. The amount of chemical waste generated in 2011 and 2012 are summarized below for reference.

Chemical Waste Generation	2011	2012
Spent acid (L)	5674	5849
Spent alkali (L)	69	46
Spent non-halogenated organic solvent (L)	2649	2933
Spent halogenated organic solvent (L)	1686	1383

In 2012, the total organic solvent and alkali waste generation had been decreased. However, there was about 3 % increase in acid waste which was mainly due to the high test demand in metal analysis from the client departments.

Way Forward

In pursuit of continuous improvement in its environmental performance, the Laboratory constantly reviews its operation to ensure the established environmental guidelines and procedures are fully implemented. Further, Sections concerned continue to initiate environment objectives and programmes for activities under their purview.

It is our commitment to continue conserving energy and saving consumables, the Laboratory will keep liaison with the Electrical & Mechanical Services Department (EMSD) and the Architectural Services Department (ASD) to seek new initiatives and formulate effective energy management programmes. For instance, automatic sensors controlling the lighting system at the area with low activities had been installed in some laboratory areas and this scheme will be extended to cover other laboratory areas in the coming year as the results were promising.

Due to the effectiveness of environmental policy and measures, the consumption of paper in the Laboratory was reduced about 8%. Besides, staff of the Laboratory was reminded regularly to observe the guidelines on the green measures. In our daily operation, hard copies of quality document involved in the laboratory operation and instrument maintenance has been replaced electronically as far as practicable.

Over the year, the Laboratory successfully minimizes the use of chemicals and generation of chemical waste by modification of operation procedures. In order to sustain a high standard of environmental performance, the Laboratory will make every endeavour to achieve a better living environment in Hong Kong.



Feedback and Enquiries

Please direct any feedback and comments on this Report to the Departmental Secretary of Government Laboratory.

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