

July 2008  
For information

**LEGISLATIVE COUNCIL  
PANEL ON ENVIRONMENTAL AFFAIRS**

**Review on Implementation of the  
Air Pollution Control (Volatile Organic Compounds) Regulation**

**Purpose**

In response to Members' request when scrutinizing the Air Pollution Control (Volatile Organic Compounds) Regulation in early 2007, we conducted a review on implementation of the Regulation. This paper reports the findings of the review.

**Background**

2. As part of the comprehensive programme to improve air quality and to achieve 55% emission reduction of volatile organic compounds (VOC) in 2010 (with 1997 as the base year), the Government has implemented the Air Pollution Control (Volatile Organic Compounds) Regulation (the Regulation) to control the contents of VOC in paints, printing inks and selected consumer products. The Regulation came into effect on 1 April 2007.

3. The Subcommittee set up by the House Committee to scrutinize the proposed Regulation has requested the Government to review the following, within one year after the Regulation has come into operation:

- (a) the adequacy of the resources for enforcement of the Regulation;
- (b) the need to impose liability on retailers; and
- (c) the appropriateness of the VOC limit for flat coatings.

4. On 14 March 2007, the Legislative Council carried the motion moved by the Hon Audrey EU, "that this Council notes the Air Pollution Control (Volatile Organic Compounds) Regulation which was published in the Gazette as Legal Notice No. 20 of 2007 and laid on the table of the Legislative Council

on 28 February 2007.” We have submitted a progress report in July 2007 which indicated that a review would be conducted accordingly.

## **Review Findings**

### Adequacy of the resources for enforcement of the Regulation

5. The Government had earmarked \$2.7 million per year for a dedicated team to enforce the Regulation, and the Government Laboratory would set aside \$3.1 million for acquiring the testing equipment for testing of about 500 samples each year. Members were concerned that given the wide range of products covered by the Regulation, the inspection number would be too small as opposed to the quantities of the products imported each year, and the resource employed might not be able to ensure all the regulated products would comply with the requirements of the Regulation.

6. EPD has formed a dedicated team to enforce the Regulation since its implementation on 1 April 2007. The enforcement work of the team mainly includes inspections to premises of importers / local manufacturers and sales outlets, collecting random samples of regulated products for testing to verify compliance and taking prosecution action against non-compliance.

7. A total of 40 types of regulated products have already been subject to control under the Regulation by phases since 1 April 2007. By the end of April 2008, more than 380 inspections were conducted to all major retail outlets comprising chain-stores, large supermarkets and other specialized retail shops. More than 560 samples of common and dominant brands of regulated products which were displayed at these major retail outlets were collected for compliance testing. Among these inspections so far, we only found one sample which could not meet the requirements of the Regulation. Discussions with the relevant stakeholders also revealed that they were aware of the Regulation and most of them were confident in complying with the regulatory requirements. We therefore consider that the level of enforcement work is adequate to achieve the enforcement targets and maintain adequate deterrent effect.

8. Based on enforcement experience gained so far, we consider that the enforcement team has to be well-trained with specialized knowledge and skills in VOC control in the medium to longer term. As such, it would be necessary to regularize the current deployment of resources to enforce the legislation. Therefore, we plan to set up a dedicated permanent team comprising ten EPD

staff for the enforcement work and management of service contracts for testing and monitoring, which would require an additional resource of \$1.7 million annually.

#### The need to impose liability on retailers

9. Members were concerned that retailers if not held liable for selling non-compliant VOC products, there might be some unscrupulous retailers who might smuggle non-compliant products into Hong Kong and sell them at low prices thereby creating unfair competition to their law-abiding counterparts. Members requested that consideration should be given to holding retailers liable if they knowingly sell non-compliant products.

10. Up to end of April 2008, we have conducted more than 380 inspections to retail outlets and collected samples for analysis. So far there was no evidence of smuggling of non-compliant products for sale at the retail level, nor retailers knowingly selling illegal products. There were two suspected cases of non-compliance and the retailers were cooperative to provide information for the enforcement staff to trace the importer. Therefore, it is considered not necessary to impose liability on retailers at present. We will continue to monitor and review the situation.

#### The appropriateness of the VOC limit for flat coatings

11. Members were of the view that there should be room for further tightening of the prescribed VOC limit for flat coatings as water-based flat coatings emit much less VOC as compared to their oil-based counterparts. They requested the Administration to consider reviewing the relevant VOC limits, taking into account the availability of alternative products in the market.

12. It is to be noted that the current limit of 50g/L is applicable to both solvent-based and water-based coatings. In practice, it is practically not feasible for solvent-based (or oil-based) flat coatings to comply with this limit. The limit therefore requires the compliant coatings to be water-based. We have reviewed the current standards for flat coatings after the Regulation has taken effect, and a comparison of Hong Kong and overseas limits for flat coatings is given in the Appendix. Since up to now the Hong Kong current limit of 50g/L is still the most stringent limit among advanced countries, further tightening of the VOC limit is not considered necessary.

## **Advice Sought**

13. We will continue to monitor closely the situation to ensure that the Regulation is effectively enforced to help achieving the emission reduction target in 2010.

14. Members are requested to note the review findings summarised in paragraphs 5 to 12 above.

**Environmental Protection Department**  
**July 2008**

**Comparison of Hong Kong and Overseas VOC Limits on Flat Coatings**

| Jurisdiction  | VOC Limit (g/L)  |
|---|--|
| Hong Kong   | 50 <sup>[1]</sup><br>(effective from 1.1.2009)   |
| United States   | 250 <sup>[1]</sup>   |
| California  | 100 <sup>[1][2]</sup>  |
| South Coast Air Quality Management District of California | 100 <sup>[1]</sup><br>(effective before 1.7.2008)<br><br>50 <sup>[1]</sup><br>(effective from 1.7.2008)  |
| Canada  | 100 <sup>[1]</sup><br>(proposed standard<br>to be effective in 2009)   |
| European Union  | about 164 to 188 (water-based)<br>about 400 (solvent-based) <sup>[3]</sup><br><br>about 75 to 119 <sup>[1][4]</sup><br>(effective from 1.1.2010)     |
| Mainland China  | 550-750 (solvent-based)<br><br>200 (water-based)<br>(for interior wall coatings)<br>150 <sup>[5]</sup> (water-based)<br>(for exterior wall coatings) |

<sup>[1]</sup> Applicable to both water-based and solvent-based coatings.

<sup>[2]</sup> Suggested standard for implementation by individual air quality management districts.

<sup>[3]</sup> 75 g/L (water-based) and 400 g/L (solvent-based) based on EU's testing method, which are estimated to be equivalent to 164 to 188 g/L (water-based) and 400 g/L (solvent-based) respectively using the prescribed testing method in the Regulation.

<sup>[4]</sup> 30g/L for both water- and solvent-based coatings based on EU's testing method, which is estimated to be equivalent to 75 to 119 g/L using the prescribed testing method in the Regulation.

<sup>[5]</sup> Not a mandatory standard.