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(For advice)

Proposed Construction Dust Regulation

1. INTRODUCTION

1.1 High dust (total suspended particulates) levels in the territory as recorded by the monitoring stations operated by the Environmental Protection Department (EPD) have become a priority concern due to the damaging effects on our health and well-being. With further economic growth and development in our infrastructure, the dust pollution situation will further worsen if the problem is allowed to go on unregulated.

1.2 Chemical analysis of the collected dust samples indicates that a significant portion of the dust comes from construction and earth moving activities, indicating the need to control dust emission from construction works.

1.3 This paper seeks Members' views on a regulatory scheme for controlling dust emissions from construction works. Members' views will be sought again when the proposed regulation has been drafted.

2. BACKGROUND

2.1 The existing Air Pollution Control Ordinance empowers the Director of Environmental Protection to serve air pollution abatement notices on owners of premises or persons carrying out a polluting process causing air pollution. This reactive arrangement is very ineffective in controlling construction dust because it deals with the situation only after a problem has been created, and the nature of the problem is such that it usually takes at least a few months before the problem can be rectified. Furthermore, this approach does nothing to deal with the many construction dust sources which are not subject of complaint.

2.2 It is considered desirable to take a proactive approach in dealing with construction dust emissions, as indicated in the Second Review of the 1989 White Paper on Pollution in Hong Kong. Following considerable consultation with the many parties involved, the following regulatory scheme is now proposed.

3. OUTLINE SCHEME OF CONTROL

3.1 Regulatory control through a two-tiered system is proposed for the control of construction dust emissions. The occupier of any building, premises or site intended to carry out any construction works will be required to either notify EPD of the intended work (described in more detail in paras. 3.3 and 3.4 below) or to apply to EPD for a permit (paras. 3.5 and 3.6) as appropriate before the work is carried out.

3.2 In order to keep the workload and manpower manageable from an enforcement point of view, certain categories of work will be exempted. Small sites with an area less than 500 square metres, and building renovation works inside a building, which have lower dust emission potential, are to be excluded from the application of the regulation. Works related to emergency situations where human life or building safety is immediately threatened and which cannot be delayed will also be exempted from the regulation.

Notifiable work

3.3 This category of work comprises activities for which dust control measures can be cost-effectively standardized. The occupier of any building, premises or site who intends to carry out such work will be required to notify EPD prior to the commencement of work and to abide by a list of standard dust control measures. This allows the industry to be aware beforehand what measures should be adopted and thus facilitate their planning process; at the same time it enables EPD to know the location and nature of the work so that compliance with the dust control requirements can be monitored.

3.4 The following are proposed to be notifiable works :

- (a) road opening and resurfacing, including utility services works;
- (b) construction of building superstructure;
- (c) building substructure works including piling and capping;
- (d) renovation of the external wall of a building, except paint brushing, patch repairs and roof maintenance works;
- (e) slope stabilization, except slope maintenance work;
- (f) any construction works, not excluded or not controlled as permit works, with any of the following construction activities :
 - (i) stockpiling of dusty materials;
 - (ii) use of vehicles for haulage;
 - (iii) pneumatic or power driven drilling, cutting, and polishing;
 - (iv) material transfer with conveyor system;
 - (v) loading and unloading of dusty materials;
 - (vi) refuse handling;
 - (vii) earth moving.

Permit work

3.5 The other category of work which is more site specific and not readily amenable to standardised control in view of scale, site area, project cost, duration or dust emission potential, is to be classified as permit work. The occupier of any building, premises or sites who intends to carry out such work will be required to apply to EPD for a permit at least 21 days prior to the commencement of work. In contrast to notifiable works, standard conditions cannot be cost-effectively set across the board for permit works. Flexibility will be given to the applicant to propose effective dust control measures tailor-made to suit the particular situation of the specific project. In addition to dust control measures, other conditions such as operating hours, restriction on the use of dusty equipment, or proper siting of equipment may also be imposed.

3.6 The following are proposed to be permit works :

- (a) crushing and associated screening of aggregate outside the scope of mineral works being controlled as specified process under the Air Pollution Control Ordinance;
- (b) concrete batching works outside the scope of cement works being controlled as specified process under the Air Pollution Control Ordinance;
- (c) tunnel works, excluding any part beyond 100 m. from any exit to the open air;
- (d) site formation;
- (e) reclamation;
- (f) demolition of building.

Permit Processing Considerations

3.7 In considering if a permit is to be issued under the proposed regulation, EPD will take into account the achievement and maintenance of Air Quality Objectives, the abatement of air pollution, and the use of reasonably available and practicable control technology.

Variation of Conditions and Suspension and Cancellation of Permit

3.8 EPD may add or vary conditions where circumstances have materially changed since the permit was last processed, or misleading or false information has been supplied. EPD may also revoke a permit if it should not have been issued earlier had true and correct information been supplied at the time of application.

Offence, Enforcement and Appeal

3.9 Fines with enough deterrent effect will be proposed between \$50,000 to \$200,000, and an imprisonment term of 3 to 6 months, depending on the gravity of offence. On contravention, a defence provision is given to cater for the situation where all due diligence has been taken to mitigate against any unforeseeable circumstances such as those which prevail during adverse weather or emergency situations. Appeals on any decision, requirement and specification under the proposed regulation are to be made to the Air Pollution Appeal Board constituted under the Air Pollution Control Ordinance.

Transitional arrangement

3.10 The proposed regulation will not apply to projects which have already commenced work before the operational date of the regulation. This is to avoid any major cost implication on the contractor of the existing works which have not been priced in the tendering process.

4. CONSTRUCTION DUST CONTROL MEASURES

4.1 Construction dust control measures to be imposed on the construction work may include the installation of necessary dust control equipment, hard-paving of main haul roads, wetting and spraying of exposed earth, and proper vehicle usage. In addition, other conditions such as operating hours, restriction on the use of dusty equipment, or proper siting of equipment may be imposed.

Installation of dust control equipment

4.2 Proper dust control equipment can be as simple as an enclosure for a conveyor system, or it may be as sophisticated as a fabric filter dust collector for a concrete batching plant. With proper installation and maintenance of the control equipment, together with the proper siting of the dust generating plants, dust emissions can be minimized.

Hard paving of main haul road

4.3 If haul roads used by trucks are not hard paved, voluminous amounts of dust are generated due to agitation by moving vehicles. In order to mitigate this situation, it is necessary to hard pave and frequently hose down these roads.

Wetting and spraying of exposed earth

4.4 Exposed earth should be frequently water-sprayed to avoid dust blow-off by the wind. Stockpiles of dusty materials or debris should also be dampened before truck loading or transfer operations.

Proper vehicle usage

4.5 Wheel washing facilities should be provided and used by all vehicles leaving construction sites. Vehicles carrying loads should be properly covered.

5. CONSULTATION

5.1 Relevant contractors, developers, their associations, utility companies, and government departments have been consulted. The proposed scheme of control through a two-tiered system, i.e. notifiable work and permit work, was generally supported in principle. Some government departments expressed concerns on the practicability and cost implication of certain dust reducing measures, and on the requirement of making a permit application 21 days prior to the commencement of works, which may delay their work commencement under the contract. Further consultation with them will be made to fine-tune the technical details and the arrangements pertaining to the control mechanism.

6. IMPLEMENTATION

6.1 Due to the limited manpower resources of EPD, the proposed regulation will be implemented in stages. The first stage of implementation, which will cover notifiable works, will be implemented shortly after the proposed regulation is gazetted. This will be followed by implementation of the permit works.

7. ECONOMIC IMPLICATIONS

7.1 Since many dust control measures are in the nature of good housekeeping, costs are not large and have generally already been embodied in the project cost. No significant economic impact is therefore expected as a result of the proposed regulation.

8. STAFF IMPLICATIONS

8.1 To implement the proposed regulation, a package of staff comprising 12 officers (1 Senior Environmental Protection Officer, 1 Environmental Protection Officer, and 10 Environmental Inspectorate grade staff) has been provided at an annual recurrent cost of about \$5.8 million.

9. PUBLIC REACTION

9.1 As dust pollution will be reduced through the proposed control scheme at no direct cost to the public, it should be welcomed by them.

10. ADVICE SOUGHT

10.1 Members are requested to consider and advise whether they support the scheme of control outlined above. When the draft regulation has been prepared, it will be submitted for Members' formal advice.