



**A GUIDANCE NOTE ON THE
BEST PRACTICABLE MEANS**

FOR

MINERAL WORKS

(PULVERISED FUEL ASH CLASSIFICATION PLANT)

BPM 11/2 (96)

Environmental Protection Department
Air Policy Group

September 2008

1. INTRODUCTION

- 1.1 This Note is one of a series issued by the Environmental Protection Department to provide guidance on air pollution management for processes specified under Part IV of the Air Pollution Control Ordinance (the Ordinance). It also serves as a guide for the assessment of an application for Specified Process licence under the Ordinance.
- 1.2 It should be understood that this Note sets out the basic requirements for the applicant to provide and maintain the best practicable means for the prevention of emission of air pollutants. The applicant should recognize that whether a licence is granted or refused, and on what conditions, will depend on all the circumstances of an individual application besides the requirements set out in this Note. The Authority may devise specific requirements for individual facility carrying out the specified process.
- 1.3 This Note covers the specified process and associated processes for the below operations under “Minerals Works” as described in Schedule 1 to the Ordinance in which:
- (a) the processing capacity exceeds 5,000 tonnes per annum; and in which-
 - (b) pulverised fuel ash is subjected to any grading by a process giving rise to dust, not being any works described in any other specified process.

2. EMISSION LIMITS

- 2.1 All emissions to air, other than steam or water vapour, shall be colourless, free from persistent mist or fume, and free from droplets.
- 2.2 Emissions from the specified process and associated processes as covered by this Note shall not:
- (a) exceed the concentration limit set out in Annex I.
 - (b) appear to be as dark as or darker than Shade 1 on the Ringelmann Chart when compared in the appropriate manner with the Ringelmann Chart or an approved device.

3. FUEL RESTRICTION

- 3.1 All fuels to be used shall comply with the Air Pollution Control (Fuel Restriction) Regulations in force.

4. CONTROL OF EMISSIONS

- 4.1 All sources of air pollutant emissions shall be identified. Appropriate mitigation measures acceptable to the Authority shall be provided to minimize the emission of pollutants and to prevent:
- (a) harm to the environment, adverse effect to the human health or creation of any nuisance situation;
 - (b) threatening the attainment or maintenance of the relevant air quality objectives; and
 - (c) imposing undue constraint on the existing and future development or land use.
- 4.2 Clean energy sources and fuels with proven benefits to air pollution reduction shall be used whenever possible in the relevant specified process and associated operations. The use of electricity or gaseous fuel for process heating or production of goods is always recommended.
- 4.3 Pulverised fuel ash shall be conveyed, processed and stored in a totally enclosed system unless the pulverised fuel ash is adequately conditioned with water or other wetting agent to an extent that fugitive dust emissions arising from the above activities can be avoided.
- 4.4 The locations of air pollutant emission sources shall be agreed by the Authority and determined by mathematical or physical dispersion modelling techniques acceptable to the Authority. The aim is to ensure the emission limits stipulated in Section 2 of this Note can be satisfied.
- 4.5 Written, up-to-date, authorised standard operation and maintenance procedure shall be available to ensure the effective implementation of all air pollution control measures.

5. OPERATION AND MAINTENANCE

- 5.1 Best practicable means requirements include not only the provision of the appliances, but the proper operation and maintenance of equipment, its supervision when in use, and the training and supervision of properly qualified staff.
- 5.2 In general, equipment shall be repaired as soon as practicable. Specific operation and maintenance requirements may be specified for individual equipment.
- 5.3 Malfunction, breakdown or failure of any process or air pollution control equipment that may result in abnormal emission of air pollutants shall be reported to the Authority within 3 working days after the incident.

6. MONITORING REQUIREMENTS

- 6.1 Essential operation parameter(s) which may significantly affect the emission of air pollutants shall be properly monitored.
- 6.2 Source and ambient monitoring, the frequency of which will be determined by the Authority, may be required to demonstrate the emissions are properly controlled.

7. COMMISSIONING

- 7.1 Commissioning trials (*to be witnessed by the Authority whenever appropriate*) shall be conducted to demonstrate the performance and capability of the air pollution measures. A report of the commissioning trial shall be submitted to the Authority within 1 month after completion of the trial.

**ANNEX I CONCENTRATION LIMIT FOR EMISSION FROM MINERALS WORKS -
PULVERISED FUEL ASH CLASSIFICATION PLANT**

I.1 Air pollutant emissions from the subject specified process and associated processes covered by this Note shall not exceed the concentration limit specified below. The air pollutant concentration is expressed at reference conditions of 0°C temperature, 101.325 kPa pressure, and without correction for water vapour content. Introduction of diluted air to achieve the emission concentration limits shall not be permitted.

Air Pollutant	Concentration Limit
Particulates	50 mg/m ³