

---

STATUTORY RULES OF NORTHERN IRELAND

---

**2010 No. 188**

**The Air Quality Standards Regulations (Northern Ireland) 2010**

**PART 2**

**Assessment of ambient air quality**

**CHAPTER 3**

Arsenic, cadmium, nickel, mercury, benzo(a)pyrene and other polycyclic aromatic hydrocarbons

**Assessment thresholds**

**11.**—(1) The Department shall classify each zone according to whether or not the upper and lower assessment thresholds specified in Section 1 of Annex II to Council Directive [2004/107/EC](#) are exceeded in relation to arsenic, cadmium, nickel and benzo(a)pyrene.

(2) The Department shall review the classification of zones in paragraph (1) every five years, and shall do so more frequently than every five years if there are significant changes in the activities which may affect levels of the pollutants referred to in paragraph (1) in ambient air.

(3) When classifying zones in accordance with assessment thresholds, the Department shall comply with Section II of Annex II to Council Directive [2004/107/EC](#).

**Assessment criteria**

**12.**—(1) The Department shall assess concentrations of arsenic, cadmium, nickel and benzo(a)pyrene in ambient air in all zones.

(2) In zones where the levels of arsenic, cadmium, nickel and benzo(a)pyrene are above the upper assessment threshold referred to in regulation 11, measurement is mandatory but may be supplemented by modelling techniques to provide an adequate level of information on ambient air quality.

(3) In zones where the levels of those pollutants are between the upper and lower assessment thresholds referred to in regulation 11, measurement is mandatory but may be supplemented by indicative measurements as referred to in Section I of Annex IV to Council Directive [2004/107/EC](#) or modelling, or both.

(4) In zones where the levels of those pollutants are below the lower assessment thresholds, modelling or objective estimation techniques may be used instead of measurement.

**Data quality objectives**

**13.** When assessing levels of arsenic, cadmium, nickel, benzo(a)pyrene and other polycyclic aromatic hydrocarbons or gaseous mercury, the Department shall apply the data quality objectives and other standards contained in Annex IV to Council Directive [2004/107/EC](#).

### **Location and number of sampling points**

14. The location and number of sampling points for the assessment of arsenic, cadmium, nickel and benzo(a)pyrene shall be determined in accordance with Annex III to Council Directive [2004/107/EC](#).

### **Monitoring of polycyclic aromatic hydrocarbons**

15.—(1) The Department shall monitor concentrations of other relevant polycyclic aromatic hydrocarbons in addition to benzo(a)pyrene as it thinks fit, including at least the following—

- (a) benzo(a)anthracene,
- (b) benzo(b)fluoranthene,
- (c) benzo(j)fluoranthene,
- (d) benzo(k)fluoranthene,
- (e) indeno(1,2,3-cd)pyrene,
- (f) dibenz(a,h)anthracene.

(2) Monitoring sites shall be located together with sampling points for benzo(a)pyrene.

(3) Monitoring sites shall be selected so that geographical variations and long-term trends in the concentrations of polycyclic aromatic hydrocarbons can be identified.

(4) Monitoring sites shall be selected in accordance with the criteria in Sections I to III of Annex III to Council Directive [2004/107/EC](#).

### **Background monitoring**

16.—(1) The Department shall operate background sampling points to provide the indicative measurements of—

- (a) concentrations of—
  - (i) arsenic, cadmium, nickel and benzo(a)pyrene;
  - (ii) the polycyclic aromatic hydrocarbons in paragraph (1) of regulation 15; and
  - (iii) total gaseous mercury.
- (b) total depositions of—
  - (i) arsenic, cadmium, nickel and benzo(a)pyrene within the PM<sub>10</sub> fraction;
  - (ii) the polycyclic aromatic hydrocarbons in paragraph (1) of regulation 15; and
  - (iii) mercury.

(2) For the purposes of paragraph (1) the Department shall ensure that—

- (a) at least one sampling point is installed for every 100,000km<sup>2</sup>; and
- (b) each sampling point is located in accordance with Annex III to Council Directive [2004/107/EC](#).

### **Reference methods for sampling and analysis**

17. Measurements of arsenic, cadmium, mercury, nickel, benzo(a)pyrene and other polycyclic aromatic hydrocarbons in ambient air and disposition of those pollutants shall be made in accordance with the reference measurement methods set out in Annex V to Council Directive [2004/107/EC](#).