
STATUTORY RULES OF NORTHERN IRELAND

2002 No. 357

ENVIRONMENTAL PROTECTION

**The Air Quality Limit Values (Amendment)
Regulations (Northern Ireland) 2002**

Made - - - - *21st November 2002*

Coming into operation *13th December 2002*

The Department of the Environment, being a department designated⁽¹⁾ for the purposes of section 2(2) of the European Communities Act 1972⁽²⁾ in relation to measures relating to the control of pollution in ambient air, in exercise of the powers conferred on it by that section and of every other power enabling it in that behalf, hereby makes the following Regulations:

Citation, commencement and interpretation

1.—(1) These Regulations may be cited as the Air Quality Limit Values (Amendment) Regulations (Northern Ireland) 2002 and shall come into operation on 13th December 2002.

(2) The Interpretation Act (Northern Ireland) 1954⁽³⁾ shall apply to these regulations as it applies to an Act of the Northern Ireland Assembly.

Responsibility for implementation of the Air Framework Directive

2. For the purposes of Article 3 (implementation and responsibilities) of Council Directive [96/62/EC](#) on ambient air quality assessment and management⁽⁴⁾ 'the Air Framework Directive',

- (a) the Department of the Environment shall be the competent authority responsible for—
- (i) assessment of ambient air quality;
 - (ii) approval of measuring devices (methods, equipment, networks and laboratories);
 - (iii) ensuring accuracy of measurement by measuring devices and checking the maintenance of such accuracy by those devices, in particular by internal quality controls carried out in accordance with applicable quality assurance standards, including European standards;
 - (iv) analysis of assessment methods; and

(1) S.I.1988/785

(2) 1972 c. 68

(3) 1954 c. 33(N.I.)

(4) O.J. No. L296, 21.11.96, p. 55

- (v) co-ordination within Northern Ireland of European Community-wide quality assurance programmes organised by the European Commission, save in so far as that co-ordination entails communication with the European Commission;
- (b) where a Northern Ireland Department has functions relevant to the assessment and maintainance of ambient air quality, it shall exercise those functions so as to secure compliance with the requirements of that Directive.

Amendment of the Air Quality Limit Values Regulations (Northern Ireland) 2002

3.—(1) The Air Quality Limit Values Regulations (Northern Ireland) 2002(5) shall be amended in accordance with paragraphs (2) to (11).

(2) In regulation 2(1) (definitions and interpretation), in the definition of “relevant pollutants”, for the words “and lead” there shall be substituted “, lead, benzene and carbon monoxide”.

(3) In regulation 7 (method of assessment of ambient air quality)—

(a) in paragraph (6)—

- (i) in sub-paragraph (b) the word “and” at the end shall be omitted;
- (ii) in sub-paragraph (c) after “PM₁₀” there shall be added a semi-colon;
- (iii) after sub-paragraph (c) there shall be inserted—

“(d) the sampling and analysis of benzene; and

(e) the analysis of carbon monoxide.”.

(b) in paragraph (9) for the words “and oxides of nitrogen” there shall be substituted “, oxides of nitrogen, benzene and carbon monoxide”.

(4) In regulation 11 (public information), after paragraph (3), there shall be inserted the following paragraphs—

“(3A) Information on ambient concentrations of benzene, as an average value over the last 12 months, shall be updated—

- (a) where practicable on a monthly basis;
- (b) in all other cases, as a minimum on a three-monthly basis.

(3B) Information on ambient concentrations of carbon monoxide, as a maximum running average over eight hours, shall be updated—

- (a) where practicable on an hourly basis;
- (b) in all other cases, as a minimum on a daily basis.”.

(5) In Schedule 1 (limit values, margins of tolerance etc.) after Part IV there shall be added—

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“PART V
BENZENE

| | <i>Averaging period</i> | <i>Limit value</i> | <i>Margin of tolerance</i> | <i>Date by which limit value is to be met</i> |
|--|-------------------------|--------------------|---|---|
| Limit value for the protection of human health | Calendar year | 5µg/m ³ | 5µg/m ³ on 13 December 2002, reducing on 1 January 2006 and every 12 months thereafter by 1 µg/m ³ to reach 0 by 1 January 2010 | 1 January 2010 |

PART VI
CARBON MONOXIDE

| | <i>Averaging period</i> | <i>Limit value</i> | <i>Margin of tolerance</i> | <i>Date by which limit value is to be met</i> |
|--|---------------------------|---------------------|--|---|
| Limit value for the protection of human health | Maximum daily 8-hour mean | 10mg/m ³ | 6 mg/m ³ on 13th December 2002, reducing on 1 January 2003 and every 12 months thereafter by 2 mg/m ³ to reach 0 by 1 January 2005 | 1 January 2005”. |

The maximum daily 8-hour mean concentration will be selected by examining 8-hour running averages, calculated from hourly data and updated each hour. Each 8-hour average so calculated will be assigned to the day on which it ends, i.e. the first calculation period for any one day will be the period from 17:00 on the previous day to 01:00 on that day; the last calculation period for any one day will be the period from 16:00 to 24:00 on that day.

(6) In Part I of Schedule 2 (upper and lower assessment thresholds and exceedances) after paragraph (d) there shall be added—

“(e) BENZENE

| | <i>Annual Average</i> |
|----------------------------|---|
| Upper assessment threshold | 70% of limit value (3.5 µg/m ³) |
| Lower assessment threshold | 40% of limit value (2 µg/m ³) |

(f) CARBON MONOXIDE

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| | <i>Eight-hour average</i> |
|----------------------------|--|
| Upper assessment threshold | 70% of limit value (7mg/m ³) |
| Lower assessment threshold | 50% of limit value (5mg/m ³)”. |

(7) In Schedule 3–

(a) for the heading of that Schedule there shall be substituted–

“Location of Sampling Points for the Measurement of Relevant Pollutants in Ambient Air.”;

(b) in Part II in the fourth indent–

(i) after the words “for nitrogen dioxide” there shall be added the words “and carbon monoxide”; and

(ii) for the words “for particulate matter and lead” there shall be substituted “for particulate matter, lead and benzene”.

(8) In Schedule 4 (criteria for determining minimum numbers of sampling points for fixed measurement of concentrations of relevant pollutants in ambient air), in the table in paragraph (a) of Part I after the words “traffic oriented station” there shall be added “. This requirement shall also apply to benzene and carbon monoxide provided that it does not increase the number of sampling points.”.

(9) In Schedule 5 (data-quality objectives) at the end of Part 1 there shall be added–

“The following data-quality objectives, for allowed uncertainty of assessment methods, and of minimum time coverage and of data capture of measurement are provided to guide quality assurance programmes.

| | <i>Benzene</i> | <i>Carbon monoxide</i> |
|---------------------------------------|--|---|
| <i>Fixed measurements</i> | | |
| Uncertainty | 25% | 15% |
| Minimum data capture | 90% | 90% |
| Minimum time coverage | 35% urban background and traffic sites (distributed over the year to be representative of various conditions for climate and traffic) 90% industrial sites | |
| <i>Indicative measurements</i> | | |
| Uncertainty | 30% | 25% |
| Minimum data capture | 90% | 90% |
| Minimum time coverage | 14% (one day’s measurement a week at random, evenly distributed over the year, or 8 weeks evenly distributed over the year) | 14% (one measurement a week at random, evenly distributed over the year, or 8 weeks evenly distributed over the year) |

Modelling

Uncertainty:

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| | <i>Benzene</i> | <i>Carbon monoxide</i> |
|------------------------------------|----------------|------------------------|
| Eight-hour averages | – | 50% |
| Annual averages | 50% | – |
| <i>Objective estimation</i> | | |
| Uncertainty | 100% | 75%”. |

The uncertainty (on a 95% confidence interval) of the assessment methods will be evaluated in accordance with the ‘Guide to the Expression of Uncertainty of Measurements’ (ISO 1993) or the methodology of ISO 5725:1994 or equivalent. The percentages for uncertainty in the above table are given for individual measurements averaged over the period considered by the limit value, for a 95% confidence interval. The uncertainty for the fixed measurements should be interpreted as being applicable in the region of the appropriate limit value.

The uncertainty for modelling and objective estimation is defined as the maximum deviation of the measured and calculated concentration levels, over the period considered, by the limit value, without taking into account the timing of the events.

The requirements for minimum data capture and time coverage do not include losses of data due to the regular calibration of the normal maintenance of the instrumentation.

The Department may allow for random measurements to be made instead of continuous measurements for benzene if the uncertainty, including the uncertainty due to random sampling, meets the quality objective of 25%. Random sampling must be spread evenly over the year.

(10) In Schedule 6–

(a) for the heading of that Schedule there shall be substituted the words–

“Reference Methods for Assessment of Concentrations of Relevant Pollutants.”;

(b) after Part IV there shall be added–

“PART V

REFERENCE METHOD FOR THE SAMPLING AND ANALYSIS OF BENZENE

The reference method for the measurement of benzene will be pumped sampling on a sorbent cartridge followed by gas chromatographic determination.

PART VI

REFERENCE METHOD FOR THE ANALYSIS OF CARBON MONOXIDE

The reference method for the measurement of carbon monoxide will be a method based on the non-dispersive infra-red spectrometric (NDIR) method.”.

Sealed with the Official Seal of the Department of the Environment on 21st November 2002.

L.S.

Judena Goldring
A senior officer of the
Department of the Environment

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EXPLANATORY NOTE

(This note is not part of the Regulations.)

These Regulations are made in implementation of Directive [2000/69/EC](#) of the European Parliament and the Council of 16 November 2000 relating to limit values for benzene and carbon monoxide in ambient air and Council Directive [1996/62/EC](#) on ambient air quality assessment and management. Regulation 2 designates competent authorities for various air quality assessment and management functions required by Directive [1996/62/EC](#).

Regulation 3 amends the Air Quality Limit Values Regulations (Northern Ireland) 2002 ([S.R. 2002/94](#)) which in turn implement Council Directive [96/62/EC](#) on ambient air quality assessment and management 'the Air Framework Directive' and Council Directive [1999/30/EC](#) relating to limit values for sulphur dioxide, nitrogen dioxide and oxides of nitrogen, particulate matter and lead in ambient air, 'the First Air Daughter Directive'.

Regulation 3(9) amends the Air Quality Limit Values Regulations (Northern Ireland) 2002 by adding benzene and carbon monoxide as 'relevant pollutants'; by setting limit values and margins of tolerance for those substances; by determining criteria for location and numbers of sampling points and setting reference methods for the analysis and sampling of benzene and carbon monoxide; and by making consequential amendments.

Copies of the directives may be obtained at <http://europa.eu.int/eur-lex/en/index.html> and from the Stationery Office Ltd., 16 Arthur Street, Belfast, BT1 4GD.