

**2002 No. 3117**

**ENVIRONMENTAL PROTECTION**

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

*Made* - - - - - *16th December 2002*

*Laid before Parliament* *17th December 2002*

*Coming into force* - - *10th January 2003*

The Secretary of State, in exercise of the powers conferred upon her by subsection (2) of section 2 of the European Communities Act 1972<sup>(a)</sup>, being a Minister designated<sup>(b)</sup> for the purpose of that subsection in relation to the control of air pollution, hereby makes the following Regulations:

**Citation and commencement**

1. These Regulations may be cited as the Air Quality Limit Values (Amendment) Regulations 2002 and shall come into force on 10th January 2003.

**Amendment of the Air Quality Limit Values Regulations 2001**

2.—(1) The Air Quality Limit Values Regulations 2001 are amended as follows.

(2) In regulation 2 (definitions)—

(a) in the definition of “relevant pollutants”, for the words “particulate matter and lead” there are substituted the words “particulate matter, lead, benzene and carbon monoxide”; and

(b) the website address appearing in the definition of “zone” is replaced by “<http://www.defra.gov.uk/environment>”.

(3) There is inserted a new regulation 2A—

**“Designation of competent authority**

**2A.** The Secretary of State is designated as the competent authority for the purposes of article 3 (implementation and responsibilities) of Council Directive 96/62/EC on ambient air quality assessment and management<sup>(c)</sup>.”

(4) In regulation 7(6) (reference methods for relevant pollutants)—

(a) at the end of sub-paragraph (b) the word “and” is omitted; and

(b) after sub-paragraph (c) there is added—

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

(e) the analysis of carbon monoxide”.

(5) In regulation 7(9) (measurement of volume of relevant pollutants), for the words “nitrogen dioxide and oxides of nitrogen” there are substituted the words “nitrogen dioxide, oxides of nitrogen, benzene and carbon monoxide”.

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(a) 1972 c. 68.

(b) S.I. 1988/785.

(c) OJ No. L 296, 21.11.96, p. 55.

- (6) In regulation 11(1) (powers to give directions relating to air quality)—
- after the word “management” the word “and” is replaced by a comma; and
  - after the words “lead in ambient air” there are added the words “and of European Parliament and Council Directive 2000/69/EC relating to the limit values for benzene and carbon monoxide in ambient air(a)”.
- (7) After regulation 13(3) (public information) there is added—
- “(3A) Information on ambient concentrations of benzene, as an average value over the last 12 months, shall be updated—
- where practicable, on a monthly basis;
  - 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—
- where practicable, on an hourly basis;
  - in all other cases, as a minimum on a daily basis.”

(8) In Schedule 1 (Limit Values, Margins of Tolerance etc), after the table relating to lead there is added—

“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 <sup>3</sup>	5µg/m <sup>3</sup> reducing on 1 January 2006 and every 12 months thereafter by 1 µg/m <sup>3</sup> to reach 0 µg/m <sup>3</sup> 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 <sup>3</sup>	4 mg/m <sup>3</sup> reducing on 1 January 2004 to 2 mg/m <sup>3</sup> , and to 0 mg/m <sup>3</sup> on 1 January 2005	1 January 2005

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

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(a) OJ No. L313, 13.12.2000, p. 12.

(9) In Part I of Schedule 2 (upper and lower assessment thresholds), after the table relating to lead there is added—

“(e) BENZENE

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

(f) CARBON MONOXIDE

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

”

(10) In the first paragraph of Part II of Schedule 2 (determination of exceedances of upper and lower assessment thresholds), for the words from “An assessment threshold” to the end of that paragraph there are substituted the words—

“An assessment threshold will be deemed to have been exceeded if it has been exceeded during at least three separate years out of the previous five years.”

(11) In Schedule 3 (location of sampling points)—

(a) for the title of that Schedule there is substituted—

“LOCATION OF SAMPLING POINTS FOR THE MEASUREMENT OF RELEVANT POLLUTANTS IN AMBIENT AIR”; and

(b) In Part II (microscale siting), in the fifth indent (location of traffic-oriented samplers)—

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

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

(12) In Schedule 4 (criteria for determining minimum number of sampling points), in column 2 of the table in paragraph (a) of Part I (diffuse sources), after the words “traffic-oriented station” there are added the words “-this requirement shall also apply to benzene and carbon monoxide provided that it does not increase the number of sampling points.”

(13) At the end of Part I of Schedule 5 (data quality objectives) there is added—

“The following data quality objectives, for allowed uncertainty of assessment methods, 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>Benzene</i>	<i>Carbon monoxide</i>
<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)
<i>Modelling</i>		
Uncertainty:		
Eight-hour averages	—	50%
Annual averages	50%	—
Objective estimation		
Uncertainty	100%	75%

The uncertainty (on a 95% confidence interval) of the assessment methods shall be evaluated in accordance with the 'Guide to the Expression of Uncertainty of Measurements' (ISO 1993)(a) or the methodology of ISO 5725:1994(b). 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 or the normal maintenance of the instrumentation.

The Secretary of State 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.”

(14) In Schedule 6 (reference methods for assessment of concentrations)—

(a) for the title of the Schedule there is substituted—

“REFERENCE METHODS FOR ASSESSMENT OF CONCENTRATIONS OF RELEVANT POLLUTANTS”; and

(b) there is added at the end of the Schedule—

#### “PART V

##### **Reference method for the sampling and analysis of benzene**

The reference method for the measurement of benzene will be a pumped sampling method 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 non-dispersive infra-red spectrometric (NDIR) method.”

*Alun Michael*

Minister of State,  
Department for Environment,  
Food and Rural Affairs

16th December 2002

(a) Copies can be obtained from the International Organisation for Standardisation, at [www.iso.ch/iso/en/ISOOnline](http://www.iso.ch/iso/en/ISOOnline).  
(b) Copies can be obtained from the International Organisation for Standardisation, at [www.iso.ch/iso/en/ISOOnline](http://www.iso.ch/iso/en/ISOOnline).

## EXPLANATORY NOTE

*(This note is not part of the Regulations)*

These Regulations are made to implement in England European Parliament and Council Directive 2000/69/EC relating to limit values for benzene and carbon monoxide in ambient air(**a**). They amend the Air Quality Limit Values Regulations 2001(**b**) which in turn implement Council Directive 96/62/EC on ambient air quality assessment and management(**c**) (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(**d**).

The parts of the Air Quality Limit Values Regulations 2001 which these Regulations amend apply only in England.

Regulation 2 amends those Regulations by: adding a new regulation 2A designating the Secretary of State as competent authority for the purposes of the Air Framework Directive; adding benzene and carbon monoxide as “relevant pollutants”; setting limit values and margins of tolerance for those substances; determining criteria for location and numbers of sampling points; setting reference methods for the analysis and sampling of those substances; and making consequential amendments.

Regulation 2(10) amends Schedule 2 to those Regulations to give effect to Commission Decision 2001/744/EC amending Annex V to Council Directive 1999/30/EC relating to the limit values for sulphur dioxide, nitrogen dioxide and oxides of nitrogen, particulate matter and lead in ambient air(**e**).

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(a) OJ No. L313, 13.12.2000, p. 12.  
(b) S.I. 2001/2315.  
(c) OJ No. L 296, 21.11.1996, p. 55.  
(d) OJ No. L163, 29.6.1999, p. 41.  
(e) OJ No. L 278, 23.10.2001, p. 35.





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