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SCOTTISH STATUTORY INSTRUMENTS

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**2002 No. 556**

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

**Amendment of the Air Quality Limit Values (Scotland) Regulations 2001**

2.—(1) The Air Quality Limit Values (Scotland) Regulations 2001<sup>(1)</sup> are amended as follows.

(2) In regulation 2 (definitions)—

- (i) in the definition of “relevant pollutants”, for “and lead;” there is substituted “, lead, benzene and carbon monoxide;”; and
  - (ii) in the definition of “zone”, “which is designated by Scottish Ministers for the purposes of these Regulations and” is omitted.
- (3) After regulation 2 there is added—

**“Designation of competent authority**

**2A.** The Scottish Ministers are 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>(2)</sup>.”.

(4) In regulation 5 (classification of zones), in paragraph (4) between “zone” and “are” there is inserted “over a representative period”.

(5) In regulation 7 (methods of assessment of ambient air quality)—

(a) in paragraph (4)—

- (i) between “5(1)(a)” and “the” there is inserted “in relation to a relevant pollutant”; and
- (ii) “, in respect of a relevant pollutant,” is omitted;

(b) in paragraph (6)—

- (i) at the end of sub-paragraph (b) “and” is omitted;
- (ii) in sub-paragraph (c) for “,” after “PM<sub>10</sub>” there is substituted “,”; and
- (iii) after sub-paragraph (c) there is added—

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

**(e)** the analysis of carbon monoxide;”; and

(c) in paragraph (9) for “and oxides of nitrogen” there is substituted “, oxides of nitrogen, benzene and carbon monoxide”.

(6) In regulation 11 (public information)—

(a) after paragraph (3) there is added—

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

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(1) S.S.I.2001/224.

(2) O.J. No L 296, 21.11.96, p.55.

- (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.”;
- (b) in paragraph (4)(a) for “particular” there is substituted “relevant”; and
- (c) in paragraph (6) for “the map of zones prepared under regulation 2(1) and any revision of it” there is substituted “the map mentioned in the definition of “zone” in regulation 2”.
- (7) In regulation 12(5) before “Directive [80/779/EEC](#) of 15th July 1980” there is inserted “Annex IV to”.
- (8) In Schedule 1 (limit values, margins of tolerance etc.)–
- (a) in Part I (sulphur dioxide) in paragraph 1.1 (limit values for sulphur dioxide), in the table, for the entry in the fourth column (margin of tolerance) opposite item 1. there is substituted–
    - “60•g/m<sup>3</sup> on 19th January 2003, reducing on 1st January of each following year by equal amounts to reach 0•g/m<sup>3</sup> by 1st January 2005”;
  - (b) in Part II (nitrogen dioxide (NO<sub>2</sub>) and oxides of nitrogen (NO<sub>x</sub>)) in paragraph 2.1 (limit values for nitrogen dioxide and oxides of nitrogen), in the table for the entry in the fourth column (margin of tolerance)–
    - (i) opposite item 1. there is substituted–
      - “70•g/m<sup>3</sup> on 19th January 2003, reducing on 1st January of each following year by equal annual amounts to reach 0•g/m<sup>3</sup> by 1st January 2010”;
    - (ii) opposite item 2. there is substituted–
      - “14•g/m<sup>3</sup> on 19th January 2003, reducing on 1st January of each following year by equal amounts to reach 0•g/m<sup>3</sup> by 1st January 2010”;
  - (c) in Part III (particulate matter), in the table, for the entries in the fourth column (margin of tolerance)–
    - (i) opposite item 1. there is substituted–
      - “10•g/m<sup>3</sup> on 19th January 2003, reducing on 1st January of each following year by equal annual amounts to reach 0•g/m<sup>3</sup> by 1st January 2005”;
    - (ii) opposite item 2. there is substituted–
      - “3.2•g/m<sup>3</sup> on 19th January 2003, reducing on 1st January of each following year by equal amounts to reach 0•g/m<sup>3</sup> by 1st January 2005”;
  - (d) in Part IV (lead), in the table, for the entry in the fourth column (margin of tolerance) there is substituted–
    - “0.2•g/m<sup>3</sup> on 19th January 2003, reducing on 1st January of each following year by equal annual amounts to reach 0•g/m<sup>3</sup> by 1st January 2005”;
  - (e) after the table relating to lead there is added–

*Status: This is the original version (as it was originally made). This item of legislation is currently only available in its original format.*

## “PART V

### BENZENE

	<i>Averaging Period</i>	<i>Limit value</i>	<i>Margin of Tolerance(3)</i>	<i>Date by which limit value is to be met</i>
Limit value for the protection of human health	Calendar year	5 •g/m <sup>3</sup>	5•g/m <sup>3</sup> from 19th January 2003 reducing on 1st January 2006 and every 12 months thereafter by 1•g/m <sup>3</sup> to reach 0•g/m <sup>3</sup> by 1st January 2010	1st January 2010

## PART VI

### CARBON MONOXIDE

	<i>Averaging period</i>	<i>Limit value</i>	<i>Margin of Tolerance(4)</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>	4mg/m <sup>3</sup> on 19th January 2003 reducing on 1st January 2004 and every 12 months thereafter by 2mg/m <sup>3</sup> to reach 0mg/m <sup>3</sup> by 1st January 2005	1st January 2005”.

For the purposes of the table above 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.

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

“(e) BENZENE

(3) The margin of tolerance is calculated from the figures in Annex I of European Parliament and Council Directive 2000/69/EC.

(4) The margin of tolerance is calculated from the figures in Annex II of European Parliament and Council Directive 2000/69/EC.

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	<i>Annual Average</i>
Upper assessment threshold	70% of limit value (3.5•g/m <sup>3</sup> )
Lower assessment threshold	40% of limit value (2•g/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 is substituted–

“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, in Part II (microscale siting), in the fifth indent (location of traffic-oriented samplers)–

(a) in the second indent, after “for nitrogen dioxide” there is added “and carbon monoxide”, and

(b) in the third indent, for “and lead” there is substituted “, lead and benzene”.

(12) In Schedule 4, in Part I, in the last entry in column 2 (if concentrations exceed the upper assessment threshold) of the table in paragraph (a), there is added “. This requirement shall also apply to benzene and carbon monoxide provided that it does not increase the number of sampling points.”.

(13) In Schedule 5, in Part I (data-quality objectives) after the final paragraph 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>
<b>Fixed measurements</b>		
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	
<b>Indicative Measurements</b>		
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	14% (one measurement a week at random, evenly distributed

	<i>Benzene</i>	<i>Carbon monoxide</i>
	weeks evenly distributed over the year)	over the year, or 8 weeks evenly distributed over the year)
<b>Modelling</b>		
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)(5) or the methodology of ISO 5725:1994(6). 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 Scottish Ministers 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 after Part IV (reference method for the sampling and measurement of PM<sub>10</sub>) there is added–

## “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 spectromic (NDIR) method.”.

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(5) Copies of these International Standards Organisation publications can be purchased from the British Standards Institution “BSI” sales department either by telephone on 020-8996-9001 or by post from the BSI Standards House, 389 Chiswick High Road, London W4 4AL.

(6) As for footnote (a) above.