

## SCHEDULE 5

Regulation 7(5), (8)

DATA-QUALITY OBJECTIVES AND COMPILATION  
OF RESULTS OF AIR QUALITY ASSESSMENT

## PART I

## DATA-QUALITY OBJECTIVES

The following data-quality objectives for the required accuracy of assessment methods, of minimum time coverage and of data capture of measurement are laid down to guide quality assurance programmes.

	<i>Sulphur dioxide, nitrogen dioxide and oxides of nitrogen</i>	<i>Particulate matter and lead</i>
Continuous measurement		
Accuracy	15%	25%
Minimum data capture	90%	90%
Indicative measurement		
Accuracy	25%	50%
Minimum data capture	90%	90%
Minimum time coverage	14% (One measurement a week at random, evenly distributed over the year, or eight weeks evenly distributed over the year.)	14% (One measurement a week at random, evenly distributed over the year, or eight weeks evenly distributed over the year.)
Modelling		
Accuracy:		
Hourly averages	50%–60%	
Daily averages	50%	
Annual averages	30%	50%
Objective estimation		
Accuracy:	75%	100%

The accuracy of the measurement is defined as laid down in the “Guide to the Expression of Uncertainty of Measurements” (ISO 1993)(1) or in ISO 5725-1 “Accuracy (trueness and precision) of measurement methods and results” (ISO 1994)(2). The percentages in the table are given for individual measurements averaged, over the period considered, by the limit value, for a

(1) 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.

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95% confidence interval (bias + two times the standard deviation). The accuracy for continuous measurements should be interpreted as being applicable in the region of the appropriate limit value.

The accuracy 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 particulate matter and lead by methods for which accuracy within the 95% confidence interval with respect to continuous monitoring has been demonstrated to be within 10%. Random sampling must be spread evenly over the year.

## PART II

### RESULTS OF AIR QUALITY ASSESSMENT

The following information should be compiled for zones or agglomerations within which sources other than measurement are employed to supplement information from measurement or as the sole means of air quality assessment:

- a description of assessment activities carried out;
- the specific methods used, with references to descriptions of the method;
- the sources of data and information;
- a description of results, including accuracies and, in particular, the extent of any area or, if relevant, the length of road within the zone or agglomeration over which concentrations exceed limit value(s) or, as may be, limit value(s) plus applicable margin(s) of tolerance and of any area within which concentrations exceed the upper assessment threshold or the lower assessment threshold;
- for limit values the object of which is the protection of human health, the population potentially exposed to concentrations in excess of the limit value.

Where possible maps shall be compiled showing concentration distributions within each zone and agglomeration.