



STATUTORY INSTRUMENTS.

S.I. No. 659 of 2016

AIR QUALITY STANDARDS (AMENDMENT) AND ARSENIC,
CADMIUM, MERCURY, NICKEL AND POLYCYCLIC AROMATIC
HYDROCARBONS IN AMBIENT AIR (AMENDMENT)
REGULATIONS 2016

AIR QUALITY STANDARDS (AMENDMENT) AND ARSENIC,
CADMIUM, MERCURY, NICKEL AND POLYCYCLIC AROMATIC
HYDROCARBONS IN AMBIENT AIR (AMENDMENT)
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I, DENIS NAUGHTEN, Minister for the Communications, Climate Action & Environment, in exercise of the powers conferred on me by Sections 10, 20, 21, 46, 47, 49, 50 and 52 of the Air Pollution Act 1987 (No. 6 of 1987) and by sections 6 (as amended by Section 8 of the Protection of the Environment Act 2003 (No. 27 of 2003)), 53, 54, 56 and 80 of the Environmental Protection Agency Act 1992 (No. 7 of 1992) and by the Climate Action and Environment (Transfer of Departmental Administration and Ministerial Functions) Order 2016 (S.I. No. 393 of 2016 (as adapted by the Communications, Energy and Natural Resources (Alteration of Name of Department and Title of Minister) Order 2016 (S.I. No. 421 of 2016) and by Section 3 of the European Communities Act 1972 (No. 27 of 1972), and for the purpose of giving effect to Council Directive 2015/1480/EU¹ amending several annexes to Directives 2004/107/EC² and 2008/50/EC³ of the European Parliament and of the Council laying down the rules concerning reference methods, data validation and location of sampling points for the assessment of ambient air quality, hereby make the following Regulations:

Citation

1. These Regulations may be cited as the Air Quality Standards (Amendment) and Arsenic, Cadmium, Mercury, Nickel and Polycyclic Aromatic Hydrocarbons in Ambient Air (Amendment) Regulations 2016.

Commencement

2. (1) These Regulations shall come into operation on 28th December 2016.

Definitions

3. In these Regulations:

“Regulations of 2009” means the Arsenic, Cadmium, Mercury, Nickel and Polycyclic Aromatic Hydrocarbons in Ambient Air (Amendment) Regulations 2009 (S.I. No. 58 of 2009);

“Regulations of 2011” means the Air Quality Standards Regulations 2011. (S.I. No. 180 of 2011).

¹OJ L 226, 29.8.2015

²OJ L 23, 26.1.2005

³OJ L 152, 11.6.2008

*Notice of the making of this Statutory Instrument was published in
“Iris Oifigiúil” of 6th January, 2017.*

Amendments to the Regulations of 2009

4. The Regulations of 2009 are amended as follows:

(1) In Part 1 of Schedule IV, by the substitution of the following for the table:

“

	Benzo(a)pyrene	Arsenic, cadmium and nickel	Polycyclic aromatic hydrocarbons other than benzo(a)pyrene, total gaseous mercury	Total deposition
— Uncertainty				
Fixed and indicative measurements	50%	40%	50%	70%
Modelling	60%	60%	60%	60%
— Minimum data capture	90%	90%	90%	90%
— Minimum time coverage				
Fixed measurements⁽¹⁾	33%	50%		
Indicative measurements^{(1) (2)}	14%	14%	14%	33%

(1) Distributed over the year to be representative of various conditions for climate and anthropogenic activities

(2) Indicative measurement being measurements which are performed at reduced regularity but fulfil the other data quality objectives”;

(2) In Part 1 of Schedule IV, by the deletion of the following sentence:

“Twenty-four hour sampling is also advisable for the measurement of arsenic, cadmium and nickel concentrations.”;

(3) In Part 1 of Schedule IV, by the insertion of the following paragraph after the paragraph ending ‘For the measurement of deposition rates, monthly or weekly samples throughout the year are recommended.’:

“The provisions on individual samples in the previous paragraph apply also to arsenic, cadmium, nickel and total gaseous mercury. Moreover, sub-sampling of PM10 filters for metals for subsequent analysis is allowed, providing there is evidence that the sub-sample is representative of the whole and that the detection sensitivity is not compromised when compared with the relevant data quality objectives. As an alternative to daily sampling, weekly sampling for metals in PM10 is allowed provided that the collection characteristics are not compromised.”;

(4) By the substitution of the following for Parts 1-4 of Schedule V:

“

1. Reference method for the sampling and analysis of arsenic, cadmium and nickel in ambient air

The reference method for the sampling of arsenic, cadmium and nickel in ambient air is described in EN 12341:2014. The reference method for the measurement of arsenic, cadmium and nickel in ambient air is that described in EN 14902:2005 “Ambient air quality — Standard method for the measurement of Pb, Cd, As and Ni in the PM10 fraction of suspended particulate matter”.

A Member State may also use any other methods which it can demonstrate give results equivalent to the above method.

2. Reference method for the sampling and analysis of polycyclic aromatic hydrocarbons in ambient air

The reference method for the sampling of polycyclic aromatic hydrocarbons in ambient air is described in EN 12341:2014. The reference method for the measurement of benzo(*a*)pyrene in ambient air is that described in EN 15549:2008 “Air quality — Standard method for the measurement of concentration of benzo[*a*]pyrene in ambient air”. In the absence of a CEN standard method for the other polycyclic aromatic hydrocarbons referred to in article 12, Member States are allowed to use national standards methods or ISO methods such as ISO standard 12884.

A Member State may also use any other method which it can demonstrate give results equivalent to the above method.

3. Reference method for the sampling and analysis of mercury in ambient air

The reference method for the measurement of total gaseous mercury concentrations in ambient air is that described in EN 15852:2010 “Ambient air quality — Standard method for the determination of total gaseous mercury”.

A Member State may also use any other method which it can demonstrate give results equivalent to the above method.

4. Reference method for the sampling and analysis of the deposition of arsenic, cadmium, mercury, nickel and polycyclic aromatic hydrocarbons

The reference method for the determination of the deposition of arsenic, cadmium, and nickel is that described in EN 15841:2009 “Ambient air quality — Standard method for determination of arsenic, cadmium, lead and nickel in atmospheric deposition”.

The reference method for the determination of the deposition of mercury is that described in EN 15853:2010 “Ambient air quality — Standard method for determination of mercury deposition”.

The reference method for the determination of the deposition of benzo(a)pyrene and the other polycyclic hydrocarbons referred to in article 12 is that described in EN 15980:2011 “Air quality. Determination of the deposition of benz[a]anthracene, benzo[b]fluoranthene, benzo[j]fluoranthene, benzo[k]fluoranthene, benzo[a] pyrene, dibenz[a,h]anthracene and indeno[1,2,3-cd]pyrene”.

(5)

Amendments to the Regulations of 2011

5. The Regulations of 2011 are amended as follows:

(1) In Schedule 1, by the substitution of the following for Part C:

“C. Quality assurance for ambient air quality assessment. Data validation

1. To ensure accuracy of measurements and compliance with the data quality objectives laid down in Section A, the appropriate competent authorities and bodies designated pursuant to Article 3 shall ensure the following:
 - (i) that all measurements undertaken in relation to the assessment of ambient air quality pursuant to Articles 6 and 9 are traceable in accordance with the requirements set out in the harmonised standard for testing and calibration laboratories;
 - (ii) that institutions operating networks and individual stations have an established quality assurance and quality control system which provides for regular maintenance to assure the continued accuracy of measuring devices. The quality system shall be reviewed as necessary and at least every five years by the relevant National Reference Laboratory;
 - (iii) that a quality assurance/quality control process is established for the process of data collection and reporting and that institutions appointed for this task actively participate, in the related Union-wide quality assurance programmes;
 - (iv) that the National Reference Laboratories are appointed by the appropriate competent authority or body designated pursuant to Article 3 and are accredited for the reference methods referred to in Schedule 6, at least for those pollutants for which concentrations are above the lower assessment threshold, according to the relevant harmonised standard for testing and calibration laboratories, the reference to which has been published in the *Official Journal of the European Union* pursuant to Article 2(9) of Regulation (EC) No 765/2008 setting out the requirements for accreditation and market surveillance. These laboratories shall

also be responsible for the coordination in Member State's territory of the Union-wide quality assurance programmes to be organised by the Commission's Joint Research Centre and shall also be responsible for coordinating, on the national level, the appropriate use of reference methods, and the demonstration of equivalence of non-reference methods. National Reference Laboratories organising intercomparison on the national level should also be accredited according to the relevant harmonised standard for proficiency testing;

- (v) that the National Reference Laboratories, take part at least every three years in the Union-wide quality assurance programmes organized by the Commission's Joint Research Centre. If this participation produces unsatisfactory results then the national laboratory should demonstrate at the next participation in the intercomparison satisfactory remediation measures, and provide a report to the Joint Research Centre on these;
- (vi) that the national reference laboratories support the work done by the European network of National Reference Laboratories set up by the Commission.

2. All reported data under Article 27 shall be deemed to be valid except data flagged as provisional.”

(2) In Part C of Schedule 3, by the substitution of the following for the first and second indents of paragraph 1:

“— the flow around the inlet sampling probe shall be unrestricted (in general free in an arc of at least 270° or 180° for sampling points at the building line) without any obstructions affecting the airflow in the vicinity of the inlet (normally some metres away from buildings, balconies, trees and other obstacles and at least 0,5 m from the nearest building in the case of sampling points representing air quality at the building line)

— in general, the inlet sampling point shall be between 1,5 m (the breathing zone) and 4 m above the ground. Higher siting may also be appropriate if the station is representative of a large area and any derogations should be fully documented;”;

(3) In Part C of Schedule 3, by the substitution of the following for the fifth indent of paragraph 1:

“— for all pollutants, traffic-orientated sampling probes shall be at least 25 m from the edge of major junctions and no more than 10 m from the kerb-side. A “major junction” to be considered here is a junction which interrupts the traffic flow and causes different emissions (stop&go) from the rest of the road.”

(4) In Part C of Schedule 3, by the addition of the following paragraph after the text “planning requirements”:

“Any deviation from the criteria listed in this Section shall be fully documented through the procedures described in Section D.”

- (5) In Schedule 3, by the substitution of the following for Section D:

“D. Documentation and review of site selection

The competent authorities responsible for air quality assessment shall for all zones and agglomerations fully document the site-selection procedures and record information to support the network design and choice of location for all monitoring sites. The documentation shall include compass-point photographs of the area surrounding monitoring sites and detailed maps. Where supplementary methods are used within a zone or agglomeration, the documentation shall include details of these methods and information on how the criteria listed in Article 7(3) are met. The documentation shall be updated as necessary and reviewed at least every 5 years, to ensure that selection criteria, network design and monitoring site locations remain valid and optimal over time. The documentation shall be provided to the Commission within 3 months of being requested.”

- (6) In Schedule 6, by the substitution of the following for Section A:

“A. Reference methods for the assessment of concentrations of sulphur dioxide, nitrogen dioxide and oxides of nitrogen, particulate matter (PM10 and PM2.5), lead, benzene, carbon monoxide and ozone

1. Reference method for the measurement of sulphur dioxide

The reference method for the measurement of sulphur dioxide is that described in EN 14212:2012 “Ambient air — Standard method for the measurement of the concentration of sulphur dioxide by ultraviolet fluorescence”.

2. Reference method for the measurement of nitrogen dioxide and oxides of nitrogen

The reference method for the measurement of nitrogen dioxide and oxides of nitrogen is that described in EN 14211:2012 “Ambient air — Standard method for the measurement of the concentration of nitrogen dioxide and nitrogen monoxide by chemiluminescence”.

3. Reference method for the sampling and measurement of lead

The reference method for the sampling of lead is that described in Section A(4) of this Schedule. The reference method for the measurement of lead is that described in EN 14902:2005 “Standard method for measurement of Pb/Cd/As/Ni in the PM10 fraction of suspended particulate matter”.

4. Reference method for the sampling and measurement of PM10

The reference method for the sampling and measurement of PM10 is that described in EN12341:2014 “Ambient Air — standard gravimetric measurement method for the determination of the PM10 or PM2.5 mass concentration of suspended particulate matter”.

5. Reference method for the sampling and measurement of PM2.5

The reference method for the sampling and measurement of PM2.5 is that described in EN12341:2014 “Ambient Air — standard gravimetric measurement method for the determination of the PM10 or PM2,5 mass concentration of suspended particulate matter”

6. Reference method for the sampling and measurement of benzene

The reference method for the measurement of benzene is that described in EN 14662:2005, parts 1, 2 and 3 ‘Ambient air quality — Standard method for measurement of benzene concentrations’.

7. Reference method for the measurement of carbon monoxide

The reference method for the measurement of carbon monoxide is that described in EN 14626:2012 “Ambient air — Standard method for the measurement of the concentration of carbon monoxide by non-dispersive infrared spectroscopy”.

8. Reference method for measurement of ozone

The reference method for the measurement of ozone is that described in EN 14625:2012 “Ambient air — Standard method for the measurement of the concentration of ozone by ultraviolet photometry”.

(7) In Schedule 6, by the deletion of Section D;

(8) In Schedule 6, by the substitution of the following for Section E:

“E. Mutual recognition of data

When demonstrating that equipment meets the performance requirements of the reference methods listed in Section A of this Schedule, the competent authorities and bodies designated pursuant to Article 3 shall accept test reports issued in other Member States provided that the test laboratories are accredited to the relevant harmonised standard for testing and calibration laboratories.

The detailed test reports and all the results of the tests shall be available to other competent authorities or their designated bodies. Test reports shall demonstrate that the equipment meets all the performance requirements including where some environmental and site conditions are specific to a Member State and are outside the conditions for which the equipment has been already tested and type approved in another Member State;”

(9) In Schedule 9, by the substitution of the following for Section A:

“A. Minimum number of sampling points for fixed measurements of concentrations of ozone

Minimum number of sampling points for fixed continuous measurements to assess compliance with target values, long — term objectives and information and alert thresholds where such measurements are the sole source of information.

Population (× 1000)	Agglomeration⁽¹⁾	Other zones⁽¹⁾	Rural background
<250		1	1 station/50000 km ² as an average density over all zones per country ⁽²⁾
<500	1	2	
<1000	2	2	
<1500	3	3	
<2000	3	4	
<2750	4	5	
<3750	5	6	
>3750	One additional station per 2 million inhabitants	One additional station per 2 million inhabitants	

(1) At least 1 station in areas where exposure of the population to the highest concentrations of ozone is likely to occur. In agglomerations, at least 50 % of the stations shall be located in suburban areas.

(2) 1 station per 25 000 km² for complex terrain is recommended.”



Given under my Official Seal,
28 December 2016.

DENIS NAUGHTEN,
Minister for Communications Climate Action and
Environment.

EXPLANATORY NOTE

(This note is not part of the instrument and does not purport to be a legal interpretation.)

These Regulations transpose Commission Directive (EU) 2015/1480 of 28 August 2015 amending several annexes to Directives 2004/107/EC and 2008/50/EC of the European Parliament and of the Council laying down the rules concerning reference methods, data validation and location of sampling points for the assessment of ambient air quality.

In so doing, they amend the Arsenic, Cadmium, Mercury, Nickel and Polycyclic Aromatic Hydrocarbons in Ambient Air Regulations 2009 (S.I. No. 58 of 2009) and Air Quality Standards Regulations 2011 (S.I. No. 180 of 2011) respectively, which transposed the earlier Directives.

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