



**The translation of this document is outdated.**

**Translation validity: 09.03.2017.–12.04.2021.**

**Amendments not included: 08.04.2021.**

Text consolidated by Valsts valodas centrs (State Language Centre) with amending regulations of:  
21 February 2017 [shall come into force from 9 March 2017].

If a whole or part of a paragraph has been amended, the date of the amending regulation appears in square brackets at the end of the paragraph. If a whole paragraph or sub-paragraph has been deleted, the date of the deletion appears in square brackets beside the deleted paragraph or sub-paragraph.

**Republic of Latvia**

**Cabinet**

**Regulation No. 1290**

Adopted 3 November 2009

## **Regulations Regarding Ambient Air Quality**

*Issued pursuant to  
Section 12, Paragraph two and Section 17,  
Paragraph three of the law On Pollution  
and Section 17, Paragraph two of the Environmental Protection Law*

*[21 February 2017]*

### **I. General Provisions**

1. This Regulation prescribes quality standards for outdoor air in the troposphere (excluding workplaces) in the territory of Latvia, as well as:

- 1.1. deadlines for ensuring of ambient air quality standards;
- 1.2. permissible level of air pollutants in the environment and characteristic values thereof;
- 1.3. parameters, monitoring methods and methods which are used in order to determine exceedance of the relevant ambient air quality standards;
- 1.4. the measures to be performed if ambient air quality standards are exceeded.

2. The following terms are used in this Regulation:

2.1. lower assessment threshold - a level below which modelling or objective-estimation techniques alone may be used to assess ambient air quality;

2.2. arsenic, cadmium, nickel and benzo(a)pyrene - the total content of these elements and compounds thereof in the PM<sub>10</sub> fraction;

2.3. upper assessment threshold - a level below which a combination of fixed measurements and modelling techniques or indicative measurements may be used to assess ambient air quality, or the both together;

2.4. contributions from natural sources - emissions of pollutants not caused directly or indirectly by human

activities, including natural events such as volcanic eruptions, seismic activities, geothermal activities, wild-land fires, high-wind events, sea sprays or the atmospheric re-suspension or transport of natural particles from dry regions;

2.5. particulate matter PM<sub>10</sub> - particulate matter which passes through a size-selective inlet as defined in the base (reference) method for the sampling and measurement of PM<sub>10</sub> with a 50 % efficiency cut-off at 10 µm aerodynamic diameter;

2.6. particulate matter PM<sub>2,5</sub> - particulate matter which passes through a size-selective inlet as defined in the base (reference) method for the sampling and measurement of PM<sub>2,5</sub> with a 50 % efficiency cut-off at 2,5 µm aerodynamic diameter;

2.7. exposure concentration target value - a level fixed on the basis of the average exposure indicator with the aim of reducing harmful effects on human health, to be attained over a given period;

2.8. assessment of ambient air quality - any method used to measure, calculate, predict or estimate levels of ambient air pollution;

2.9. air quality target value - a level pollutant in outdoor air to be attained over a given period (where possible) with the aim of avoiding, preventing or reducing harmful effects on human health and the environment;

2.10. ambient air quality limit value - a level fixed on the basis of scientific knowledge, with the aim of avoiding, preventing or reducing harmful effects on human health or the environment as a whole, to be attained within a given period and not to be exceeded once attained;

2.11. level of ambient air pollution - the concentration of a pollutant in ambient air or the deposition thereof on surfaces in a given time;

2.12. air pollutant - any substance present in ambient air and likely to have harmful effects on human health or the environment as a whole;

2.13. information threshold - a level beyond which there is a risk to human health from brief exposure for particularly sensitive sections of the population and for which immediate and appropriate information is necessary;

2.14. long-term objective - a level to be attained in the term of more than 10 years, save where not achievable through proportionate measures, with the aim of providing effective protection of human health and the environment;

2.15. indicative measurements - measurements which meet data quality objectives that are less strict than those required for fixed measurements;

2.16. total or bulk deposition - the total mass of pollutants which is transferred from the atmosphere to soil, vegetation, water, buildings or other surface in a given area within a given time;

2.17. critical level - a level fixed on the basis of scientific knowledge, above which direct adverse effects may occur on some receptors, such as trees, other plants or natural ecosystems but not on humans;

2.18. objective assessment method - mathematical method for determination of concentration of air pollutants where the measurement data of air pollutants obtained in another territory or another time and based on the information acquired during scientific researches regarding trends of concentration spread of pollutants are used;

2.19. ozone precursor substances - substances which contribute to the formation of ground-level ozone;

2.20. sensitive population groups - population groups especially sensitive against air pollution, including, pregnant women, newborns, infants, children up to the age of 13, people over 65 years of age who are suffering from cardiovascular system diseases, people who are suffering from asthma or any chronic obstructive lung disease, as well as people who are exposed to an increased level of air pollution;

2.21. margin of tolerance - the percentage of the limit value by which that value may be exceeded subject to the conditions laid down in this Directive;

2.22. urban background locations - places in urban areas where levels are representative of the exposure of the general urban population;

2.23. polycyclic aromatic hydrocarbons - organic compounds, composed of at least two fused aromatic rings made entirely from carbon and hydrogen;

2.24. action programme for reduction of air pollution - a programme in which measures to achieve limit value or target value are provided for;

2.25. fixed measurements - measurements taken at fixed sites, either continuously or by random sampling, to determine the level of pollution in accordance with the relevant data quality objectives;

2.26. spatial resolution - in accordance with Part B, Clause 6 of Annex to Commission Regulation (EC) No 1205/2008 of 3 December 2008 implementing Directive 2007/EC of the European Parliament and of the Council as regards metadata;

2.27. alert threshold - a level beyond which there is a risk to human health from brief exposure for the population as a whole and at which immediate steps are to be taken in accordance with the requirements laid down in this Regulation;

2.28. national exposure reduction target - a percentage reduction of the average exposure indicator set for the reference year with the aim of reducing harmful effects on human health, to be attained where possible over a given period;

2.29. average exposure indicator - an average level of pollution determined on the basis of measurements at urban background locations throughout the whole country and which reflects population impact on inhabitants and which is used to calculate the national exposure reduction target and to determine the compliance with the exposure concentration target value;

2.30. national monitoring network - ambient air quality monitoring stations under administration of *valsts sabiedrības ar ierobežotu atbildību "Latvijas Vides, ģeoloģijas un meteoroloģijas centrs"* [State limited liability company Latvian Environment, Geology and Meteorology Centre] (hereinafter - the Centre) which are located throughout the State territory in accordance with the criteria specified in Chapter III of this Regulation and where conformity with other requirements laid down in this Regulation is ensured in order to provide the public, as well as the international co-operation organisations and the European Commission with reliable and representative information regarding ambient air quality in Latvia.

[21 February 2017]

## **II. Ambient Air Quality Standards and Characteristic Values, Methods for the Measurement of Air Pollutants**

3. In order to ensure the protection of human health and environment, ambient air quality standards and characteristic values, as well as measurement methods are determined in this Regulation for the following pollutants:

3.1. sulphur dioxide:

3.1.1. ambient air quality standards and characteristic values are specified in Annex 1 to this Regulation;

3.1.2. the base (reference) method specified in the standard LVS EN 14212:2012 "Ambient air quality - Standard method for the measurement of the concentration of sulphur dioxide by ultraviolet fluorescence", or another equivalent method of analysis is used for the measurements of pollution level;

3.2. nitrogen dioxide and oxides of nitrogen (the sum of volume ratio of nitrogen monoxide and nitrogen dioxide mixture in parts per billion (in volume units) (ppbv) expressed in nitrogen dioxide mass concentration units ( $\mu\text{g}/\text{m}^3$ ));

3.2.1. ambient air quality standards and characteristic values are specified in Annex 2 to this Regulation;

3.2.2. the base (reference) method specified in the standard LVS EN 14211:2012 "Ambient air quality - Standard method for the measurement of the concentration of nitrogen dioxide and nitrogen monoxide by chemiluminescence", or another equivalent method of analysis is used for the measurements of pollution level;

3.3. particulate matter  $\text{PM}_{10}$ :

3.3.1. ambient air quality standards are specified in Annex 3 to this Regulation;

3.3.2. the base (reference) method specified in the standard LVS EN 12341:2014 "Ambient air - Standard gravimetric measurement method for the determination of the  $\text{PM}_{10}$  or  $\text{PM}_{2,5}$  mass concentration of suspended particulate matter", or another equivalent method of analysis is used for the sampling and measurements of pollution level;

3.4. particulate matter  $\text{PM}_{2,5}$ :

3.4.1. ambient air quality standards and characteristic values are specified in Annex 4 to this Regulation;

3.4.2. the base (reference) method specified in the standard LVS EN 12341:2014 "Ambient air - Standard gravimetric measurement method for the determination of the  $\text{PM}_{10}$  or  $\text{PM}_{2,5}$  mass concentration of suspended particulate matter", or another equivalent method for the sampling and analysis is used for the sampling and measurements of air pollution level;

### 3.5. lead:

3.5.1. ambient air quality standards are specified in Annex 5 to this Regulation;

3.5.2. the base (reference) method specified in the standard LVS EN 14902:2007 "Ambient air quality. Standard method for measurement of Pb/Cd/As/Ni in the PM<sub>10</sub> fraction of suspended particulate matter", or another equivalent method of sampling and analysis is used for the measurements of pollution level;

### 3.6. ozone:

3.6.1. ambient air quality standards and characteristic values are specified in Annex 6 to this Regulation;

3.6.2. the base (reference) method of analysis and calibration specified in the standard LVS EN 14625: 2012 "Ambient air quality - Standard method for the measurement of the concentration of ozone by ultraviolet photometry", or another equivalent method is used for the measurements of pollution level;

### 3.7. benzene:

3.7.1. ambient air quality standards are specified in Annex 7 to this Regulation;

3.7.2. the base (reference) method specified in the standard LVS EN 14662:2005 "Ambient air quality - Standard method for the measurement of the concentration of benzene", or another similar method of analysis is used for the measurements of pollution level;

### 3.8. carbon monoxide:

3.8.1. ambient air quality standards are specified in Annex 8 to this Regulation;

3.8.2. the base (reference) method specified in the standard LVS EN 14626:2012 "Ambient air quality - Standard method for the measurement of the concentration of carbon monoxide by non-dispersive infrared spectroscopy", or another similar method of analysis is used for the measurements of pollution level;

### 3.9. arsenic, cadmium, nickel and benzo(a)pyrene:

3.9.1. ambient air quality standard specified in Part I of Annex 9 to this Regulation;

3.9.2. to assess the contribution of benzo(a)pyrene in ambient air, measurements shall be performed at least for such other polycyclic aromatic hydrocarbons as benzo(a)anthracene, benzo(b)fluoranthene, benzo(j)fluoranthene, benzo(k)fluoranthene, indeno(1,2,3-cd)pyrene, and dibenz(a,h)anthracene and monitoring sites for them shall be co-located with sampling sites for benzo(a)pyrene.

3.9.3. the base (reference) method specified in the standard LVS EN 14902:2007 "Ambient air quality - Standard method for measurement of Pb/Cd/As/Ni in the PM<sub>10</sub> fraction of suspended particulate matter", or another equivalent method of analysis is used for the measurements of arsenic, cadmium, nickel and lead;

3.9.4. the base (reference) method specified in the standard LVS EN 12341:2014 "Ambient air - Standard gravimetric measurement method for the determination of the PM<sub>10</sub> or PM<sub>2,5</sub> mass concentration of suspended particulate matter", or another equivalent method of analysis is used for the sampling of benzo(a)pyrene and other relevant polycyclic aromatic hydrocarbons, as well as arsenic, cadmium, and nickel;

3.9.5. the base (reference) method specified in the standard LVS EN 15549:2008 "Air quality - Standard method for the measurement of the concentration of benzo[a]pyrene in ambient air", or another equivalent method of analysis is used for the measurements of the concentration of benzo(a)pyrene, and the method specified in the standard LVS ISO 12884:2001 "Ambient air- Determination of total (gas- and particle-phase) polycyclic aromatic hydrocarbons - Collection on sorbent-backed filters with gas chromatographic/mass spectrometric analyses", or another equivalent method of analysis is used for the measurements of the concentration of other polycyclic aromatic hydrocarbons;

3.9.6. the base (reference) method specified in the standard LVS EN 15852:2010 "Ambient air quality - Standard method for the determination of total gaseous mercury", or another equivalent method of analysis is used for the measurements of total gaseous mercury (mercury vapour and able to react gaseous mercury - water-soluble types of mercury with sufficiently high pressure to be in gaseous condition) concentrations;

3.9.7. in order to assess the total amount of depositions of arsenic, cadmium, mercury, nickel and polycyclic aromatic hydrocarbons the following base (reference) methods are used:

3.9.7.1. for the determination of arsenic, cadmium and nickel deposition - the method specified in the standard LVS EN 15841:2010 "Ambient air quality - Standard method for determination of arsenic, cadmium, lead and nickel in atmospheric deposition";

3.9.7.2. for the determination of mercury deposition - the method specified in the standard LVS EN 15853:2010

"Ambient air quality - Standard method for the determination of mercury deposition";

3.9.7.3. for the determination of benzo(a)pyrene and other relevant polycyclic aromatic hydrocarbon deposition - the method specified in the standard LVS 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".

[21 February 2017]

3.<sup>1</sup> The volume of the sample for particulate matters PM<sub>10</sub> and particulate matters PM<sub>2,5</sub>, as well as components of particulate matters to be analysed (for example, lead) shall be determined in the relevant ambient conditions, taking into account the temperature and atmospheric pressure on the day of the measurement.

[21 February 2017]

4. Air quality target values for pollutants to which the conditions referred to in Paragraph 3 of this Regulation do not apply are specified in Part II of Annex 9 to this Regulation.

5. [21 February 2017]

6. [21 February 2017]

7. [21 February 2017]

7.<sup>1</sup> The Centre (with regard to the stations included in the national monitoring network) and other State or local government institutions responsible for ambient air quality monitoring stations the obtained data whereof are used for informing the public in accordance with Sub-paragraph 45.5 of this Regulation or for the development of the action programme referred to in Paragraph 24 of this Regulation, shall use the base (reference) methods referred to in Paragraph 3 of this Regulation for the determination and measuring of the level of ambient air pollution.

[21 February 2017]

7.<sup>2</sup> In cases specified in Paragraph 7.<sup>1</sup> of this Regulation, another method for the sampling and analysis which is not the base (reference) method referred to in Paragraph 3 of this Regulation may be also used for the determination and measuring of the level of ambient air pollution, if the results obtained by using that other method are equivalent to the results obtained by using the standard (base) methods referred to in Paragraph 3 of this Regulation or - with regard to particulate matters PM<sub>10</sub> and particulate matters PM<sub>2,5</sub> - the method which fully conforms to the base (reference) method. The results obtained with regard to particulate matters PM<sub>10</sub> and particulate matters PM<sub>2,5</sub> shall be adjusted with a coefficient in order to make them equivalent to the results obtained by using the base (reference) method (including the results of previous measurements shall be adjusted with the relevant coefficient to ensure better comparability for data). If coefficients are used to ensure equivalence, they shall be either approved or amended with a reference to the guidance on the demonstration of equivalence developed by the European Commission.

[21 February 2017]

7.<sup>3</sup> If in accordance with Paragraph 7.<sup>2</sup> of this Regulation the method of sampling and analysis used for measuring the level of ambient air pollution is other than the base (reference) method referred to in Paragraph 3 of this Regulation, it shall be necessary to prove that the results obtained with the method used are equivalent to the results obtained with the base (reference) method. In order to prove this, State and local government institutions which conduct the measurements of the level of ambient air pollution and use the obtained data for informing the public in accordance with Sub-paragraph 45.5 of this Regulation or for the development of the action programme referred to in Paragraph 24 of this Regulation shall submit to the Centre the relevant equivalence demonstration protocol (report) issued by a testing laboratory accredited in Latvia or another European Union Member State in conformity with the harmonised standard for testing and calibration laboratories. The Centre shall ensure conformity with the requirements referred to in this Paragraph also in respect of the stations included in the national monitoring network.

[21 February 2017]

7.<sup>4</sup> The equivalence demonstration protocol (report) referred to in Paragraph 7.<sup>3</sup> of this Regulation must attest that the equipment conforms to all performance requirements and it must include information regarding the specific environmental and local conditions characteristic to the testing environment. The Centre all assess the possibilities for the use of the equipment, taking into account the characteristic specific environmental and local conditions in which the use of the equipment is planned.

[21 February 2017]

7.<sup>5</sup> If such method is used in the stations existing in the national monitoring network which is not the base (reference) method referred to in Paragraph 3 of this Regulation and regarding which the equivalence demonstration

protocol (report) drawn up by the competent authorities of other Member States of the European Union is not available, the Centre shall organise mutual comparison of methods and shall draw up a report on the results obtained. The relevant equivalence demonstration protocols (reports) drawn up as a result of assessment and all test results shall be made available by the Centre to other competent authorities upon request.

*[21 February 2017]*

7.<sup>6</sup> In accordance with Paragraph 7.<sup>3</sup> of this Regulation the Centre shall keep the submitted equivalence demonstration protocols (reports) for as long as the relevant method of sampling and analysis is used for the determination and measuring of the level of ambient air pollution, but not less than for five years.

*[21 February 2017]*

8. [21 February 2017]

### **III. Ambient Air Quality Assessment and Conditions for the Performance Thereof**

*[21 February 2017]*

8.<sup>1</sup> The Centre is the national reference laboratory of Latvia which conducts measurements of the level of ambient air pollution and is the responsible institution in Latvia for the following:

8.<sup>1</sup> 1. establishment and maintenance of the national monitoring network and performance of ambient air quality assessment;

8.<sup>1</sup> 2. accreditation of the measurement systems to be used in the national monitoring network and analysis of assessment methods, and organisation of equivalence demonstration processes of the methods used in the national monitoring network;

8.<sup>1</sup> 3. ensuring the accuracy of ambient air quality measurements conducted in the national monitoring network;

8.<sup>1</sup> 4. ensuring co-operation with the European Network of National Reference Laboratories and the Joint Research Centre established by the European Commission, and coordination of quality assurance programmes at the European Union level in Latvia.

*[21 February 2017]*

8.<sup>2</sup> The Centre shall ensure that the national reference laboratory is a testing laboratory which has been accredited in the national accreditation authority in accordance with the laws and regulations regarding the assessment, accreditation, and supervision of conformity assessment authorities (hereinafter - the accredited laboratory) in respect of the standard methods referred to in Paragraph 3 of this Regulation with regard to at least those polluting substances the concentration of which exceeds the lowest threshold of pollution assessment. If the Centre performs mutual comparison of the methods at national level (including in the case referred to in Paragraph 7.<sup>5</sup> of this Regulation), it must be accredited in accordance with the respective standard in the field of skills examinations.

*[21 February 2017]*

8.<sup>3</sup> The Centre shall ensure that measurements in the stations included in the national monitoring network are performed by the accredited laboratory which has been accredited in respect of the base (reference) methods referred to in Paragraph 3 of this Regulation or other equivalent methods. A quality assurance and quality control system shall be established and applied for the monitoring stations included in the national monitoring network, and this system shall provide for the performance of regular maintenance of equipment which is necessary to guarantee the accuracy of measuring equipment, as well as ensures the establishment of a quality control procedure for data collection and notification and traceability of measurement data in conformity with the requirements laid down in the harmonised standard for testing and calibration laboratories. Starting from 2019, the Centre shall, at least once every five years, assess the established quality assurance system and shall inform the Ministry of Environmental Protection and Regional Development regarding the results thereof.

*[21 February 2017]*

8.<sup>4</sup> The Centre shall, not later than in 2019 and at least once every three years thereafter, participate in the quality assurance programmes organised at the European Union level. If while participating in the relevant programmes unsatisfactory results are obtained (i.e., results which are substantially different than the results obtained from other equipment), the Centre shall, until the next assessment, take reasonable measures and submit a follow-up report to the European Commission.



*[21 February 2017]*

8.<sup>5</sup> The Centre shall be responsible for coordinating the quality assurance programmes at the European Union level organised by the Joint Research Centre of the European Commission in Latvia and for the coordination of the use of the base (reference) methods referred to in Paragraph 3 of this Regulation at national level. The Centre shall publish on its website guidance on quality control procedures so that, where necessary, they can be applied also by other institutions and organisations which conduct the measurements of the level of ambient air quality pollution.

*[21 February 2017]*

8.<sup>6</sup> In order to ensure the accuracy of measurements and their conformity with the data quality objectives specified in this Regulation, the State or local government institutions which use the obtained data for informing the public in conformity with Sub-paragraph 45.5 of this Regulation or for the development of the action programme referred to in Paragraph 24 of this Regulation shall ensure that the measurements of the level of ambient air pollution are conducted by the accredited laboratory.

*[21 February 2017 / Paragraph shall come into force on 30 June 2018. See Paragraph 58]*

8.<sup>7</sup> If a State or local government institution conducts indicative measurements of ambient air pollution and it uses the obtained data for informing the public in conformity with Sub-paragraph 45.5 of this Regulation or for the development of the action programme referred to in Paragraph 24 of this Regulation, it shall be allowed not to conform to the prescribed requirements, if it establishes and applies a quality assurance and quality control system which provides for the performance of regular maintenance of equipment which is required to guarantee the accuracy of measuring equipment, as well as ensures the establishment of a quality control procedure for data collection and notification and traceability of measurement data in conformity with the requirements laid down in the harmonised standard for testing and calibration laboratories. In the abovementioned case the institution shall submit to the Centre information regarding the established quality assurance and quality control system and the application of the requirements laid down therein, as well as other information which may be necessary to the Centre for the verification of the conformity of the actions of the institution or its unit in accordance with the requirements laid down in the harmonised standard for testing and calibration laboratories. The Centre shall assess the competence of the State or local government institution or its unit and the capacity to perform testing for a fee according to the price list approved by the Cabinet.

*[21 February 2017 / Paragraph shall come into force on 30 June 2018. See Paragraph 58]*

8.<sup>8</sup> State or local government institutions which conduct the measurements of the level of ambient air pollution and use the obtained data for informing the public in conformity with Sub-paragraph 45.5 of this Regulation or for the development of the action programme referred to in Paragraph 24 of this Regulation shall, within a month after commencement of the measurements, inform the Centre regarding the used measurement methods and the installed ambient air quality measuring equipment and thereafter the relevant information shall be provided to the Centre only in the event of any changes in the operations of already installed equipment (including the change of the location of equipment) or the use of other measurement methods.

*[21 February 2017]*

8.<sup>9</sup> On the basis of information submitted in accordance with Paragraph 8.<sup>8</sup> of this Regulation, the Centre shall, from 2020 once every five years, draw up a report on the monitoring equipment existing in the State the data whereof are used for informing the public in accordance with Sub-paragraph 45.5 of this Regulation or for the development of the action programme referred to in Paragraph 24 of this Regulation, and their conformity with the requirements laid down in this Regulation. The abovementioned information shall be published by the Centre on its website, also indicating the equipment the measurements of which do not conform to the requirements laid down in this Regulation and the data whereof have a low level of reliability.

*[21 February 2017]*

9. The Centre shall, from 2019, but not less than once every five years, review the division of the territory in zones (territorial unit as delimited for the purposes of ambient air quality assessment and management) and agglomerations (aggregate of populated areas where the population exceeds 250,000 inhabitants or, aggregate of populated areas where the population is less, but the population density exceeds 2500 inhabitants per square kilometre), upon assessing ambient air quality in respect of the pollutants referred to in Paragraph 3 of this Regulation. If substantial changes have occurred in agglomerations or zones which affect the level of ambient air pollution, the Centre shall organise extraordinary air quality assessment.

*[21 February 2017]*

10. [1 January 2011 / See Paragraph 56]

11. In order to assess ambient air quality and ensure its management, the State territory shall be divided into

zones and agglomerations in accordance with the order by the Minister for Environmental Protection and Regional Development. The order shall contain information regarding ambient air quality monitoring stations in the national monitoring network, and it shall be published on the website of the Ministry. The location of these stations may not be changed and the operation of the stations included in the national monitoring network may not be suspended without prior coordination with the Ministry of Environmental Protection and Regional Development.

*[21 February 2017]*

12. The Centre shall assess air quality in agglomerations and zones each year, where the average level of ambient air pollution has exceeded air quality standards and characteristic values specified for pollutants and referred to in Paragraph 3 of this Regulation during the previous three years. In order to identify the impact caused by contributions from natural sources and salting or sanding, air quality shall be assessed in agglomerations and zones where:

12.1. during the previous year exceedance of the limit values specified for the particular pollutant referred to in Paragraph 3 of this Regulation is attributable to pollution caused by natural sources. The Centre shall provide information regarding concentrations of contributions from natural sources and contribution sources, as well as provide the evidence demonstrating that the exceedances are attributable to natural sources. Exceedances of a limit value which have incurred entirely due to pollution caused by natural sources shall not be considered exceedances within the meaning of this Regulation;

12.2. during the previous year exceedance of the limit values specified for particulate matters PM<sub>10</sub> is attributable to re-suspension of particulate matters PM<sub>10</sub> following winter-sanding or -salting of roads. The Centre shall prepare information regarding concentration and sources of particulate matters PM<sub>10</sub>, as well as provide evidence that the reason for exceedance is re-suspension of particulate matters PM<sub>10</sub>.

*[21 February 2017]*

13. In order to assess air quality, the minimum number of air monitoring stations for fixed measurements shall be determined taking into account the criteria specified in Annex 10 to this Regulation.

14. In order to assess the level of ambient air pollution with the pollutants (except ozone) referred to in Paragraph 3 of this Regulation, air quality monitoring stations shall be located in accordance with the criteria specified in Annex 11 of this Regulation, but for the assessment of ozone level - in accordance with the criteria specified in Annex 12 to this Regulation.

14.<sup>1</sup> In order to ensure the establishment of a national monitoring network corresponding to the requirements laid down in this Regulation and to ensure regular assessment of whether the current national monitoring network design and locations of monitoring stations are still reasonable and optimal, the Centre shall, starting from 2020 and thereafter, as required, not less than once every five years, draw up a report which contains assessment and justification for selecting the location of all monitoring stations included in the national monitoring network, as well as includes photographs of the surroundings of monitoring stations, indicating cardinal directions therein, and detailed maps. The report shall cover information regarding the conformity of stations included in the national monitoring network with the criteria specified in Annexes 10, 11, and 12 to this Regulation and the necessary changes in the current national monitoring network design. If additional assessment methods (modelling techniques or indicative measurements) are used in any zone or agglomeration, the report shall include detailed information regarding such methods and information describing the fulfilment of the criteria referred to in Paragraph 20 of this Regulation. Upon request of the European Commission, the Centre shall submit the report prepared to the European Commission within three months.

*[21 February 2017]*

15. In accordance with the requirements referred to in Annex 13 to this Regulation the Centre shall measure the concentration of pollutants also in rural background locations far away from major sources of pollution. As a minimum, information regarding the total mass concentration and the chemical composition concentrations of particulate matter PM<sub>2,5</sub> on an annual average basis shall be provided with such measurements.

*[21 February 2017]*

16. In order to substantiate the territorial division in zones and agglomerations of the State, upper and lower assessment thresholds which are specified in Annex 14 to this Regulation for sulphur dioxide, nitrogen dioxide, and oxides of nitrogen, particulate matter PM<sub>10</sub>, particulate matter PM<sub>2,5</sub>, lead, benzene, carbon monoxide, arsenic, cadmium, nickel and benzo(a)pyrene, shall be used.

17. In agglomerations and zones where the level of pollutants referred to in Paragraph 3 of this Regulation is below the lower assessment threshold, the modelling techniques or another objective-estimation method or both shall be sufficient for the assessment of ambient air quality.

18. In agglomerations and zones where the level of pollutants referred to in Paragraph 3 of this Regulation is below



the upper assessment threshold, a combination of fixed measurements and modelling techniques or indicative measurements or both may be used for the assessment of ambient air quality.

19. In agglomerations and zones where the level of pollutants referred to in Paragraph 3 of this Regulation exceeds the upper assessment threshold, fixed measurements which may be supplemented by modelling techniques or indicative measurements, or by both, if they provide adequate information regarding the spatial distribution of the level, shall be used for the assessment of ambient air quality.

19.<sup>1</sup> Conformity with the data quality objectives specified in Annex 15 to this Regulation and other criteria specified in the abovementioned Annex shall be ensured upon performance of ambient air quality assessment and modelling of ambient air quality dispersion.

*[21 February 2017]*

20. In agglomerations and zones where information from fixed measurement sampling points is supplemented by information from modelling or indicative measurements, the Centre may reduce the total number of sampling points specified in Part I of Annex 10 to this Regulation by 50 %, provided that the number of ambient air quality monitoring stations installed and the spatial resolution of other techniques are sufficient to achieve the data quality objectives specified in Annex 15 to this Regulation and the assessment results complying with the specified criteria. The obtained measurement results shall be taken into account upon assessing the conformity with the limit values specified in this Regulation.

*[21 February 2017]*

21. The criteria specified in Annex 16 to this Regulation shall be used for checking validity when aggregating data and calculating statistical parameters.

22. The Centre shall ensure that at least one ambient air monitoring station measures the concentrations of the ozone precursor substances listed in Annex 17 to this Regulation in accordance with the requirements laid down in Annex 17 to this Regulation. On the basis of information regarding the condition of ambient air quality and taking into account the siting of other monitoring stations intended for assessment of pollutants referred to in Paragraph 3 of this Regulation, the Centre shall determine where the monitoring stations for ozone precursors are to be located.

*[21 February 2017]*

23. In order to ensure indicative measurements for arsenic, cadmium, nickel, total gaseous mercury, benzo(a)pyrene and for other polycyclic aromatic hydrocarbons referred to in Paragraph 3 of this Regulation and determine the total amount of depositions thereof on every 100 000 km<sup>2</sup>, as well as to ensure the necessary spatial resolution, the Centre may agree with the competent authority of the European Union Member State concerned regarding setting up of common measuring station.

## **IV. Improvement in Ambient Air Quality**

24. In order to improve ambient air quality in agglomerations or zone areas where the level of ambient air pollution exceeds the air quality standards specified in Paragraph 3 of this Regulation, taking into account also the margin of tolerance, if any specified, or it is detected during the air quality assessment performed by the Centre that the average value of the level of pollution over the period of last three years exceeds the annual average value of the upper assessment threshold specified in Annex 14 to this Regulation and the level of pollution has a tendency to increase, the local government in co-operation with the Ministry of Environmental Protection and Regional Development shall draw up and implement a long-term action programme for the reduction of air pollution (hereinafter - the action programme) in accordance with the law On Pollution.

*[21 February 2017]*

24.<sup>1</sup> In order to ensure a coordinated approach in respect of the measures included in various action programmes, the local government, upon developing the action programme, shall take into account the measures included in the action programmes which are developed in accordance with the laws and regulations regarding total maximum permissible emissions into the air in the State and the laws and regulations in the field of noise evaluation and management.

*[21 February 2017]*

24.<sup>2</sup> Upon developing the action programme referred to in Paragraph 24 of this Regulation, the local government in co-operation with the Ministry of Environmental Protection and Regional Development shall also assess the impact on ambient air quality caused by combustion plants located in the territory of local governments. If necessary, for medium and small combustion plants in zones or zone areas where ambient air quality assessment shows potential regulatory exceedance of pollutants or exceeds the upper assessment threshold of pollution, the local government, in

accordance with the law On Pollution, may impose, in the binding regulations, stricter limit values for emissions than those specified in the laws and regulations regarding combustion plants. Upon imposing stricter limit values for emissions, it is necessary to take into account the information published by the European Commission concerning emission levels which can be achieved with the best available or most recent techniques.

*[21 February 2017]*

25. In agglomerations or zone areas where the level of ambient air pollution is not reduced within the specified term up to the limit values referred to in Paragraph 3 of this Regulation, measures ensuring the compliance with the limit values specified in Paragraph 3 of this Regulation within as short period of time as possible shall be intended in the action programme, as well as measures which protect sensitive population groups may also be included therein.

26. In order to improve ambient air quality in agglomerations or zone areas where the level of ambient air pollution exceeds or may exceed one or several of the alert thresholds (if necessary, also in cases when one or several limit values or target values are exceeded), a local government shall draw up and implement a short-term action programme for the reduction of air pollution (hereinafter - the short-term programme). The short-term programme shall include immediate measures for the reduction of air pollution. Depending on the individual case, measures to control and suspend activities which contribute to the risk of the respective limit values or target values or alert threshold being exceeded may be included. Measures to protect sensitive population groups may also be included.

27. If the action programme or the short-term programme drawn up in accordance with this Regulation includes measures the implementation of which is not within the competence of the local government, the implementation of such measures shall be co-ordinated by the Ministry of Environmental Protection and Regional Development or by the institutions subordinated thereto.

*[21 February 2017]*

28. If there is a risk of exceedance of the alert threshold for ozone specified in Annex 6 to this Regulation, the local government shall only draw up the short-term programme referred to in Paragraph 26 of this Regulation when there is a potential, taking into account geographical, meteorological and economic conditions, to reduce the risk, duration, or severity of the abovementioned exceedance.

29. Local governments shall draw up the action programme or the short-term programme for agglomerations or zone areas only insofar as the exceedance of the limit value may be applied to sources of particular pollutants other than winter-sanding or -salting and pollution caused by natural sources, provided that all measures to reduce repeated concentration of dispersed particulate matter PM<sub>10</sub> caused by winter-sanding or -salting are being performed or have already been implemented.

30. The local government shall, not later than two years after exceedance of any of the ambient air quality standards referred to in Paragraph 3 of this Regulation, taking into account the margin of tolerance, or not later than two years after the average value of the level of pollution over the period of last three years exceeds the annual average value of the upper assessment threshold of pollution specified in Annex 14 to this Regulation, in co-operation with the Ministry of Environmental Protection and Regional Development, draw up and approve the action programme in the entire territory or part thereof. The following conditions shall be taken into account in drawing up and implementing the action programme:

30.1. if air quality standards of one of pollutants referred to in Paragraph 3 of this Regulation are exceeded in agglomeration or in certain area of the zone, the action programme for reduction of air pollution with the relevant pollutant shall be drawn up;

30.2. if air quality standards of several pollutants referred to in Paragraph 3 of this Regulation are exceeded in agglomeration or in certain area of the zone, an integrated action programme shall be drawn up in which the reduction of pollutants the concentration of which exceeds air quality standards is planned, provided that the concentration of other pollutants will not increase due to implementation of the action programme;

30.3. if in agglomeration or in a certain area of the zone the concentration of pollutants does not comply with the long-term objective, financially substantiated measures shall be included in the action programme for achievement of the long-term objective.

*[21 February 2017]*

31. The action programme and the short-term programme shall be approved by a local government. The action programme, prior to approval thereof, shall be coordinated with the Ministry of Environmental Protection and Regional Development, receiving a positive decision therefrom, whereas the short-term programme - with the State Environmental Service, receiving a positive decision therefrom.

*[21 February 2017]*

32. If the agglomerations or zone areas in which the air quality standards are exceeded cover several local governments, the relevant local governments shall draw up and implement a common action programme.

33. The action programme, as well as other measures which are carried out for the improvement of ambient air quality, shall comply with the following criteria:

33.1. air, water and soil protection shall be performed in a complex way, taking into account the integrated approach;

33.2. negative impact shall not be caused on the environment outside the territory to which the action programme applies.

34. The action programme shall include the information referred to in Part I of Annex 18 to this Regulation, as well as other information arising from the legal acts of the European Union regarding the provision of information and development of the action programme in the field of ambient air protection or which is considered relevant by the developers of the action programme. Measures for limitation of emissions from fixed sources, as well as for limitation of vehicle traffic may be included in the action programme, if they cause exceedances of ambient air quality limit values. The action programme shall include the assessment of expected increase in traffic intensity which in the future could be caused by the construction of new objects and the impact thereof on ambient air quality and achievement of the objectives specified in the action programme, substantiating it with the modelling of ambient air pollution dispersion.

*[21 February 2017]*

35. In order not to reduce but improve ambient air quality in territories where the level is lower than the air quality standards specified in this Regulation, but it does not exceed the upper assessment threshold or is lower than the long-term objective, the relevant local governments:

35.1. may determine air quality target values for pollutants for which limit values have been determined. Air quality target values may not be lower than the upper assessment threshold of pollutants for which such is specified in Annex 14 to this Regulation and than levels of ambient air pollution observed in long-term for pollutants referred to in Paragraph 3 of this Regulation for which the upper assessment threshold is not specified;

35.2. shall determine the numerical value and determination period, as well as the term within which the air quality target values specified in accordance with Sub-paragraph 35.1 of this Regulation are to be ensured.

36. Local governments and State institutions according to the competence thereof shall implement measures in order for the air quality status not to deteriorate in zones or agglomerations where the level does not exceed the air quality standards specified in this Regulation

37. The local government which implements the action programme or the short-term programme shall, each year until 1 March, submit to the Ministry of Environmental Protection and Regional Development a report on the implementation of the programme during the previous year. The local government, within the territory of which the limit values of particulate matter PM<sub>10</sub> are exceeded in ambient air due to repeated dispersion of particulate matter PM<sub>10</sub> after winter-sanding or -salting, shall, in the report on the implementation of the programme, provide the information regarding measures being performed or already implemented in order to reduce the concentration of repeatedly dispersed particulate matter PM<sub>10</sub>.

*[21 February 2017]*

38. The Ministry of Environmental Protection and Regional Development, on the basis of information provided in the report referred to in Paragraph 37 of this Regulation, shall prepare evaluation of the implementation of the action programme and provide proposals regarding measures to facilitate the implementation of the action programme and send them to the relevant local government within two months after receipt of the report on the implementation of the action programme or shall convene a meeting to discuss the identified issues.

*[21 February 2017]*

39. An action programme shall be reviewed not less than once in five years, as well as if it is not implemented according to the specified time schedules or significant negative changes in air quality parameters have been detected. The reviewed action programme shall be co-ordinated and approved in accordance with the procedures laid down in this Regulation.

40. If ambient air pollution exceeds the ambient air quality standards specified in this Regulation, alert thresholds, or long-term objectives due to significant transport of air pollution (also ozone precursors) from the Member States of the European Union, the Ministry of Environmental Protection and Regional Development in co-operation with the European Commission and the responsible authority of the relevant state shall draw up joint plans and programmes for reduction of ambient air pollution. If necessary, the local government, in accordance with Paragraph 26 of this Regulation, shall prepare and implement joint short-term action programmes which cover adjoining zones in other Member States and ensure that these states receive all the relevant information.

[21 February 2017]

41. In order to achieve the national exposure reduction target and exposure concentration target value specified in Annex 4 to this Regulation, the Centre shall, until 31 December 2012, if necessary, draw up the national action programme in order to reduce the average exposure indicator in accordance with the requirements specified in Part II of Annex 4 and Paragraph 4 of this Regulation. If it is foreseen over the period of next three years that the national exposure reduction target will not be achieved until 2020 or the average exposure indicator for 2015 may exceed the exposure concentration target value, the programme shall be reviewed. Measures, which would ensure the observance of the national exposure reduction target and exposure concentration target value specified for particulate matter PM<sub>2,5</sub>, shall be intended in the programme.

## V. Provision of Information

42. The Centre shall, starting from 2019, not less than once every five years, collect and prepare information regarding ambient air quality assessment in agglomerations and zones, as well as attach the relevant ambient air pollution dispersion maps and necessary descriptions.

[21 February 2017]

43. The Centre shall, for every calendar year until 30 July of the following year, collect information obtained in performing air quality assessment, and prepare an annual report on the ambient air quality in agglomerations and areas of the zone. The report shall provide information regarding the cases when characteristic values and standards of pollutants referred to in Paragraph 3 of this Regulation are exceeded. Where the limit value (taking also into account the margin of tolerance, if any determined), target value, alert threshold, information threshold or long-term target is exceeded, the possible reasons for exceedance and impact of particular pollutant on human health and, if necessary, on vegetation shall be indicated.

44. If any of the air quality standards or characteristic values referred to in Paragraph 43 of this Regulation are exceeded, the Health Inspectorate shall, within 30 days upon request of the Centre, prepare and provide information regarding the impact of the particular pollutant on human health.

45. In order to provide the public as well as environment and health protection institutions, mass media and interested associations (including associations the objective of which is the environmental protection or consumer rights protection, as well as those associations which are representing the interests of sensitive populations) with the information regarding the level of ambient air pollution in the country:

45.1. the Centre shall:

45.1.1. publish the information referred to in Paragraphs 42 and 43 of this Regulation on the website thereof;

45.1.2. at least once a day, but, if necessary, every hour update the information regarding the level of sulphur dioxide, nitrogen dioxide, particulate matter PM<sub>10</sub>, if possible, also particulate matter PM<sub>2,5</sub>, ozone, and carbon monoxide on the website thereof;

45.1.3. at least once in three months, but, if necessary, once a month update the information regarding the level of lead, benzene, arsenic, cadmium, mercury, nickel, benzo(a)pyrene, and other polycyclic aromatic hydrocarbons on the website thereof;

45.2. the Ministry of Environmental Protection and Regional Development shall publish information regarding suspension of the term for provision of the limit values specified for sulphur dioxide, benzene, or particulate matter PM<sub>10</sub> in accordance with Paragraphs 50 and 51 of this Regulation on the website thereof;

45.3. local governments shall inform inhabitants regarding the developed action programmes, short-term programmes and their implementation, as well as regarding action programmes which have been developed in accordance with Paragraph 52 of this Regulation (publishing the programmes and information regarding the implementation thereof also on the website of the relevant local government);

45.4. if the alert threshold or information threshold is exceeded or if there are serious threats that it may be exceeded, the State Fire and Rescue Service shall, after the receipt of the information referred to in Paragraph 46 of this Regulation, inform inhabitants in accordance with the regulatory enactments regarding the establishment, use and financing of the civil alarm and notification system;

45.5. other State or local government institutions which conduct the measurements of the level of ambient air pollution and publish them or inform the public otherwise regarding the pollution level shall conform to the requirements laid down in Chapter III of this Regulation. If the institution fails to conform to the requirements laid down in Chapter III of this Regulation, upon publishing the obtained measurement results, it shall indicate that this information has not been obtained in accordance with the requirements laid down in this Regulation and it has a low level of reliability.

*[21 February 2017]*

46. If the information threshold or alert threshold is exceeded or if there are serious threats that it may be exceeded:

46.1. the Centre shall, without delay, inform the Ministry of Environmental Protection and Regional Development, the Health Inspectorate, the State Fire and Rescue Service, the local government, and the State Environmental Service;

46.2. the Ministry of Environmental Protection and Regional Development and the Centre in co-operation with the relevant local government shall prepare and transfer to the State Fire and Rescue Service the following information:

46.2.1. the date when pollution has occurred, as well as the time and place of pollution;

46.2.2. in case of ozone the highest one hour concentration and the highest eight hour mean concentration shall be specified;

46.2.3. forecast for the following afternoon, day or days:

46.2.3.1. expected changes in pollution concentration (improvement, stabilisation or deterioration of the situation), specifying the reasons for those changes;

46.2.3.2. geographical spread of air pollution;

46.2.3.3. expected duration of air pollution;

46.3. the Health Inspectorate shall prepare and transfer to the State Fire and Rescue Service the following information:

46.3.1. regarding population groups at risk which may potentially be affected by the information threshold or alert threshold exceedance for the relevant type of pollution;

46.3.2. regarding health protection measures to be performed by inhabitants (including sensitive populations) and the description of likely symptoms.

46.4. the Ministry of Environmental Protection and Regional Development in co-operation with the State Environmental Service and the respective local government shall, without delay, prepare information for inhabitants regarding the main pollution sources, as well as information regarding the measures necessary to reduce the ambient air pollution caused by these sources and shall ensure availability thereof to the public.

*[21 February 2017]*

47. If the information threshold or alert thresholds are exceeded in zones or agglomerations close to the State border, the Ministry of Environmental Protection and Regional Development shall inform the competent authorities of the relevant Member States of the European Union regarding the event as soon as possible.

*[21 February 2017]*

48. The Centre shall provide the following information to the European Commission:

48.1. every year not later than until 30 September of the following year:

48.1.1. regarding agglomerations and zones where exceedances of limit values (taking also into account the margin of tolerance, if any specified), target values, critical levels or long-term objectives of one or several pollutants referred to in Paragraph 3 of this Regulation are detected and regarding the levels assessed in such territories, as well as dates when the exceedance was observed;

48.1.2. if air quality target values for arsenic, cadmium, nickel and benzo(a)pyrene are exceeded - regarding zones and agglomerations where the exceedance was detected, the amount, concentration and reasons thereof (pollution sources causing exceedance and the number of inhabitants exposed to exceedance of concentration of the abovementioned substances);

48.1.3. data regarding ambient air quality;

48.1.4. if necessary, a list of zones and agglomerations where exceedances of the limit values specified for a given pollutant are attributable to natural sources and inform regarding concentrations of pollutants caused by natural sources and contribution sources, as well as provide evidence that the exceedance is attributable to natural sources;

48.1.5. if necessary, a list of zones and agglomerations, where the limit values of particulate matter PM<sub>10</sub> are exceeded in the ambient air due to repeated dispersion after winter-sanding or - salting attaching the information regarding the concentration of particulate matter PM<sub>10</sub> detected and sources. The Centre shall provide evidence that

the reason for exceedance of the limit value is repeatedly dispersed particulate matter PM<sub>10</sub> and that the relevant measures have been taken to reduce the concentration thereof;

48.2. regarding agglomerations and zones where exceedance of the alert threshold or information threshold was detected specifying the level recorded and the duration of exceedance. The abovementioned information shall be provided not later than three months after the day when the exceedance of the alert threshold or information threshold was detected;

48.3. regarding the measurement methods used in the determination of the chemical composition of particulate matter PM<sub>2,5</sub> and in sampling of volatile organic compounds (organic compounds from anthropogenic and biogenic sources (other than methane) that are capable of producing photochemical oxidants by reactions with nitrogen oxides in the presence of sunlight) referred to in Annex 17 to this Regulation and in concentration measurement of these substances;

48.4. regarding action programmes (shall be submitted not later than two years after the time when limit values were exceeded, taking into account the margin of tolerance);

48.5. regarding implementation of action programmes and short-term programmes (in respect of ozone - also implementation of other measures for reduction of pollution). The abovementioned information shall be provided once in three years;

48.6. reports and information in accordance with legal acts of the European Union regarding provision of information in the field of air protection.

48.<sup>1</sup> Only data which are considered valid shall be used for reporting. All data notified in accordance with Paragraph 48 of this Regulation (except for provisional data) shall be considered as valid.

*[21 February 2017]*

49. The Ministry of Environmental Protection and Regional Development shall provide the following information to the European Commission:

49.1. the institutions which are responsible for air quality assessment, approval of air quality measurement systems (for example, methods, measuring devices, monitoring network, laboratories), co-ordination of compliance assessment of air quality measurements, as well as for the analysis of methods for compliance assessment and air quality assessment;

49.2. cases when Paragraph 51 or 52 of this Regulation is applied, as well as send the relevant information.

*[21 February 2017]*

50. *[21 February 2017]*

## **VI. Postponement of Terms for Provision of Certain Limit Values**

51. The deadline for provision of limit value may be extended until 1 January 2015 after receipt of approval from the European Commission for the zone or agglomeration, where the concentration of nitrogen dioxide or benzene in the ambient air exceeds limit values specified for these substances and it is not possible to ensure the conformity with limit values until 1 January 2010, if the following information has been submitted to the European Commission:

51.1. the relevant local government in co-operation with the Ministry of Environmental Protection and Regional Development shall prepare information which proves that all necessary measures have been taken at the State, regional and national level in order to ensure conformity with the limit values specified for nitrogen dioxide or benzene by 1 January 2010 and explain the reasons due to which the conformity is not ensured;

51.2. the relevant local government shall prepare the information on how the conformity with the limit values specified for nitrogen dioxide or benzene will be ensured within the extended term, and provide substantiated forecasts regarding possible reduction of the nitrogen dioxide or benzene concentration;

51.3. the relevant local government shall, in accordance with Paragraphs 24 and 26 of this Regulation, draw up an action programme for the zones and agglomerations to which the postponement of deadlines for provision of limit values apply. The local government in co-operation with the Ministry of Environmental Protection and Regional Development shall include in the action programme the information referred to in Part II of Annex 18 to this Regulation which is related to the relevant pollutants and clearly demonstrate therein how it will ensure the conformity with the limit values before the extended deadline.

*[21 February 2017]*



52. The deadline for provision of the limit value may be postponed until 21 May 2011 after receipt of approval from the European Commission for the zone or agglomeration where the concentration of particulate matter PM<sub>10</sub> exceeds the specified limit values because of site-specific dispersion characteristics, adverse climatic conditions, or transboundary contributions, if the following information has been submitted to the European Commission:

52.1. the relevant local government in co-operation with the Ministry of Environmental Protection and Regional Development shall prepare information which proves that conformity with the limit values specified for particulate matter PM<sub>10</sub> cannot be achieved because of site-specific dispersion characteristics, adverse climatic conditions, or transboundary contributions;

52.2. the relevant local government in co-operation with the Ministry of Environmental Protection and Regional Development shall prepare information which proves that all necessary measures were taken at the State, regional and local level in order to ensure the conformity with the limit values specified for particulate matter PM<sub>10</sub> by 1 January 2005;

52.3. the relevant local government shall prepare the information on how the conformity with the limit values specified for particulate matter PM<sub>10</sub> will be ensured within the extended deadline, and provide substantiated forecasts regarding possible reduction of particulate matter PM<sub>10</sub> concentration;

52.4. the relevant local government shall, in accordance with Paragraphs 24 and 26 of this Regulation, draw up an action programme for the zones and agglomerations to which the postponement of deadlines for provision of limit values apply. In this action programme the local government in co-operation with the Ministry of Environmental Protection and Regional Development shall include the information referred to in Part II of Annex 18 to this Regulation which is related to the relevant pollutants and clearly demonstrate therein how it will ensure the conformity with the limit values before the extended deadline.

*[21 February 2017]*

53. The local government shall submit the information referred to in Paragraph 51 or 52 of this Regulation, including the action programme drawn up, to the Ministry of Environmental Protection and Regional Development.

*[21 February 2017]*

54. Upon applying Paragraph 51 or 52 of this Regulation, the local government shall ensure that during postponement of the deadline for ensuring of limit values specified for nitrogen oxide, benzene, or particulate matter PM<sub>10</sub> the concentration of these pollutants is not higher than the maximum margin of tolerance which is specified for each pollutant concerned in Annexes 2, 3, and 7 to this Regulation.

## **VII. Closing Provisions**

55. The Cabinet Regulation No. 588 of 21 October 2003, Regulations Regarding Air Quality (*Latvijas Vēstnesis*, 2003, No. 153; 2006, No. 118) is repealed.

56. Paragraph 10 of this Regulation shall be in force until 31 December 2010.

57. *[21 February 2017]*

58. Sub-paragraphs 8.<sup>6</sup> and 8.<sup>7</sup> of this Regulation shall come into force on 30 June 2018.

*[21 February 2017 / The abovementioned amendments shall be included in the wording of the Regulation as of 30 June 2018]*

## **Informative Reference to the Directives of the European Union**

*[21 February 2017]*

The Regulation includes legal norms arising from:

1) Directive 2008/50/EC of the European Parliament and of the Council of 21 May 2008 on ambient air quality and cleaner air for Europe;

2) Directive 2004/107/EC of the European Parliament and of the Council of 15 December 2004 relating to arsenic, cadmium, mercury, nickel and polycyclic aromatic hydrocarbons in ambient air;

3) 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;

4) Directive (EU) 2015/2193 of the European Parliament and of the Council of 25 November 2015 on the limitation of emissions of certain pollutants into the air from medium combustion plants.

Prime Minister V. Dombrovskis

Minister for Environment R. Vējonis

#### **Annex 1**

Cabinet Regulation No. 1290

3 November 2009

## **Ambient Air Quality Standards and Characteristics for Sulphur Dioxide**

### **I. Limit Values**

1. Limit values for sulphur dioxide shall be expressed as  $\mu\text{g}/\text{m}^3$  (standard volume, at a temperature of 293 K and an atmospheric pressure of 101.3 kPa):

No.	Type of limit value	Determination period	Limit value
1.1.	Hourly limit value for the protection of human health ( $R_H$ )	1 hour	$350 \mu\text{g}/\text{m}^3$ (not to be exceeded more than 24 times a calendar year)
1.2.	Daily limit value for the protection of human health ( $R_H$ )	24 hours	$125 \mu\text{g}/\text{m}^3$ (not to be exceeded more than three times a calendar year)

### **II. Critical Level**

2. Critical level for the protection of ecosystems ( $KPL_g$ ), which is determined for a calendar year and winter period (from 1 October up to 31 March) shall be  $20 \mu\text{g}/\text{m}^3$ .

### **III. Alert threshold**

3. Alert threshold is  $500 \mu\text{g}/\text{m}^3$  for measurements which are made over three consecutive hours, if the monitoring stations, in which the measurements are made, refer to the territory over 100 km<sup>2</sup> or an entire zone or agglomeration.

Minister for Environment R. Vējonis

#### **Annex 2**

Cabinet Regulation No. 1290

3 November 2009

## **Ambient Air Quality Standards and Characteristics for Nitrogen Dioxide and Nitrogen Oxides**

### **I. Limit Values for Nitrogen Dioxide**

1. Limit values for nitrogen dioxide and nitrogen oxides shall be expressed as  $\mu\text{g}/\text{m}^3$  (standard volume, at a temperature of 293 K and an atmospheric pressure of 101.3 kPa):

No.	Type of limit value	Determination period	Limit value	Margin of tolerance	Date from which exceeding of limit value is not permissible, not exceeding the margin of tolerance
1.1.	Hourly limit value for the protection of human health ( $R_H$ )	1 hour	$200 \mu\text{g}/\text{m}^3$ (not to be exceeded more than 18 times a calendar	Initially 50 % over the limit value. In calculation it shall be decreased on 1 January 2001 and every 12 months	1 January 2010

			times a calendar year)	thereafter by equal annual percentages to reach 0 % by 1 January 2010	
1.2.	Annual limit value for the protection of human health (R <sub>h</sub> )	calendar year	40 µg/m <sup>3</sup>	Initially 50 % over the limit value. In calculation it shall be decreased on 1 January 2001 and every 12 months thereafter by equal annual percentages to reach 0 % by 1 January 2010	1 January 2010

## II. Critical Level for Nitrogen Oxides

2. Critical level for the protection of ecosystems (KPL<sub>g</sub>), which is determined for a calendar year shall be 30 µg/m<sup>3</sup>.

## III. Alert Threshold for Nitrogen Dioxide

3. Alert threshold is 400 µg/m<sup>3</sup> for measurements which are made over three consecutive hours, if the monitoring stations in which the measurements are made, refer to the territory over 100 km<sup>2</sup> or an entire zone or agglomeration.

Minister for Environment R. Vējonis

### Annex 3

Cabinet Regulation No. 1290  
3 November 2009

## Ambient Air Quality Standards for Particulate Matter PM<sub>10</sub>

No.	Type of limit value	Determination period	Limit value	Margin of tolerance	Date until which exceeding of limit value is permissible, not exceeding margin of tolerance
1.	Daily limit value for the protection of human health (R <sub>h</sub> )	24 hours	50 µg/m <sup>3</sup> (not to be exceeded more than 35 times a calendar year)	Initially 50 % over the limit value. In calculation it shall be decreased on 1 January 2001 and every 12 months thereafter by equal annual percentages to reach 0 % by 1 January 2005	1 January 2005
2.	Annual limit value for the protection of human health (R <sub>h</sub> )	calendar year	40 µg/m <sup>3</sup>	Initially 20 % over the limit value. In calculation it shall be decreased on 1 January 2001 and every 12 months thereafter by equal annual percentages to reach 0 % by 1 January 2005	1 January 2005

Minister for Environment R. Vējonis

### Annex 4

Cabinet Regulation No. 1290  
3 November 2009

## Ambient Air Quality Standards and Characteristics for Particulate Matter PM<sub>2,5</sub>

[21 February 2017]

### I. Average Exposure Indicator

1. The average exposure indicator expressed in  $\mu\text{g}/\text{m}^3$  shall be based upon measurements in urban background locations in zones and agglomerations throughout the State territory. It should be assessed as a three-calendar year running annual mean concentration averaged over all sampling points established pursuant to Sub-paragraph 1.2 of Annex 10. If the reference year is 2010, the average exposure indicator appropriate for this year is the mean concentration of the years 2008, 2009, and 2010. The average exposure indicator for the year 2015 shall be the three-year running mean concentration averaged over all those sampling points for the years 2013, 2014, and 2015. The average exposure indicator shall be used to examine whether the exposure reduction target is met.

2. The average exposure indicator for the year 2020 shall be the three-year running mean concentration averaged over all those sampling points for the years 2018, 2019, and 2020. It shall be used for the examination whether the national exposure reduction target is met.

3. Where the average exposure indicator in the reference year or in any time period from 2010 until 2020 is  $8,5 \mu\text{g}/\text{m}^3$  or less the national exposure reduction target shall be zero relative to the initial average exposure indicator concentration.

4. The average exposure indicator for the year 2015 established may not exceed the exposure concentration target value laid down in Part III of this Annex.

## II. National Exposure Reduction Target

No.	National exposure reduction target relative to the average exposure indicator in 2010		Year by which the national exposure reduction target should be met
	initial average exposure indicator concentration in $\mu\text{g}/\text{m}^3$	national exposure reduction target in percentage	2020
1.	$\leq 8.5$	0	
2.	$> 8.5 - < 13$	10	
3.	$= 13 - < 18$	15	
4.	$= 18 - < 22$	20	
5.	$\geq 22$	All relevant measures to achieve $18 \mu\text{g}/\text{m}^3$	

## III. Exposure Concentration Target Value

Exposure Concentration Target Value	Date by which the exposure concentration target value is to be met
$20 \mu\text{g}/\text{m}^3$	1 January 2015

## IV. Guideline value

Type of limit value	Determination period	Guideline value	Date by which target value should be met
Target value for the protection of human health ( $M_g$ )	Calendar year	$25 \mu\text{g}/\text{m}^3$	1 January 2010

## V. Limit Value

No.	Type of limit value	Determination period	Limit value	Margin of tolerance	Date by which limit value should be met
Stage 1					
1.	Annual limit value for the protection of human health ( $R_h$ )	calendar year	$25 \mu\text{g}/\text{m}^3$	Initially 20 % over the limit value. In calculation it shall be decreased on 1 January 2009 and every 12 months thereafter by equal annual percentages to reach 0 % by 1 January 2015	1 January 2015
Stage 2*					
2.	Annual limit value for the protection of human health ( $R_h$ )	calendar year	$20 \mu\text{g}/\text{m}^3$		1 January 2020

Note.

\* Stage 2 - indicative limit value to be reviewed by the Commission in 2013 in the light of further information on health and environmental effects, technical feasibility and experience of the target value in Member States.

Minister for Environment R. Vējonis

## Annex 5

Cabinet Regulation No. 1290

3 November 2009

### Ambient Air Quality Standard for Lead

Type of limit value	Determination period	Limit value
Annual limit value for the protection of human health ( $R_h$ )	calendar year	0.5 $\mu\text{g}/\text{m}^3$ *

Note.

\* Limit value to be met by 1 January 2010 in the immediate vicinity of the specific industrial sources situated on sites contaminated by decades of industrial activities. In such cases, the limit value until 1 January 2010 will be 1.0  $\mu\text{g}/\text{m}^3$ . The area in which higher limit values apply must not extend further than 1000 m from such specific sources.

Minister for Environment R. Vējonis

## Annex 6

Cabinet Regulation No. 1290

3 November 2009

### Ambient Air Quality Standards and Characteristics for Ozone

#### I. General Provisions

1. Ambient air quality standards for ozone shall be expressed as  $\mu\text{g}/\text{m}^3$  (standard volume, at a temperature of 293  $^{\circ}\text{K}$  and an atmospheric pressure of 101,3 kPa).

2. Characteristic value AOT40 (expressed in  $(\mu\text{g}/\text{m}^3) \times \text{hours}$ ) - the sum of the difference between hourly concentrations greater than 80  $\mu\text{g}/\text{m}^3$  (= 40 parts per billion) and 80  $\mu\text{g}/\text{m}^3$  over a given period using only the one-hour values measured between 8.00 and 20.00 Central European Time (CET) each day - shall be used for determination of ambient air quality standards.

3. The obtained annual ozone concentration values regarding exceedances of the ambient air quality standard in comparison with the determined ambient air quality target values and long-term objective shall be examined, if the data quality complies with the criteria determined in Annex 15 to this Regulation.

#### II. Ambient Air Quality Target Values

No.	Type of ambient air quality target value	Parameter	Ambient air quality target value	Term for fulfilment (target value)*
1.	Target value for the protection of human health ( $M_d$ )	Maximum daily eight-hour mean**	120 $\mu\text{g}/\text{m}^3$ (not to be exceeded on more than 25 days per calendar year averaged over three years***)	1 January 2010
2.	Target value for protection of vegetation ( $M_h$ )	AOT40, calculated from one hour value from May to July	18 000 $\mu\text{g}/\text{m}^3 \times \text{h}$ averaged over five years****	1 January 2010

Notes.

1. \* 2010 will be the first year the data for which is used in assessing compliance with ambient air quality target value over the following three or five years.

2. \*\* The maximum daily eight-hour mean concentration shall be determined by examining eight-hour running averages, calculated from hourly data and updated each hour. Each eight-hour average so calculated shall 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 the day.

3. \*\*\* If the three or five year averages cannot be determined on the basis of a full and consecutive set of annual data, the minimum annual data required for checking compliance with the ambient air quality target value for the protection of human health shall be valid for one year.

4. \*\*\*\* If the three or five year averages cannot be determined on the basis of a full and consecutive set of annual data, the minimum annual data required for checking compliance with the ambient air quality target value for the protection of vegetation shall be valid for three years.

### III. Long-term Objectives

No.	Long-term Objectives	Parameter	Long-term objective value
1.	Protection of human health	maximum daily eight-hour mean within a calendar year	120 $\mu\text{g}/\text{m}^3$
2.	Protection of vegetation	AOT40, calculated from one hour value from May to July	6000 $\mu\text{g}/\text{m}^3 \times \text{h}$

### IV. Information Threshold and Alert Threshold for Ozone

No.	Characteristic	Parameter	Characteristic value
1.	Information threshold	one hour mean	180 $\mu\text{g}/\text{m}^3$
2.	Alert threshold	one hour mean*	240 $\mu\text{g}/\text{m}^3$

Note.

\* The exceedances of the threshold is to be measured or predicted for three consecutive hours.

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### Annex 7

Cabinet Regulation No. 1290  
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## Ambient Air Quality Standard for Benzene

Limit value shall be expressed as  $\mu\text{g}/\text{m}^3$  (standard volume, at a temperature of 293 K and an atmospheric pressure of 101,3 kPa).

Type of limit value	Determination period	Limit value	Margin of tolerance	Date until which exceeding of limit value is permissible, not exceeding margin of tolerance
Annual limit value for the protection of human health ( $R_h$ )	calendar year	5 $\mu\text{g}/\text{m}^3$	Initially 100 % over the limit value. In calculation it shall be decreased on 1 January 2006 and every 12 months thereafter by 1 $\mu\text{g}/\text{m}^3$ to reach 0 % by 1 January 2010.	1 January 2010

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### Annex 8

Cabinet Regulation No. 1290  
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## Ambient Air Quality Standard for Carbon Monoxide

Limit value shall be expressed as  $\mu\text{g}/\text{m}^3$  (standard volume, at a temperature of 293°K and an atmospheric pressure of 101,3 kPa).

Type of limit value	Determination period	Limit value
Eight hour limit value for the protection of human health ( $R_{8h}$ )	maximum daily eight hour mean concentration	10 $\text{mg}/\text{m}^3$

Note.

The maximum daily eight hour mean concentration shall be determined on the basis of eight hour running averages, calculated from hourly data and updated each hour. Each eight-hour average so calculated shall 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 the day.

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### Annex 9

Cabinet Regulation No. 1290  
3 November 2009

## Ambient Air Quality Standard for Metals and Their Compounds, Non-metals and Their Compounds, as well as Volatile Organic Compounds

### I. Target Values for Arsenic, Cadmium, Nickel and Benzo(a)pyrene

No.	Name of substance	Ambient air quality target value*	Date until which exceeding of target value is permissible
1.	Arsenic	6 $\text{ng}/\text{m}^3$	31 December 2012
2.	Cadmium	5 $\text{ng}/\text{m}^3$	
3.	Nickel	20 $\text{ng}/\text{m}^3$	
4.	Benzo(a) pyrene	1 $\text{ng}/\text{m}^3$	

Note.

\* Applicable to average content in the particulate matter  $\text{PM}_{10}$  fraction during one calendar year.

### II. Target Values for Ambient Air Quality Assessment for Emissions of Other Metals and Non-metals and Their Compounds, as well as Volatile Organic Compounds from Sources of Air Pollution

No.	Name of substance	Determination period	Ambient air quality target value
1.	<b>Metals and their compounds</b>		
1.1.	manganese and its compounds (recalculating to manganese)	calendar year	0.15 $\mu\text{g}/\text{m}^3$
1.2.	vanadium and its compounds (recalculating to vanadium)	24 hours	1 $\mu\text{g}/\text{m}^3$
1.3.	mercury and its compounds (recalculating to mercury)	24 hours	1 $\mu\text{g}/\text{m}^3$
2.	<b>Non-metals and their compounds</b>		
2.1.	carbon disulphide	24 hours	100 $\mu\text{g}/\text{m}^3$
2.2.	hydrogen sulphide ( $\text{H}_2\text{S}$ )	24 hours	150 $\mu\text{g}/\text{m}^3$
3.	<b>Volatile organic compounds</b>		
3.1.	1,2-Dichloroethane	24 hours	0.7 $\text{mg}/\text{m}^3$
3.2.	dichloromethane	24 hours	3 $\text{mg}/\text{m}^3$
		week	0.45 $\text{mg}/\text{m}^3$

3.3.	formaldehyde	30 minutes	0.1 mg/m <sup>3</sup>
3.4.	styrene	week	0.26 mg/m <sup>3</sup>
3.5.	tetrachloroethene (perchloro-ethylene)	calendar year	0.25 mg/m <sup>3</sup>
3.6.	toluene	week	0.26 mg/m <sup>3</sup>

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#### Annex 10

Cabinet Regulation No. 1290

3 November 2009

## Criteria for Determining the Number of Ambient Air Monitoring Stations for Performance of Fixed Measurements

[21 February 2017]

### I. Criteria for Determining the Number of Ambient Air Monitoring Stations for the Measurement of Sulphur Dioxide, Nitrogen Dioxide and Nitrogen Oxides, Lead, Benzene and Carbon Monoxide, Particulate Matter (PM<sub>10</sub> and PM<sub>2,5</sub>) Concentration in Ambient Air

1. In order to assess ambient air quality and compliance with limit values for the protection of human health, information and alert thresholds, in zones and agglomerations where fixed continuous measurements are the sole source of information, the minimum number of ambient air monitoring stations shall be as follows:

1.1. assessing the level nearby diffuse sources, the following criteria shall be taken into account:

No.	Population of agglomeration or zone (thousands)	Number of stations			
		if level exceeds the upper assessment threshold*		if maximum concentrations are between the upper and lower assessment thresholds	
		pollutants other than particulates	particulates (sum of particulate matter PM <sub>10</sub> and PM <sub>2,5</sub> )**	pollutants other than particulates	particulates (sum of particulate matter PM <sub>10</sub> and PM <sub>2,5</sub> )**
1.1.1.	up to 250	1	2	1	1
1.1.2.	251 - 499	2	3	1	2
1.1.3.	500 - 749	2	3	1	2
1.1.4.	750 - 999	3	4	1	2
1.1.5.	1000 - 1499	4	6	2	3
1.1.6.	1500 - 1999	5	7	2	3
1.1.7.	2000 - 2749	6	8	3	4
1.1.8.	2750 - 3749	7	10	3	4
1.1.9.	3750 - 4749	8	11	3	6
1.1.10.	4750 - 5999	9	13	4	6
1.1.11.	≥ 6000	10	15	4	7

#### Notes.

1. \* In case of pollutant being nitrogen dioxide, particulate matter PM<sub>10</sub>, particulate matter PM<sub>2,5</sub>, benzene and carbon monoxide, at least one urban background monitoring station and one traffic-orientated station shall be placed. Sampling points with exceedances of the limit value for PM<sub>10</sub> within the last three years shall be maintained, unless a relocation is necessary owing to special circumstances, in particular spatial development.

2. \*\* Where PM<sub>2,5</sub> and PM<sub>10</sub> are measured in accordance with Paragraph 3 of this Regulation at the same monitoring station, these shall count as two separate sampling points. The total number of particulate matter PM<sub>2,5</sub> and PM<sub>10</sub> sampling points in the State shall not differ by more than a factor of 2, and the number of PM<sub>2,5</sub> sampling points in the urban background of agglomerations and urban areas shall meet the requirements under Sub-paragraph

1.2 of this Annex.

1.2. in order to assess whether the national exposure reduction target for the protection of human health is observed, the minimum number of sampling points shall be at least one sampling point per million inhabitants summed over agglomerations and additional urban areas in excess of 100 000 inhabitants. Those sampling points may coincide with sampling points under Sub-paragraph 1.1 of this Annex;

1.3. in assessment of pollution in the vicinity of point sources, the number of sampling points for fixed measurement shall be calculated taking into account emission densities, the likely distribution patterns of ambient-air pollution and the potential exposure of the population.

2. In order to ensure the observance of the standards specified for the protection of ecosystem or vegetation in zones other than agglomerations, the minimum number of monitoring stations for measurements at fixed places shall be as follows:

2.1. if maximum concentrations exceed the upper assessment threshold - one station every 20 000 km<sup>2</sup>;

2.2. if maximum concentrations are between upper and lower assessment threshold - one station every 40 000 km<sup>2</sup>.

## **II. Criteria for Determining the Number of Ambient Air Monitoring Stations for the Measurement of Ozone Concentration in Ambient Air**

3. In order to assess ambient air quality and compliance with limit values, long-term objectives, information and alert thresholds at places where continuous measurements are the sole source of information, the minimum number of ozone pollution monitoring stations for the performance of continuous measurements shall be as follows:

No.	Population of agglomeration or zone (thousands)	Number of stations		
		agglomeration*	other zones*	rural background
3.1.	up to 250		1	1 station per 50 000 km <sup>2</sup> over all zones per country**
3.2.	251 - 500	1	2	
3.3.	501 - 1000	2	2	
3.4.	1001 - 1500	3	3	
3.5.	1501 - 2000	3	4	

Notes.

1. \* At least one ambient air quality monitoring station in the territory where the highest concentration of ozone pollution is observed; in an agglomeration at least 50 % of the stations must be located in suburban area.

2. \*\* One station per 25 000 km<sup>2</sup> is recommended.

4. The continuous measurements of nitrogen dioxide shall be performed in addition to the continuous ozone measurements at a minimum of 50 % of the monitoring stations referred to in Paragraph 3 of this Annex, except at the monitoring stations in rural area for background measurements, specified in Annex 12 to this Regulation, where other monitoring methods may be used.

5. In zones and agglomerations where in accordance with the results of measurements of previous five years the ozone concentration does not exceed values of long-term objective in determining the minimum number of ozone pollution fixed monitoring stations the following conditions shall be taken into account in order to assess the long-term objective for ozone pollution:

5.1. the number of fixed monitoring stations shall, in combination with other means of supplementary assessment (such as air quality modelling and collocated nitrogen dioxide measurements), be sufficient to examine the trend of ozone pollution and check compliance with the long-term objectives;

5.2. if fixed ambient air monitoring stations are located in agglomeration or zone, the number of monitoring stations specified in Paragraph 3 of this Annex may be reduced to one-third;

5.3. at places where information from fixed ambient air monitoring stations is the sole source of information, at least one continuous monitoring station shall be installed;

5.4. in zones where there is no monitoring stations (there are only other means for assessment of air quality), coordination with the number of stations in neighbouring zones shall ensure adequate assessment of ozone concentrations against long-term objectives;

5.5. the number of rural background stations shall be at least one ambient air monitoring station per 100 000 km<sup>2</sup>.

6. For zones and agglomerations within which the results from sampling points for fixed measurements is supplemented by information from modelling or indicative measurements, the total number of monitoring stations specified in Paragraph 3 of this Annex may be reduced provided that:

6.1. the supplementary methods provide sufficient information for the assessment of air quality with regard to target values, long-term objectives, information and alert thresholds;

6.2. the number of monitoring stations to be installed and the spatial resolution of other techniques are sufficient for the concentration of ozone to be established in accordance with the data quality objectives and enable assessment results to meet the requirements specified in Annex 15 to this Regulation;

6.3. the number of sampling points in each zone or agglomeration amounts to at least one monitoring station per two million inhabitants, as well as at least one monitoring station per 50 000 km<sup>2</sup>;

6.4. there is at least one monitoring station in each zone or agglomeration;

6.5. nitrogen dioxide is measured at all monitoring stations, except monitoring stations in rural area for background measurements.

7. The results of modelling and indicative measurement shall be taken into account for the assessment of compliance of air quality with target values in cases specified in Paragraph 6 of this Annex.

### III. Criteria for Determining the Number of Ambient Air Monitoring Stations for the Measurement of Concentration of Arsenic, Cadmium, Nickel and Benzo(a)pyrene in Ambient Air

No.	Population of agglomeration or zone (thousands)	Number of stations, if level exceeds the upper assessment threshold*		Number of stations, if level is between the upper and lower assessment thresholds	
		As, Cd, Ni	B(a)P	As, Cd, Ni	B(a)P
1.	up to 749	1	1	1	1
2.	750 - 1999	2	2	1	1
3.	2000 - 3749	2	3	1	1
4.	3750 - 4749	3	4	2	2
5.	4750 - 5999	4	5	2	2
6.	6000 and more	5	5	2	2

Note.

1. \* At least one urban background monitoring station and one traffic-orientated station shall be included for assessment of concentration of benzo(a)pyrene provided this does not increase the number of sampling points.

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### Annex 11

Cabinet Regulation No. 1290  
3 November 2009

## Location of Ambient Air Monitoring Stations (Sampling Points) and Conditions for Sampling of Sulphur Dioxide, Nitrogen Dioxide and Oxides of Nitrogen, Particulate Matter PM<sub>10</sub>, Particulate Matter PM<sub>2,5</sub>, Lead, Carbon Monoxide, Benzene, Arsenic, Cadmium, Nickel and Benzo(a)pyrene Level

[21 February 2017]

1. Compliance with the limit values directed at the protection of human health shall not be assessed at the following locations:

1.1. any locations situated within areas where members of the public do not have access and there is no fixed habitation;

1.2. on factory premises or at industrial installations to which all relevant provisions concerning health and safety at work apply;

1.3. on the carriageway of roads; and on the central reservations of roads, except where there is normally pedestrian access to the central reservation.

2. Location of ambient air monitoring stations shall comply with the following requirements:

2.1. ambient air monitoring stations directed at the protection of human health shall be sited in such a way as to:

2.1.1. provide data on the areas within zones and agglomerations where the highest concentrations occur to which the population is likely to be directly or indirectly exposed for a period which is significant in relation to the averaging period of the limit values;

2.1.2. acquire data regarding levels in other areas within the zones and agglomerations which are representative of the exposure of the general population within the relevant zone or agglomeration;

2.1.3. obtain data during arsenic, cadmium, nickel and benzo(a)pyrene measurements on deposition rates representing the indirect exposure of the population through the food chain;

2.1.4. avoid measurements representing environmental parameters of only very small territory in immediate vicinity of the ambient air monitoring station. Ambient air monitoring station, if possible, shall be representative of similar territory which is not located in direct vicinity of the station;

2.1.5. the air sampled is representative of air quality for a street segment no less than 100 m length (in case of arsenic, cadmium, nickel and benzo(a)pyrene measurements - within a territory of 200 m<sup>2</sup>) at traffic-orientated sites and at least 250 m × 250 m at industrial sites, where feasible;

2.2. urban background locations shall be located so that their pollution level is influenced by the integrated contribution from all sources upwind of the station. The pollution level should not be dominated by a single source unless such a situation is typical for a larger urban area. Those sampling points shall, as a general rule, be representative for the territory of several square kilometres;

2.3. in assessing rural background levels, the sampling point shall not be influenced by agglomerations or industrial sites in its vicinity, i.e., sites closer than five kilometres;

2.4. in assessing contributions from industrial sources, at least one sampling point shall be installed downwind of the source in the nearest residential area. Where the background concentration is not known, an additional sampling point shall be situated within the main wind direction;

2.5. in order to ensure the protection of ecosystems and vegetation, ambient air monitoring stations shall be sited more than 20 km away from agglomerations or more than five kilometres away from other built-up areas, industrial installations or motorways, or major road sections where traffic intensity exceeds 50 000 vehicles per day. It is desirable that air quality measurements are to be applied in a territory of at least 1000 km<sup>2</sup>. Sampling points may be sited at a lesser distance and samples taken therein may represent air quality in a less extended area, taking account of geographical conditions or of the opportunities to protect particularly vulnerable areas.

3. Siting of sampling probes at the sampling point shall comply with the following conditions in so far as possible:

3.1. the airflow around the inlet sampling probe shall be unrestricted without any obstructions affecting the airflow in the vicinity of the sampler (sampling points located at the building line must be free in an arc of at least 270° or 180°). Normally these devices are positioned some metres away from buildings, 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;

3.2. the inlet sampling probe of airflow shall be positioned between 1,5 m (the breathing zone) and 4 m above the ground. A higher siting may be necessary if the monitoring station characterises a larger territory. If the sampling probe is positioned higher than 4 m above the ground, this information shall be included in the report which is drawn up in accordance with Paragraph 14.<sup>1</sup> of this Regulation;

3.3. the inlet sampling probe shall not be positioned in the immediate vicinity of sources in order to avoid the direct and unmixed with ambient air intake of emitted pollutants;

3.4. the sampler's exhaust outlet shall be positioned so that recirculation of exhaust air to the sampler inlet is avoided;

3.5. sampling probes intended for measuring the pollution caused by vehicles shall be sited in the distance of at least 25 m from major junctions (such junctions which stop the traffic flow and cause different emissions (stop and start) compared to the rest of the road) and not farther than 10 m from the edge of the curbside;

3.6. in establishing ambient air monitoring station, the following factors shall be taken into account:

3.6.1. interfering sources;

- 3.6.2. security of sampling probe,
- 3.6.3. accessibility of sampling point;
- 3.6.4. availability of electrical power and telephone communications;
- 3.6.5. visibility of the sampling point in relation to its surroundings;
- 3.6.6. safety of the public and operators;
- 3.6.7. the possibility to establish sampling points for different pollutants in the vicinity;
- 3.6.8. territorial planning requirements.

4. [21 February 2017]

Minister for Environment R. Vējonis

#### **Annex 12**

Cabinet Regulation No. 1290

3 November 2009

## **Location of Ambient Air Monitoring Stations (Sampling Points) and Conditions for Sampling of Ozone Level**

[21 February 2017]

### **I. Location of Monitoring Stations for Performance of Fixed Measurements**

No.	Type of monitoring station	Objective of monitoring	Representativeness*	Siting criteria
1.	Urban	Protection of human health - to assess the exposure of the urban population to ozone, i.e., where population density and ozone concentration are relatively high and representative of the exposure of the general population	a few km <sup>2</sup>	Away from the influence of local emissions (such as traffic, petrol stations). Vented locations where well mixed levels can be measured. Locations such as residential and commercial areas of cities, parks and small public gardens, big streets or squares with very little or no traffic, open areas characteristic of educational, sports or recreation facilities.
2.	Suburban	Protection of human health and vegetation - to assess the exposure of the population and vegetation located in the outskirts of the agglomeration, where the highest ozone levels, to which the population and vegetation are likely to be directly or indirectly exposed occur.	some tens of km <sup>2</sup>	At a certain distance from the area of maximum emissions, downwind following the main wind direction/directions during conditions favourable to ozone formation. Where population, sensitive crops or natural ecosystems located in the outer fringe of an agglomeration are exposed to high ozone levels. Where appropriate, some suburban stations also upwind of the area of maximum emissions, in order to determine the regional background levels of ozone.
3.	Rural area**	Protection of human health and vegetation - to assess the exposure of population, crops and natural ecosystems to ozone concentrations	regional level (a few hundred km <sup>2</sup> )	Small settlements or areas with natural ecosystems, forests or crops. Away from the influence of immediate local emissions (such as industrial installations and roads). At open area sites, except highlands.



4.	Rural background**	Protection of vegetation and human health - to assess the exposure of crops and natural ecosystems to ozone concentrations as well as exposure of the population	regional, national or continental levels (1000 to 10 000 km <sup>2</sup> )	Station located in areas with lower population density, with natural ecosystems, forests, away from urban and industrial areas and away from local emissions. Avoid locations which are subject to locally enhanced formation of ground-near inversion conditions, also highlands. Coastal sites with pronounced diurnal wind cycles of local character are not recommended.
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Notes.

1. \* Sampling points should, where possible, be representative of similar locations not in their immediate vicinity.

2. \*\* The possibilities of co-ordination in respect of monitoring requirements determined in Regulations of the European Commission (EC) regulating the protection of Community forests against air pollution shall be assessed.

## II. Conditions for Sampling and Selection of Sampling Points

1. In sampling the following conditions shall be observed in so far as possible:

1.1. the conditions referred to in Paragraph 3 of Annex 11;

1.2. the inlet probe is positioned well away from such sources as furnaces and incineration flues and more than 10 m from the nearest road (with distance increasing as a function of traffic intensity).

## III. Documentation and Review of Site Selection for Monitoring Station

2. The procedures in Paragraph 4 of Annex 11 shall be followed. In implementing these requirements, the monitoring data and interpretation thereof in the context of the meteorological and photochemical processes affecting the ozone concentrations measured at the respective sites shall be taken into account.

Minister for Environment R. Vējonis

### Annex 13

Cabinet Regulation No. 1290  
3 November 2009

## Measurements at Rural Background Locations Irrespective of Concentration

1. Measurement of PM<sub>2.5</sub> must include at least the total mass concentration and concentrations of appropriate compounds to characterise its chemical composition. At least the list of chemical species given below shall be included:

1.1.	SO <sub>4</sub> <sup>2-</sup>	Na <sup>+</sup>	NH <sub>4</sub> <sup>+</sup>	Ca <sup>2+</sup>	elemental carbon
1.2.	NO <sub>3</sub> <sup>-</sup>	K <sup>+</sup>	Cl <sup>-</sup>	Mg <sup>2+</sup>	organic carbon

2. Measurements at rural background locations for concentration of pollutants shall be performed taking into account the following criteria:

2.1. one sampling point shall be installed every 100 000 km<sup>2</sup>;

2.2. at least one measuring station shall be installed in the territory of Latvia or may, by agreement with adjoining Member States of the European Union, set up one or several common measuring stations, covering the relevant neighbouring zones, to achieve the necessary spatial resolution;

2.3. where appropriate, monitoring shall be coordinated with the monitoring strategy and measurement programme of the Cooperative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe (EMEP);

2.4. Part I of Annex 15 to this Regulation and Paragraph 6 of this Regulation shall apply in relation to the data quality objectives for mass concentration measurements of particulate matter.

**Annex 14**

Cabinet Regulation No. 1290

3 November 2009

## Requirements for Assessment of Level of Sulphur Dioxide, Nitrogen Dioxide and Oxides of Nitrogen, Particulates PM<sub>10</sub>, Particulates PM<sub>2,5</sub>, Lead, Benzene, Carbon Monoxide, Arsenic, Cadmium, Nickel and Benzo(a) pyrene in Agglomeration or Zone

### Upper and Lower Assessment Thresholds

1. Pollutants have the following upper and lower assessment thresholds:

1.1. sulphur dioxide:

No.	Assessment threshold	24-hour average value for the protection of human health	Annual average value for the protection of ecosystems
1.1.1.	upper	60 % of 24-hour limit value (75 µg/m <sup>3</sup> , not to be exceeded more than 3 times in any calendar year)	60 % of winter critical level (12 µg/m <sup>3</sup> )
1.1.2.	lower	40 % of 24-hour limit value (50 µg/m <sup>3</sup> , not to be exceeded more than 3 times in any calendar year)	40 % of winter critical level (8 µg/m <sup>3</sup> )

1.2. nitrogen dioxide (NO<sub>2</sub>) and oxides of nitrogen (NO<sub>x</sub>):

No.	Assessment threshold	Hourly value for the protection of human health (NO <sub>2</sub> )	Annual value for the protection of human health (NO <sub>2</sub> )	Annual value for the protection of ecosystems (NO <sub>x</sub> )
1.2.1.	upper	70 % of hourly limit value (140 µg/m <sup>3</sup> , not to be exceeded more than 18 times in any calendar year)	80 % of annual limit value (32 µg/m <sup>3</sup> )	80 % of critical level (24 µg/m <sup>3</sup> )
1.2.2.	lower	50 % of hourly limit value (100 µg/m <sup>3</sup> , not to be exceeded more than 18 times in any calendar year)	65 % of annual limit value (26 µg/m <sup>3</sup> )	65 % of critical level (19.5 µg/m <sup>3</sup> )

1.3. particulate matter PM<sub>10</sub> and particulate matter PM<sub>2,5</sub>:

No.	Assessment threshold	24-hour average value of particulate matter PM <sub>10</sub> for the protection of human health	Annual average value of particulate matter PM <sub>10</sub> for the protection of human health	Annual average value of particulate matter PM <sub>2,5</sub> for the protection of human health*
1.3.1.	upper	70 % of 24-hour limit value (35 µg/m <sup>3</sup> , not to be exceeded more than 35 times in any calendar year)	70 % of annual limit value (28 µg/m <sup>3</sup> )	70 % of annual limit value (17 µg/m <sup>3</sup> )
1.3.2.	lower	50 % of 24-hour limit value (25 µg/m <sup>3</sup> , not to be exceeded more than 35 times in any calendar year)	50 % of annual limit value (20 µg/m <sup>3</sup> )	50 % of annual limit value (12 µg/m <sup>3</sup> )

Note.

\* The upper assessment threshold and the lower assessment threshold for particulate matter PM<sub>2,5</sub> do not apply to the measurements to assess compliance with the national exposure reduction target.

1.4. lead:

No.	Assessment threshold	Annual average
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1.4.1.	upper	70 % of annual limit value (0.35 µg/m <sup>3</sup> )
1.4.2.	lower	50 % of annual limit value (0.25 µg/m <sup>3</sup> )

1.5. benzene:

No.	Assessment threshold	Annual average
1.5.1.	upper	70 % of annual limit value (3.5 µg/m <sup>3</sup> )
1.5.2.	lower	40 % of annual limit value (2 µg/m <sup>3</sup> )

1.6. carbon monoxide:

No.	Assessment threshold	Eight-hour average
1.6.1.	upper	70 % of annual limit value (7 mg/m <sup>3</sup> )
1.6.2.	lower	50 % of annual limit value (5 mg/m <sup>3</sup> )

1.7. arsenic:

No.	Assessment threshold	Annual average
1.7.1.	upper	60 % of annual long-term target value (3,6 ng/m <sup>3</sup> )
1.7.2.	lower	40 % of annual long-term target value (2,4 ng/m <sup>3</sup> )

1.8. cadmium:

No.	Assessment threshold	Annual average
1.8.1.	upper	60 % of annual long-term target value (3,0 ng/m <sup>3</sup> )
1.8.2.	lower	40 % of annual long-term target value (2,0 ng/m <sup>3</sup> )

1.9. nickel:

No.	Assessment threshold	Annual average
1.9.1.	upper	70 % of annual long-term target value (14,0 ng/m <sup>3</sup> )
1.9.2.	lower	50 % of annual long-term target value (10,0 ng/m <sup>3</sup> )

1.10. benzo(a)pyrene:

No.	Assessment threshold	Annual average
1.10.1.	upper	60 % of annual long-term target value (0,6 ng/m <sup>3</sup> )
1.10.2.	lower	40 % of annual long-term target value (0,4 ng/m <sup>3</sup> )

## II. Cases of Exceedances of Upper and Lower Assessment Thresholds

2. Exceedances of upper and lower assessment thresholds shall be determined on the basis of concentrations during the previous five years where sufficient data are available. An assessment threshold shall be deemed to have been exceeded if it has been exceeded during at least three separate years out of those previous five years.

3. In the territories where fewer than five years' data are available, measurement campaigns of short duration during the period of the year and at locations likely to be typical of the highest pollution levels may be combined with results obtained from information from emission inventories and modelling to determine exceedances of the upper and lower assessment thresholds.

Minister for Environment R. Vējonis

### Annex 15

Cabinet Regulation No. 1290  
3 November 2009

## Data Quality Objectives and Compilation of Results of Ambient Air Quality Assessment

[21 February 2017]

## I. Data Quality Objectives

1. There are the following data quality objectives, uncertainty, minimum data capture and minimum time coverage for ambient air quality assessment:

No.	Conditions	Sulphur dioxide, nitrogen dioxide and oxides of nitrogen and carbon monoxide	Particulate matter PM <sub>10</sub> , particulate matter PM <sub>2,5</sub> and lead	Benzene	Ozone and related NO and NO <sub>2</sub>
1.1.	Fixed measurements*:				
1.1.1.	uncertainty*****	15 %	25 %	25 %	15 %
1.1.2.	minimum data capture	90 %	90 %	90 %	90 % during summer 75 % during winter
1.1.3.	minimum time coverage:				
1.1.3.1.	urban background and traffic	-	-	35 %**	-
1.1.3.2.	industrial sites	-	-	90 %	-
1.2.	Indicative measurements:				
1.2.1.	uncertainty*****	25 %	50 %	30 %	30 %
1.2.2.	minimum data capture	90 %	90 %	90 %	90 %
1.2.3.	minimum time coverage	14 %***	14 %***	14 %****	> 10 % during summer
1.3.	Modelling uncertainty:				
1.3.1.	hourly average	50 %	-	-	50 %
1.2.3.	eight-hour average	50 %	-	-	50 %
1.3.3.	daily average	50 %	not yet defined	-	-
1.3.4.	annual average	30 %	50 %	50 %	-
1.4.	Objective estimation uncertainty	75 %	100 %	100 %	75 %

Notes.

1. \* Member States may apply random measurements instead of fixed measurements for benzene, lead and particulate matter PM<sub>10</sub> and particulate matter PM<sub>2,5</sub> if they can demonstrate that the uncertainty, including the uncertainty due to random sampling, meets the quality objective of 25 % and the time coverage is still larger than the minimum time coverage for indicative measurements. Random sampling must be evenly distributed over the year in order to avoid skewing of results. The uncertainty due to random sampling may be determined by the procedure laid down in ISO 11222 (2002) "Air Quality - Determination of the Uncertainty of the Time Average of Air Quality Measurements". If random measurements are used to assess the requirements of the particulate matter PM<sub>10</sub> limit value, the 90,4 percentile (to be lower than or equal to 50 µg/m<sup>3</sup>) should be evaluated instead of the number of exceedances, which is highly influenced by data coverage.

2. \*\* Distributed over the year to be representative of various conditions for climate and traffic.

3. \*\*\* One day's measurement a week at random (evenly distributed over the year, or eight weeks evenly distributed over the year).

4. \*\*\*\* One measurement a week at random (evenly distributed over the year, or eight weeks evenly distributed over the year).

5. \*\*\*\*\* The specified percentage of uncertainty refers to specific measurements the average value whereof has been determined for a period of time that is subject to a limit value (in respect of ozone - target value), if the confidence interval is 95 %. The uncertainty of fixed measurements is applied for a territory where conformity with the respective limit values is assessed (in respect of ozone - target value).

2. There are the following data quality objectives and requirements for air quality models in assessment of pollution by arsenic, cadmium, nickel benzo(a)pyrene and polycyclic aromatic hydrocarbons (other than benzo(a)pyrene and total gaseous mercury):

No.	Conditions	Benzo(a) pyrene	Arsenic, cadmium and nickel	Polycyclic aromatic hydrocarbons (other than benzo(a)pyrene) total gaseous mercury	Total deposition
2.1.	Uncertainty:				
2.1.1.	fixed and indicative measurements*	50 %	40 %	50 %	70 %
2.1.2.	modelling	60 %	60 %	60 %	60 %
2.2.	Minimum data capture	90 %	90 %	90 %	90 %
2.3.	Minimum time coverage**:				
2.3.1.	fixed measurements	33 %	50 %		
2.3.2.	indicative measurements	14 %	14 %	14 %	33 %

Notes.

1. \* In the context of this table indicative measurements are such measurements which are conducted on a less regular basis, but which conform to the remaining data quality objectives.

2. \*\* Distributed evenly over a year in a way the measurements would be representative in respect of various climatic conditions and anthropogenic activities.

3. The uncertainty (expressed at a 95 % confidence level) shall be evaluated:

3.1. in accordance with the principles of the CEN Guide to the Expression of Uncertainty in Measurement and which comply with the standard LVS ENV 13005:2007, Guide to the expression of uncertainty in measurement;

3.2. pursuant to the standard LVS ISO 5725-1:2006, Accuracy (trueness and precision) of measurement methods and results - Part 1: General principles and definitions;

3.3. pursuant to the standard LVS ISO 5725-2:2006, Accuracy (trueness and precision) of measurement methods and results - Part 2: Basic method for the determination of repeatability and reproducibility of a standard measurement method;

3.3. pursuant to the standard LVS ISO 5725-3:2006, Accuracy (trueness and precision) of measurement methods and results - Part 3: Intermediate measures of the precision of a standard measurement method;

3.5. pursuant to the standard LVS ISO 5725-4:2006, Accuracy (trueness and precision) of measurement methods and results - Part 4: Basic methods for the determination of the trueness of a standard measurement method;

3.6. pursuant to the standard LVS ISO 5725-5:2006, Accuracy (trueness and precision) of measurement methods and results - Part 5: Alternative methods for the determination of the precision of a standard measurement method;

3.7. pursuant to the standard LVS ISO 5725-6:2006, Accuracy (trueness and precision) of measurement methods and results - Part 6: Use in practice of accuracy values;

3.8. in accordance with methodological instructions included in the European Committee for Standardisation (CEN) air quality report on uncertainty of the reference methods used for measurements of ambient air pursuant to the standard LVS CR 14377:2007, Air quality - Approach to uncertainty estimation for ambient air reference measurement methods, in which uncertainty of measurements is assessed as such which may be applied to the relevant limit value, or according to another equivalent method. In order to avoid inaccurate results, fixed and indicative measurements shall be performed at equal intervals during the entire year.

4. The uncertainty of modelling is the maximum difference between the measured and calculated concentration levels of 90 % from specific monitoring points for the period of determining the relevant limit value (in respect of ozone - target value), without taking into account the sequence of the events. The uncertainty of modelling is applied for a territory where conformity with the respective limit values is assessed (in respect of ozone - target value). Fixed measurements which must be taken for comparison with modelling results conform to the scale covered by the model. The uncertainty for objective assessment method is defined as the maximum deviation of the measured and calculated concentration, over the period considered, by the limit value (in respect of ozone - target value), without taking into account the sequence of the events.

5. Samples for benzo(a)pyrene and other polycyclic aromatic hydrocarbons shall be taken within a twenty-four-hour period. Individual samples for arsenic, cadmium, nickel, total gaseous mercury, benzo(a)pyrene and for other polycyclic aromatic hydrocarbons (of up to one month) shall be used for complex analysis, if the methods ensures

sampling stability in this period. Some substances (for example, benzo(b)fluoranthene, benzo(j)fluoranthene, benzo(k)fluoranthene) can be difficult to resolve analytically. In such cases they can be reported as sum. Sampling must be spread evenly over the weekdays and the year. For the measurement of deposition rates monthly, or weekly samples throughout the year are recommended. It is allowed to use wet only instead of bulk sampling if they can demonstrate that the difference between them is within 10 % (deposition rates should generally be given as  $\mu\text{g}/\text{m}^2$  per day).

5.<sup>1</sup> Particulate matter  $\text{PM}_{10}$  filter for taking subsamples for metal detection to carry out subsequent analysis is permitted, if there is proof that the subsample is representative in respect of aggregate and provided that detection sensitivity is not impaired in comparison with the respective data quality objectives. As an alternative for daily sampling it is possible to conduct weekly sampling for metal detection in particulate matters  $\text{PM}_{10}$ , if characteristics of sampling are not impaired.

6. Deviation from conditions of Paragraph 3 of this Annex is allowed for fixed measurements (not lower than 14 %) and for indicative measurements (not lower than 6 %), calculated according to the standard LVS ISO 11222:2006, Air quality. Determination of the uncertainty of the time average of air quality measurements, or other equal method.

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

8. The number of measurement data shall be determined as percentage of time, during which the measurements performed with instrumentation are considered as valid, of the whole interval for which average concentration or other statistical indicator of pollutant is to be calculated.

9. The minimum time of measurements shall be determined as percentage of time, during which the measurements are to be performed, of the whole interval for which limit value is determined.

## **II. Results of Ambient Air Quality Assessment**

10. The following information shall be provided for zones or agglomerations within which sources of other information are employed to supplement information from measurement or within which other sources of information are the sole means of air quality assessment:

10.1. a description of assessment of ambient air quality;

10.2. a description of the specific methods used;

10.3. the sources of data and information;

10.4. for all pollutants referred to in Paragraph 3 of this Regulation:

10.4.1. a description of results, including uncertainties and the extent of any area or, if relevant, the length of road (street) within the zone or agglomeration over which concentrations exceed limit value, taking into account the relevant margin of tolerance (in case of ozone pollution - target value) or long-term objective, and of any area within which concentrations exceed the upper assessment threshold or the lower assessment threshold;

10.4.2. the relevant limit value determined for the protection of human health (in case of ozone pollution - target value) or the number of inhabitants potentially exposed to exceedances of long-term target;

105. if necessary - maps in which the division of concentrations of the relevant pollutants within zone or agglomeration is indicated.

## **III. Requirements for Air Quality Models and for Estimation Techniques**

11. Where an air quality model is used for assessment, references to descriptions of the model and information on the uncertainty shall be provided. The uncertainty for modelling is defined as the maximum deviation of the measured and calculated concentration levels, over a full year, without taking into account the timing of the events.

12. Where objective estimation or determination techniques are used, the uncertainty shall not exceed 100 %.

Minister for Environment R. Vējonis

### **Annex 16**

Cabinet Regulation No. 1290  
3 November 2009

## **Criteria for Data Aggregating and Calculation of Statistical Parameters**



1. The following criteria shall be used for checking validity when aggregating data and calculating statistical parameters for sulphur dioxide, nitrogen dioxide, benzene, carbon monoxides, lead, particulate matter PM<sub>10</sub> and particulate matter PM<sub>2,5</sub>:

No.	Parameter	Required proportion of valid data
1.1.	one hour values	75 % (i.e. 45 minutes)
1.2.	eight hours values	75 % of values (i.e. six hours)
1.3.	maximum daily eight hours mean	75 % of the hourly running eight hours averages (i.e. eighteen eight-hourly averages per day)
1.4.	24-hours values	75 % of the one hour values (i.e. at least 18 hours values)
1.5.	annual mean	90 %* of the one hour values or (if not available) twenty four hours values during a year

Note.

\* Data loss due to regular calibration of instruments or regular maintenance shall not be included in the requirements for calculation of annual mean.

2. The following criteria shall be taken into account in data aggregating and calculation of statistical parameters for ozone:

No.	Parameter	Necessary proportion of valid data
2.1.	one hour values	75 % (45 minutes)
2.2.	eight hours values	75 % of value (six hours)
2.3.	maximum daily eight hours mean from hourly running eight hours	75 % of the hourly running eight hours averages (18 eighteen eight-hourly averages per day)
2.4.	AOT40	90 % of the one hour values over the time period defined for calculating the AOT40 value*
2.5.	annual mean	75 % of the one hour values over summer (April to September) and 75 % over winter (January to March, October to December) seasons separately
2.6.	number of exceedances and maximum values per month	90 % of the daily maximum eight hours mean values (27 available daily values per month) 90 % of the one hour values between (8.00 to 20.00 Central European Time)
2.7.	number of exceedances and maximum values per year	five out of six months over the summer season (April to September)

Note.

\* In cases where all possible measured data are not available, the following factor shall be used to calculate AOT40 values:

$$AOT40[provisional] = AOT40_{izm} \times \frac{n}{k}, \text{ where}$$

n - being the total possible number of hours - the number of hours within the time period of AOT40 definition, (08:00 to 20:00 according to Central European Time from 1 May to 31 July each year, for vegetation protection and from 1 April to 30 September each year for forest protection);

k - number of measured one hour values.

Minister for Environment R. Vējonis

## Annex 17

Cabinet Regulation No. 1290  
3 November 2009

## Ozone Precursors

[21 February 2017]

1. Ozone precursors for which it is recommended to perform monitoring are nitrogen oxides and relevant volatile organic compounds referred to in Paragraph 2 of this Annex.

2. Ozone precursors for which it is recommended to perform monitoring are the following volatile organic compounds (except the requirements specified for benzene in this Regulation):

- 2.1. ethane;
- 2.2. ethylene;
- 2.3. acetylene;
- 2.4. propane;
- 2.5. propene;
- 2.6. n-butane;
- 2.7. Isobutane;
- 2.8. 1-butene;
- 2.9. trans-2-butene;
- 2.10. cis-2-butene;
- 2.11. 1,3-butadiene;
- 2.12. n-pentane;
- 2.13. isopentane;
- 2.14. 1-pentane;
- 2.15. 2-pentane;
- 2.16. isoprene;
- 2.17. n-hexane;
- 2.18. isohexane;
- 2.19. n-heptane;
- 2.20. n-octane;
- 2.21. isooctane;
- 2.22. benzene;
- 2.23. toluene;
- 2.24. ethyl benzene;
- 2.25. m- and p-xylene;
- 2.26. o-xylene;
- 2.27. 1,2,4-trimethylbenzene;
- 2.28. 1,2,3-trimethylbenzene;
- 2.29. 1,3,5-trimethylbenzene;
- 2.30. formaldehyde;
- 2.31. all hydrocarbons except methane.

3. The main objectives of such measurements are to analyse any trend in ozone precursors, to check the efficiency of emission reduction strategies, to check the consistency of emission inventories and to help attribute emission sources to observed pollution concentrations. Ozone precursor measurements, as far as possible, shall be

conducted at urban or suburban stations which are sited in accordance with the requirements laid down in this Regulation, as well as in such territories which enable the acquisition of information conforming to the objectives referred to in this Paragraph.

Minister for Environment R. Vējonis

**Annex 18**

Cabinet Regulation No. 1290

3 November 2009

*[21 February 2017]*

## **I. Information to be Included in Action Programme**

1. Localisation where ambient air quality standards are exceeded:

1.1. region;

1.2. city (map);

1.3. measuring station (map, geographical coordinates).

2. General information:

2.1. type of zone (for example, city, industrial or rural area);

2.2. estimate of the polluted area (km<sup>2</sup>) and of the population exposed to the pollution;

2.3. climatic data;

2.4. data on topography;

2.5. environmental quality targets specified or required in the relevant zone.

3. The authorities responsible for the development and implementation of an action programme and contact details of the persons delegated (given name, surname, position, and represented authority).

4. Nature and assessment of pollution:

4.1. concentrations observed over previous years (before the implementation of the improvement measures);

4.2. concentrations measured since the beginning of the implementation of improvement measures;

4.3. techniques used for the assessment of ambient air quality.

5. Sources of ambient air pollution:

5.1. list of the main emission sources responsible for pollution (map);

5.2. total quantity of emissions from these sources (tonnes/year);

5.3. pollution imported from other regions.

6. Case study:

6.1. details of those factors responsible for the exceedance of ambient air quality standards, e.g. transport (including cross-border transport) or formation of secondary pollutants in the atmosphere;

6.2. details of possible measures for the improvement of air quality.

7. Detailed information regarding measures taken for the improvement of ambient air quality during the period of the approved action programme:

7.1. local, regional, national and international measures;

7.2. observed effects of measures taken.

8. Information regarding the measures included in the action programme which are planned to be implemented for the improvement of ambient air quality:

- 8.1. listing and description of all the measures set out in the action programme;
- 8.2. timetable for implementation of measures included in the action programme;
- 8.3. forecast for terms and amount in which the planned measures will ensure the improvement of air quality, achievement of ambient air quality standards and objectives specified in the action programme.
- 9. Details of the measures planned or being researched for the long term or projects which may affect the achievement of objectives specified in the action programme.
- 10. Costs of measures included in the action programme and economic efficiency.
- 11. List of the publications, documents and other informative materials, used to supplement information included in the action programme.

## **II. Information to be Included in the Action Programme Developed for Zones and Agglomerations to which Postponement of Attainment Deadlines of Limit Values Apply**

- 12. All information provided for in Part I.
- 13. Information regarding regulatory enactments regulating:
  - 13.1. air pollution by gases from positive-ignition engines of motor vehicles;
  - 13.2. volatile organic compound emissions resulting from the storage of petrol and its distribution from terminals to service stations;
  - 13.3. integrated pollution prevention and control;
  - 13.4. the emission of gaseous and particulate pollutants from internal combustion engines to be installed in non-road mobile machinery;
  - 13.5. the quality of petrol and diesel fuels;
  - 13.6. the limitation of emissions volatile organic compounds due to the use of organic solvents in certain activities and installations;
  - 13.7. a reduction in the sulphur content of certain liquid fuels;
  - 13.8. the incineration of waste;
  - 13.9. emissions of certain pollutants into the air from large combustion plants;
  - 13.10. national emission ceilings for certain atmospheric pollutants;
  - 13.11. emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products;
  - 13.12. the sulphur content of marine fuels;
  - 13.13. the emission of gaseous and particulate pollutants from compression-ignition engines for use in vehicles, and the emission of gaseous pollutants from positive-ignition engines fuelled with natural gas or liquefied petroleum gas for use in vehicles;
  - 13.14. energy end-use efficiency and energy services.
- 14. Information on all air pollution abatement measures that have been considered at appropriate local, regional or national level for implementation in connection with the attainment of air quality objectives, including on the following measures:
  - 14.1. reduction of emissions from stationary sources by ensuring that polluting small and medium sized stationary combustion sources (including for biomass) are fitted with emission control equipment or replaced;
  - 14.2. reduction of emissions from vehicles through retrofitting with emission control equipment. The use of economic incentives to accelerate take-up of those measures;
  - 14.3. procurement by public authorities, in line with the handbook on environmental public procurement of the European Community "Buying Green!", of road vehicles, fuels and combustion equipment to reduce emissions, including the purchase of:
    - 14.3.1. new vehicles, including low emission vehicles;

14.3.2. cleaner vehicle transport services;

14.3.3. low emission stationary combustion sources;

14.3.4. low emission fuels for stationary and mobile sources;

14.4. measures to limit transport emissions through traffic planning and management (including congestion pricing, differentiated parking fees or other economic incentives; establishing low emission zones);

14.5. measures to encourage a shift of transport towards less polluting modes;

14.6. ensuring that low emission fuels are used in small, medium and large scale stationary sources and in mobile sources;

14.7. other measures to reduce air pollution (for example, measures related to the permit system for performance of polluting activities, measures of the State programme for reduction of total emissions, and through the use of economic instruments such as taxes, charges or emission trading);

14.8. where appropriate - measures to protect the health of children or other sensitive groups.

Minister for Environment R. Vējonis

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