Swedish Code of Statutes



SFS 2010:477

Published 8 June 2010

Air Quality Ordinance;

issued 27 May 2010.

The Government prescribes¹ as follows.

Section 1 This Ordinance is issued

- 1. pursuant to Chapter 5, Section 1 of the Environmental Code with regard to Sections 8–25,
- 2. pursuant to Chapter 5, Section 7 of the Environmental Code with regard to Sections 32-36, 45 and 47,
- 3. pursuant to Chapter 5, Section 9 of the Environmental Code with regard to Sections 26, 30, 38, 43, 44 and 49, and
 - 4. in other respects pursuant to Chapter 8, Section 13 of the Instrument of Government.

Definitions

Section 2 In this Ordinance, the following terms have the meaning set out below:

Air Quality Directive: Directive 2008/50/EC of the European Parliament and of the Council of 21 May 2008 on ambient air quality and cleaner air for Europe², and

Directive on Metals and PAHs in Ambient Air: 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 air³, as amended by European Parliament and Council Regulation (EC) No 219/2009⁴.

Section 3 Ambient air in this Ordinance shall mean outdoor air with the exception of workplaces and road tunnels and tunnels for rail-mounted traffic.

Section 4 Agglomeration in this Ordinance shall mean an urban area

- 1. with a population in excess of 250 000 inhabitants, or
- 2. where the population is 250 000 inhabitants or less, with a population density such that there is justification for assessing air quality.

Section 5 In this Ordinance, the following terms have the meaning set out below:

PM10: particulate matter which passes through a size-selective inlet which separates particulate matter with a 50% efficiency cut-off at 10 micrometres aerodynamic diameter, and

¹ Cf. 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 (OJ L 152, 11.6.2008, p. 1, Celex 32008L0050). ² OJ L 152, 11.6.2008, p. 1 (Celex 32008L0050).

³ OJ L 23, 26.1.2005, p. 3 (Celex 32004L0107).

⁴ OJ L 87, 31.3.2008, p. 109 (Celex 32009R0219).

PM2.5: particulate matter which passes through a size-selective inlet which separates particulate matter with a 50% efficiency cut-off at 2.5 micrometres aerodynamic diameter.

Section 6 In this Ordinance, the following terms have the meaning set out below: *information threshold*: the limit value stated in Annex 2, beyond which the concentration of a substance in the ambient air is such that there is a risk to human health from brief exposure for particularly sensitive sections of the population, and *alert threshold*: the limit value stated in Annex 2, beyond which the concentration of a substance in the ambient air is such that there is a risk to human health from brief exposure.

Section 7 *Eight-hour mean* in this Ordinance shall mean a mean value calculated during a day by determining an eight-hour average for each hour. Each eight-hour average is determined as the mean of the measured values of the last eight hours. The daily value is determined as the highest of the 24 eight-hour averages determined during the day. The first eight-hour average relates to the time from 17:00 on the immediately preceding day until 01:00 on the day in question, and the last eight-hour average relates to time from 16:00 on the day in question to 24:00 the same day.

Environmental quality standards

Section 8 The environmental quality standards in Sections 10–14, 17 and 18, Section 19, point 2, Section 20, first paragraph, point 1 and Section 25 indicate levels of pollution which under Chapter 5, Section 2, first paragraph point 1 of the Environmental Code shall not be exceeded. Unless otherwise stated in the standard, each exceedance of the level of pollution shall be considered to signify that the standard is not met.

Section 9 The environmental quality standards in Sections 15 and 16, Section 19 point 1, Section 20 first paragraph point 2 and Sections 21–24 indicate level of pollutions under Chapter 5 Section 2 first paragraph, point 2 of the Environmental Code. When it is stated in the standard that a level of pollution should not be exceeded or that endeavours shall be made not to exceed a level of pollution, exceedance of the level of pollution shall be considered to signify that the standard is not met only if the exceedance is due to

- 1. activities or measures which durably and to a significant degree compromise the prospects of not exceeding the level of pollution, and
- 2. reasonable measures not having been taken to avoid the level of pollution being exceeded.

Nitrogen dioxide and oxides of nitrogen

Section 10 In order to protect human health, nitrogen dioxide shall not occur in ambient air at more than

- 1. an average of 90 micrograms per cubic metre of air during an hour (hourly mean),
- 2. an average of 60 micrograms per cubic metre of air during a day (daily mean),

3. an average of 40 micrograms per cubic metre of air during a calendar year (annual mean),

The value stated in the first paragraph may be exceeded 175 times per calendar year provided the level of pollution never exceeds 200 micrograms per cubic metre of air during one hour more than 18 times per calendar year.

The value stated in the first paragraph, point 2, may be exceeded 7 times per calendar year.

Section 11 In order to protect vegetation, oxides of nitrogen, in areas which are at least 20 kilometres from the nearest agglomeration or 5 kilometres from another urban area, industrial site or motorway, instead of the provisions of Section 10, shall not occur in ambient air at more than an average of 30 micrograms per cubic metre of air during a calendar year (annual mean).

Sulphur dioxide

Section 12 In order to protect human health, sulphur dioxide shall not occur in ambient air at more than

- 1. an average of 200 micrograms per cubic metre of air during one hour (hourly mean), and
 - 2. an average of 100 micrograms per cubic metre of air during one day (daily mean).

The value stated in the first paragraph, point 1, may be exceeded 175 times per calendar year provided the level of pollution never exceeds 350 micrograms per cubic metre of air during one hour more than 24 times per calendar year.

The value stated in the first paragraph, section 2, may be exceeded 7 times per calendar year provided the level of pollution never exceeds 125 micrograms per cubic metre of air during one hour more than 3 times per calendar year.

Section 13 In order to protect vegetation, sulphur dioxide, in areas which are at least 20 kilometres from the nearest agglomeration or 5 kilometres from another urban area, industrial site or motorway, instead of the provisions of Section 12, shall not occur in ambient air at more than

- 1. an average of 20 micrograms per cubic metre of air during the period from 1 October to 31 March inclusive (winter mean), and
- 2. an average of 20 micrograms per cubic metre of air during a calendar year (annual mean),

Carbon monoxide

Section 14 In order to protect human health, carbon monoxide shall not occur in ambient air at more than 10 milligrams per cubic metre of air as a maximum eight-hour mean during a day.

Ozone

Section 15 In order to protect human health and to the extent that is possible taking into account how ozone-forming substances are transported in the air and form ozone, endeavours shall be made for ozone not to occur in ambient air at

more than 120 micrograms per cubic metre of air as a maximum eight-hour mean during a day.

Section 16 In order to protect vegetation and to the extent that is possible taking into account how ozone-forming substances are transported in the air and form ozone, endeavours shall be made for ozone not to occur in ambient air

- 1. until 31 December 2019 at more than 18 000 micrograms calculated according to the exposure index AOT 40 and determined as an average value during a five-year period,
- 2. from 1 January 2020 at more than 6 000 micrograms calculated according to the exposure index AOT 40.
- If, due to incomplete data, it is not possible to establish annual values for a five-year period, the value referred to in the first paragraph point 1, shall be determined as an average value during a three-year period.

The exposure index AOT 40 is expressed in micrograms per cubic metre of air for a particular period of time and relates to a value for the sum of exceedances of a particular ozone concentration. The exposure index AOT 40 is calculated as follows. During the period from 1 May until 31 July inclusive each year, an hourly mean for ozone concentration shall be determined for each hour between 08:00 and 20:00. Each hourly mean is determined as the difference between the concentration of ozone which exceeds 80 micrograms per cubic metre of air and 80 micrograms per cubic metre of air. The differences are added together first for each day and than as a total sum for the whole period.

Benzene

Section 17 In order to protect human health, benzene shall not occur in ambient air at more than 5 micrograms per cubic metre of air during a calendar year (annual mean).

Particulate matter (PM10)

Section 18 In order to protect human health, particulate matter (PM10) shall not occur in ambient air at more than

- 1. an average of 50 micrograms per cubic metre of air during a day (daily mean), and
- 2. an average of 40 micrograms per cubic metre of air during a calendar year (annual mean),

The value stated in the first paragraph point 1 may be exceeded 35 times per calendar year.

Particulate matter (PM2.5)

Section 19 In order to protect human health

- 1. endeavours shall be made for particulate matter (PM2.5) until 31 December 2014 not to occur in ambient air at more than an average of 25 micrograms per cubic metre of air during a calendar year (annual mean),
- 2. particulate matter (PM2.5) from 1 January 2015 shall not occur in ambient air at more than 25 micrograms per cubic metre of air during a calendar year (annual mean).

Section 20 In order to protect human health

- 1. the national level for the average exposure of the population to particulate matter (PM2.5) from 1 January 2015 shall not exceed 20 micrograms per cubic metre of air,
- 2. endeavours shall be made for the national level for the average exposure of the population to particulate matter (PM2.5) from 1 January 2020 to have decreased in percentage terms in accordance with Annex XIV B of the Air Quality Directive.

The national level for the average exposure of the population to particulate matter (PM2.5) shall be based on the aggregate mean for the concentration of particulate matter (PM2.5) at urban background locations during a three-year period in accordance with Annex XIV A to the Air Quality Directive.

Benzo(a)pyrene

Section 21 In order to protect human health, endeavours shall be made for benzo(a)pyrene from 1 January 2013 not to occur in ambient air at more than an average of 1 nanogram per cubic metre of air, calculated by sampling and measurement of PM10 during a calendar year (annual mean).

Arsenic

Section 22 In order to protect human health, endeavours shall be made for arsenic from 1 January 2013 not to occur in ambient air at more than an average of 6 nanograms per cubic metre of air, calculated by sampling and measurement of PM10 during a calendar year (annual mean).

Cadmium

Section 23 In order to protect human health, endeavours shall be made for cadmium from 1 January 2013 not to occur in ambient air at more than an average of 5 nanograms per cubic metre of air, calculated by sampling and measurement of PM10 during a calendar year (annual mean).

Nickel

Section 24 In order to protect human health, endeavours shall be made for nickel from 1 January 2013 not to occur in ambient air at more than an average of 20 nanograms per cubic metre of air, calculated by sampling and measurement of PM10 during a calendar year (annual mean).

Lead

Section 25 In order to protect human health, lead shall not occur in ambient air at more than an average of 0.5 micrograms per cubic metre of air, calculated by sampling and measurement of PM during a calendar year (annual mean).

SFS 2010:477 Assessments

Section 26 Each municipality shall assess whether the environmental standards in Sections 10, 12, 14, 17–19 and 21–25 are met within the municipality. The assessment may be made through collaboration between several municipalities. With regard to benzo(a)pyrene, arsenic, cadmium and nickel, the levels of pollution shall also be assessed during the period before the times stated in Sections 21–24.

The assessment shall be made through measurements, calculations or objective estimation.

If the assessment is made through measurements, it shall be made

- 1. in those areas and at those locations where it is likely that the population is exposed to the highest concentrations, and
- 2. in those areas and at those locations which are representative of the exposure of the population in general.

Section 27 If previous measurements or calculations of air quality in accordance with Section 26 during a representative period of time show that the value for an average period

- 1. exceeds the upper assessment threshold in accordance with Annex 1, the assessment shall be made through measurement, which may be supplemented by calculation or measurement with lower quality requirements,
- 2. is lower than the upper assessment threshold in accordance with Annex 1, the assessment may be made through a combination of measurement and calculation, or
- 3. is lower than the lower assessment threshold in accordance with Annex 1, the assessment may be made through calculation or objective estimation only or a combination of the methods.

Section 28 The Swedish Environmental Protection Agency shall

- 1. assess the occurrence of oxides of nitrogen and sulphur dioxide in accordance with Sections 11 and 13 in the regional background in accordance with Annex III A1 and Annex III B2 of the Air Quality Directive,
- 2. assess the occurrence of ozone in accordance with Sections 15 and 16 in accordance with Articles 9–11 of the Air Quality Directive,
- 3. measure particulate matter (PM2.5) in accordance with Article 20 in the urban background in accordance with Annex III, Annex V B and Annex XIV B of the Air Quality Directive,
- 4. establish a national level for the average exposure of the population to particulate matter (PM2.5) in accordance with the second paragraph of Section 20 in accordance with Annex XIV A of the Air Quality Directive,
- 5. measure particulate matter (PM2.5) in the regional background in accordance with Article 6(5) of the Air Quality Directive,
- 6. assess the contribution of benzo(a)pyrene in the air by measuring other polycyclic aromatic hydrocarbons in the regional background in accordance with Article 4(8) of the Directive on Metals and PAHs in Ambient Air.
- 7. measure arsenic, cadmium, nickel, gaseous total mercury, benzo(a)pyrene and other polycyclic aromatic hydrocarbons in the regional background in accordance with Article 4(9) of the Directive on Metals and PAHs in Ambient Air, and
- 8. measure the total deposition of arsenic, cadmium, nickel, gaseous total mercury, benzo(a)pyrene and other polycyclic aromatic hydrocarbons in the regional background in accordance with Article 4(9) of the Directive on Metals and PAHs in Ambient Air.

Section 29 The Swedish Environmental Protection Agency shall designate the zones and agglomerations which are needed as a consequence of

- 1. Article 4 of the Air Quality Directive, and
- 2. Article 3 of the Directive on Metals and PAHs in Ambient Air.

Section 30 If the assessment in accordance with Sections 26 and 27 shows that it can be assumed that a level of pollution as stated in the environmental quality standards will be exceeded in a municipality, the municipality shall immediately notify the Swedish Environmental Protection Agency and county councils concerned.

Action programmes

Section 31 The Swedish Environmental Protection Agency shall examine the need for an action programme under Chapter 5 of the Environmental Code

- 1. following notification in accordance with Section 30, or
- 2. if the assessment in accordance with Section 28, points 1, 2 or 3 shows it can be assumed that a level of pollution as stated in the environmental quality standards will be exceeded.

If the Swedish Environmental Protection Agency finds that an action programme is needed, the Agency shall report this to the county administrative boards concerned.

If there are special reasons for it not being a county administrative board or municipality that draws up a proposal for or establishes an action programme in other cases, the Swedish Environmental Protection Agency shall report this and the need for an action programme to the Government.

Section 32 A county administrative board which has received a report under the second paragraph of Section 31 shall, as soon as possible,

- 1. draw up a proposal for an action programme, or
- 2. hand over to one or more municipalities the task of drawing up a proposal for an action programme, if it is appropriate to make such a hand-over and the municipalities concerned are in agreement with the county administrative board on this matter.

If the county administrative board does not share the Swedish Environmental Protection Agency's assessment of the need for an action programme, the county administrative board may hand the matter over to the Government before the county administrative board takes any action under the first paragraph. Such a hand-over shall contain an account to be seen by the county administrative board of the need for action programmes.

If the county administrative board cannot agree with a municipality that the municipality shall draw up a proposal for an action programme, the county administrative board may hand the matter over to the Government. Such a hand-over shall contain an account of why it is appropriate for the municipality to draw up the proposal and a description of what has emerged during the deliberations on the matter.

Section 33 An action programme shall, in addition to the provisions of Chapter 5, Section 6 of the Environmental Code, contain information on

- 1. where an exceedance of an environmental quality standard has occurred,
- 2. the type, size, weather conditions and objects worthy of the protection of the area concerned.
 - 3. the type of air pollution and how it has been observed,
 - 4. the origin of the pollution,
 - 5. the analysis of the situation which has been made,
 - 6. improvement measures implemented and their effects,

- 7. ongoing improvement measures, and
- 8. publications or other documents which supplement the information under 1–7.
- **Section 34** If appropriate, an action programme shall be coordinated with action programmes for other environmental quality standards and with programmes which have been drawn or are to be drawn up under the Ordinance (2003:65) on National Emission Ceilings.
- **Section 35** Whosoever has drawn up a proposal for an action programme shall, in the consultation under the third paragraph of Chapter 5, Section 4, third paragraph of the Environmental Code, endeavour to reach agreement with the authorities and municipalities concerned on the measures which the authorities or municipalities will need to take under the programme.
- **Section 36** When the consultation under Chapter 5, Section 4 of the Environmental Code has concluded, whosoever has drawn up the proposal for an action programme shall establish those parts of the programme on which the authorities and municipalities concerned are agreed. The issue of establishing other parts of the programme may be handed over for Government scrutiny.

Information

Section 37 Whosoever has established an action programme shall

- 1. send a copy of the programme to the Swedish Environmental Protection Agency and the other authorities and municipalities concerned, and
- 2. free of charge, through the Internet or in some other suitable way, inform the public and others who are affected or have an interest of the established action programme.
- **Section 38** The municipalities shall provide information free of charge, through the Internet or in some other suitable way, on concentrations of nitrogen dioxide, sulphur dioxide, carbon monoxide, benzene, particulate matter, benzo(a)pyrene, arsenic, cadmium, nickel and lead. The information shall always contain particulars of
- 1. any exceedances of the levels of pollution stated in the environmental quality standards,
- 2. any exceedances of the alert thresholds with regard to sulphur dioxide and nitrogen dioxide,
- 3. what assessment the municipalities makes with respect to exceedances, and
 - 4. any consequences for human health.

The information referred to in the first paragraph shall be updated every day for concentrations of nitrogen dioxide, sulphur dioxide, carbon monoxide and particulate matter (PM10). The information shall, if possible, be updated once an hour. With regard to benzene and lead, it is sufficient for the information which is to be given in the form of an average for the past twelve months to be updated at least every three months, and where possible once a month. The information on benzo(a)pyrene, arsenic, cadmium and nickel shall be updated at least every twelve months. The information under this paragraph shall relate to the data which are available to the municipalities as a result of assessments under Sections 26 and 27.

The information shall be available to the public or others who are affected by or have an interest in it.

Section 39 The Swedish Environmental Protection Agency shall, free of charge, through the Internet or in some other suitable way, provide information on the concentrations of the pollutants stated in Section 28.

The information shall be available to the public or others who are affected by or have an interest in it.

Section 40 The information under Section 39 on the concentration of oxides of nitrogen and sulphur dioxide in the regional background shall always contain particulars of any effects on vegetation.

Section 41 Information in accordance with Section 39 on the concentration of ozone in the air shall always contain particulars of

- 1. exceedances of the levels stated in Section 15 and the first paragraph of Section 16,
- 2. exceedances of the information and alert thresholds for ozone, and
- 3. any consequences for human health and vegetation.

The information shall be updated every day during the stated measuring period. The information shall, if possible, be updated once an hour.

Section 42 The Swedish Environmental Protection Agency shall, through the Internet or in some other appropriate way, produce and supply annual compilations containing information on

- 1. how the environmental quality standards in this Ordinance are met, and
- 2. established action programmes under Section 37.

The compilations under point 1 shall contain information on any exceedances of the level of pollutions stated in the environmental quality standards and the information and alert thresholds, as well as the effects of these exceedances.

The information shall be available to the public or others who are affected by or have an interest in it.

Alert

Section 43 If the alert threshold for sulphur dioxide or nitrogen dioxide is exceeded or it can be assumed that it will be exceeded, the municipality shall immediately inform the public, the Swedish Environmental Protection Agency, county administrative boards concerned and the Swedish Civil Contingencies Agency.

If the information or alert threshold for ozone is exceeded, or it can be assumed that it will be exceeded, the Swedish Environmental Protection Agency shall immediately inform the public, health-care institutions and the Swedish Civil Contingencies Agency.

Section 44 The information to the public under Section 43 shall be supplied through the press, radio, television, Internet or in some other suitable way. The information shall contain

- 1. particulars of the type of the threshold which has been exceeded,
- 2. particulars of the date, time and location of the exceedance,
- 3. particulars of the cause of the exceedance, if known,
- 4. a forecast on change in the concentration,

- 5. a forecast on which geographical areas are affected,
- 6. a forecast on the duration of the exceedance.
- 7. particulars of which population groups are affected, in particular at-risk groups.
 - 8. a description of possible symptoms,
 - 9. particulars of how the affected groups are to protect themselves,
 - 10. particulars of where further information can be obtained, and
- 11. particulars of the sectors which account for the largest emissions and recommended measures to reduce emissions.

Information on ozone under the second paragraph of Section 43 shall also contain particulars of the maximum concentrations for 1 hour and 8 hours.

Section 45 If there is a risk that the alert threshold for sulphur dioxide or nitrogen dioxide will be exceeded, the municipality shall draw up an action programme for measures which are needed in the short term to reduce the risk of exceedance and which fulfil the requirements for an action plan under Article 24 of the Air Quality Directive.

Section 46 If there is a risk that the alert threshold for ozone will be exceeded, the Swedish Environmental Protection Agency shall draw up an action programme for measures which are needed in the short term to reduce the risk of exceedance and which fulfil the requirements for an action plan under Article 24 of the Air Quality Directive.

Section 47 When an action programme is drawn up under Section 45 or 46, consultation shall take place with the Swedish Civil Contingencies Agency.

Reporting to the European Commission

Section 48 The Swedish Environmental Protection Agency shall fulfil the tasks with regard to reporting to the European Commission which follow from

- 1. Articles 6(5), 11(2), 19, 22(4), 23(1) and 27 and Annex VI B.2 of the Air Quality Directive, and
- 2. Articles 4(14) and 5 of the Directive on Metals and PAHs in Ambient Air.

The reporting shall take place according to geographical classification determined by the Swedish Environmental Protection Agency.

Authorisation

Section 49 The Swedish Environmental Protection Agency may issue those regulations on sampling and other methods which are needed for assessments under Sections 26 and 27.

This Ordinance enters into force on 1 July 2010, when the Ordinance (2001:527) on Environmental Quality Standards for Ambient Air shall cease to apply.

On behalf of the Government

ANDREAS CARLGREN

Egon Abresparr (Ministry of the Environment)

Assessment thresholds for nitrogen dioxide

Standard for hourly mean:

Upper threshold: 72 micrograms per cubic metre of air is exceeded more than 175 times during a calendar year.

Lower threshold: 54 micrograms per cubic metre of air is exceeded more than 175 times during a calendar year.

Standard for daily mean:

Upper threshold: 48 micrograms per cubic metre of air is exceeded more than 7 times during a calendar year.

Lower threshold: 36 micrograms per cubic metre of air is exceeded more than 7 times during a calendar year.

Standard for annual mean:

Upper threshold: 32 micrograms per cubic metre of air. *Lower threshold:* 26 micrograms per cubic metre of air.

Assessment thresholds for oxides of nitrogen

Standard for annual mean:

Upper threshold: 24 micrograms per cubic metre of air. *Lower threshold:* 19.5 micrograms per cubic metre of air.

Assessment thresholds for sulphur dioxide in order to protect human health (Section 12)

Standard for hourly mean:

Upper threshold: 150 micrograms per cubic metre of air is exceeded more than 175 times during a calendar year.

Lower threshold: 100 micrograms per cubic metre of air is exceeded more than 175 times during a calendar year.

Standard for daily mean:

Upper threshold: 75 micrograms per cubic metre of air is exceeded more than 3 times during a calendar year.

Lower threshold: 50 micrograms per cubic metre of air is exceeded more than 3 times during a calendar year.

Assessment thresholds for sulphur dioxide in order to protect vegetation (Section 13)

Standard for winter mean:

Upper threshold: 12 micrograms per cubic metre of air. *Lower threshold:* 8 micrograms per cubic metre of air.

Standard for annual mean:

Upper threshold: 12 micrograms per cubic metre of air.

Lower threshold: 8 micrograms per cubic metre of air.

Assessment thresholds for carbon monoxide

Standard for daily mean (maximum eight-hour mean):

Upper threshold: 7 milligrams per cubic metre of air. *Lower threshold:* 5 milligrams per cubic metre of air.

Assessment thresholds for benzene

Standard for annual mean:

Upper threshold: 3.5 micrograms per cubic metre of air. *Lower threshold:* 2 micrograms per cubic metre of air.

Assessment thresholds for particulate matter (PM10)

Standard for daily mean:

Upper threshold: 35 micrograms per cubic metre of air is exceeded more than 35 times per calendar year.

Lower threshold: 25 micrograms per cubic metre of air is exceeded more than 35 times per calendar year.

Standard for annual mean:

Upper threshold: 28 micrograms per cubic metre of air. *Lower threshold*: 20 micrograms per cubic metre of air.

Assessment thresholds for particulate matter (PM2.5)

Standard for annual mean:

Upper threshold: 17 micrograms per cubic metre of air. *Lower threshold:* 12 micrograms per cubic metre of air.

Assessment thresholds for benzo(a)pyrene

Standard for annual mean:

Upper threshold: 0.6 nanograms per cubic metre of air. *Lower threshold:* 0.4 nanograms per cubic metre of air.

Assessment thresholds for arsenic

Standard for annual mean:

Upper threshold: 3.6 nanograms per cubic metre of air. Lower threshold: 2.4 nanograms per cubic metre of air.

Assessment thresholds for cadmium

Standard for annual mean:

Upper threshold: 3 nanograms per cubic metre of air. *Lower threshold:* 2 nanograms per cubic metre of air.

Assessment thresholds for nickel

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Standard for annual mean:

Upper threshold: 14 nanograms per cubic metre of air. *Lower threshold:* 10 nanograms per cubic metre of air.

Assessment thresholds for lead

Standard for annual mean:

Upper threshold: 0.35 micrograms per cubic metre of air. *Lower threshold:* 0.25 micrograms per cubic metre of air.

SFS 2010:477 Annex 2

Alert threshold for nitrogen dioxide

400 micrograms of nitrogen dioxide per cubic metre as a mean during three consecutive hours in an area which is representative of air quality and at least 100 square kilometres in size or in an agglomeration.

Alert threshold for sulphur dioxide

350 micrograms of sulphur dioxide per cubic metre as a mean during three consecutive hours in an area which is representative of air quality and at least 100 square kilometres in size or in an agglomeration.

Information threshold for ozone

180 micrograms per cubic metre of air as a mean during one hour.

Alert threshold for ozone

240 micrograms per cubic metre of air as a mean during one hour.