

CIRCULAR

DEFINING NATIONAL TECHNICAL REGULATIONS ON ENVIRONMENT

MINISTER OF NATURAL RESOURCES AND ENVIRONMENT

Pursuant to the Law on Standards and Technical Regulations dated June 29, 2006;

Pursuant to the Decree No.127/2007/ND-CP dated August 01, 2007 of the Government detailing the implementation of some Articles of the Law on Standards and Technical Regulations;

Pursuant to the Decree No.25/2008/ND-CP dated March 04, 2008 of the Government regulating functions, duties, powers and organizational structure of the Ministry of Natural Resources and Environment;

At the request of the General Director of General Department of Environment, Director of Department of Science and Technology, Director of Department of Legal Affairs,

REGULATES:

Article 1. To issue together with this Circular two (02) National Technical Regulations on environment:

1. QCVN 05:2009/BTNMT - National Technical Regulation on ambient air quality;
2. QCVN 06:2009/BTNMT - National Technical Regulation on a number of toxic substances in ambient air.

Article 2. This Circular takes effect from January 01, 2010.

Article 3. General Director of General Department of Environment and heads of the units under the Ministry of Natural Resources and Environment, Directors of the Departments of Natural Resources and Environment of provinces and cities directly under the Central Government and other concerned organizations and individuals are responsible for the implementation of this Circular./.

**FOR MINISTER
DEPUTY MINISTER**

Nguyen Xuan Cuong



SOCIALIST REPUBLIC OF VIETNAM

QCVN 05 : 2009/BTNMT

**NATIONAL TECHNICAL REGULATION
ON AMBIENT AIR QUALITY**

HANOI – 2009

Preamble

QCVN 05: 2009/BTNMT compiled by the drafting Committee of National Technical Regulation on air quality, General Department of Environment, Department of Science and Technology, Department of Legal Affairs submit for approval and issue together with the Circular No.16/2009/TT-BTNMT dated October 07, 2009 of the Minister of Natural Resources and Environment.

NATIONAL TECHNICAL REGULATION
ON AMBIENT AIR QUALITY

1. GENERAL PROVISIONS

1.1. Scope of application

1.1.1. This Regulation prescribes limited value of the basic parameters, including sulfur dioxide (SO₂), carbon (CO), nitrogen oxides (NO_x), ozone (O₃), suspended dust, dust PM10 (dust ≤ 10 μm) and lead (Pb) in ambient air.

1.1.2. This Regulation is applied to assess ambient air quality and monitor air pollution.

1.1.3. This Regulation does not apply to assess air quality within the production establishments or indoor air.

1.2. Interpretation of terms

In this Regulation the following terms are construed as follows:

1.2.1. An hour average: means the arithmetic average of the values measured in a period of one hour for the measurements made more than once in an hour, or the value of measurements made once in a period of one hour. The average value is measured several times in 24 hours (a day) under a certain frequency. The largest average value within the measured values obtained in 24 hours is taken to compare with limited values specified in Table 1.

1.2.2. 8-hour average: means the arithmetic average of the values measured over a period of 8 consecutive hours.

1.2.3. 24-hour average means the arithmetic average of the values measured over a period of (a day).

1.2.4. Annual average: means the arithmetic average of the average value of 24 hours measured over a period of one year.

2. TECHNICAL REGULATION

Limited values of the basic parameters in the ambient air specified in Table 1
Table 1: Limited values of basic parameters in the ambient air

Unit: Microgam per cubic meter (μg/m³)

No.	Parameters	An hour average	3-hour average	24-hour average	Annual average
1	SO ₂	350	-	125	50
2	CO	30000	10000	5000	-
3	NO _x	200	-	100	40
4	O ₃	180	120	80	-
5	Suspended dust (TSP)	300	-	200	140
6	Dust ≤ 10 μm (PM10)	-	-	150	50
7	Pb	-	-	1.5	0.5

Note: Mark (-) means not describing

3. METHOD OF DETERMINATION

Method of analysis to determine the parameters of air quality under the guidance of the National Standards or corresponding Standards of analysis of the international organizations.

- TCVN 5978:1995 (ISO 4221:1980). Air quality. Determination of mass concentration of sulfur dioxide in ambient air. Photometric method using Thorin.

- TCVN 5971:1995 (ISO 6767:1990) ambient air. Determination of mass concentration of sulfur dioxide. Tetrachloromercurat Method (TCM)/Pararosanilin.

- TCVN 7726:2007 (ISO 10498:2004) ambient air. Determination of sulfur dioxide. Ultraviolet fluorescence method.

- TCVN 5972:1995 (ISO 8186:1989) ambient air. Determination of mass concentration of carbon monoxide (CO). Gas chromatographic method.
- TCVN 7725:2007 (ISO 4224:2000) ambient air. Determination of carbon monoxide concentration. Non-dispersive infrared spectrometric method.
- TCVN 5067:1995 Air quality. Quantitative methods of determining the content of dust.
- TCVN 6138:1996 (ISO 7996:1985) ambient air. Determination of mass concentration of nitrogen oxides. Optical chemical methods.
- TCVN 7171:2002 (ISO 13964:1998) Air quality. Determination of ozone in ambient air. Photometric method of ultraviolet rays.
- TCVN 6157:1996 (ISO 10313:1993) ambient air. Determination of mass concentration of ozone. Chemical luminescence method.
- TCVN 6152:1996 (ISO 9855:1993) ambient air. Determination of dust lead content of aerosols collected on the filters. Method of atomic absorption spectrometry.

4. ORGANIZATION OF IMPLEMENTATION

This Regulation is applied to replace Vietnam standard TCVN 5937:2005 - Air quality - Standard of ambient air quality issued together with the Decision No.22/2006/QĐ-BTNMT dated December 18, 2006 by Minister of Natural Resources and Environment required the application of Vietnam standards on the environment.

Where the national or international standards on analytical methods cited in this Regulation is amended, supplemented or replaced, then shall apply the new documents.