QCVN 38:2011/BTNMT

NATIONAL TECHNICAL REGULATION ON SURFACE WATER QUALITY FOR PROTECTION OF AQUATIC LIFES

Preamble

QCVN 38:2011/BTNMT has been composed by the Drafting Board of national technical regulations on water quality, approved and submitted by the Vietnam Environment Administration, the Department of Science and Technology, the Department of Legal Affairs and promulgated together with the Minister of Natural Resources and Environment's Circular No.43/2011/TT-BTNMT of December 12, 2011.

NATIONAL TECHNICAL REGULATION ON SURFACE WATER QUALITY FOR PROTECTION OF AQUATIC LIFES

1. GENERAL PROVISIONS

Scope of regulation

This Regulation provides for the limit values of parameters for surface water used for protection of aquatic lifes.

This Regulation is applied to assess and control the surface water quality to ensure its compatibility and safety for aquatic lifes.

2. TECHNICAL REGULATIONS

Limit values of parameters of surface water used for protection of aquatic lifes shall be provided in Table 1.

Table 1: Limit values of parameters for water surface used for protection of aquatic lifes

No.	Parameters	Unit	Limit value
1	pH		6,5 - 8,5
2	Dissolved oxygen (DO)	mg/l	≥ 4
3	Total suspended solids (TSS)	mg/l	100
4	Total dissolved solids	mg/l	1000
5	Nitrite (NO_2^- calculated per N)	mg/l	0,02
6	Nitrate (NO_3^- calculated per N)	mg/l	5
7	Ammonium (NH_4^+ calculated per N)	mg/l	1
8	Cyanides (CN^-)	mg/l	0,01
9	Arsenic (As)	mg/l	0,02
10	Cadmium (Cd)	mg/l	0,005
11	Lead (Pb)	mg/l	0,02
12	Chromium VI	mg/l	0,02
13	Copper (Cu)	mg/l	0,2
14	Mercury (Hg)	mg/l	0,001
15	Organochlorine chemical substances for plant protection Aldrin Chlordane	µg/l	 3,0 2,4

	DDT		1,1
	Dieldrin		0,24
	Endrin		0,09
	Heptachlor		0,52
	Toxaphene		0,73
16	Herbicides 2,4 D 2,4,5 T Paraquat	mg/l	 0,2 0,1 1,2
17	Total oil and petrolatum	mg/l	0,05
18	Phenol (total)	mg/l	0,005
19	Surface activators	mg/l	0,2

3. METHOD OF DETERMINATION

3.1. Sampling for determination of parameters of water used for protection of aquatic lifes shall be done under the following national standards:

- TCVN 6663-1 (ISO 5667-1:2006) - Water quality - Part 1: Guidance on the design of sampling programs and sampling techniques

- TCVN 6663-3:2008 (ISO 5667-3:2003) - Water quality - Sampling. Guidance on preservation and handling of samples.

- TCVN 5994:1995 (ISO 5667-4:1987) - Water quality - Sampling. Guidance on sampling from natural and artificial lakes, ponds.

- TCVN 6663-6:2008 (ISO 5667-6:2005) - Water quality - Sampling. Guidance on sampling from rivers and streams.

3.2. Method of determining parameters of water quality shall be conducted under guidance of national standards:

- TCVN 6492-2011 (ISO 10523-2008) - Water quality – Determination of pH.

- TCVN 7324-2004. Water quality – Determination of dissolved oxygen – Iodometric method.

- TCVN 6625-2000 (ISO 11923-1997) - Water quality – Determination suspended solids by filtration through glass-fibre filters

- TCVN 6494-1:2011 (ISO 10304-1:2007) Water quality - Determination of dissolved anion by liquid chromatography - Part 1: Determination of dissolved sulfate, phosphate, bromide, chloride, fluoride, nitrate and nitrite.

- TCVN 6178-1996 (ISO 6777-1984) - Water quality – Determination of nitrite. Method of molecular absorption spectrometry.

- TCVN 6180-1996 (ISO 7890-3-1988) - Water quality- Determination of nitrate. Axitosunfosalixylic spectrometric method used.

- TCVN 5988-1995 (ISO 5664-1984) - Water quality - Determination of ammonium. Distillation and titration.

- TCVN 6620:2000 Water quality - Determination of ammonium. Potentiometric method.

- TCVN 7877:2008 (ISO 5666-1999) Water quality – Determination of mercury.

- TCVN 6193-1996 (ISO 8288-1986) - Water quality - Determination of cobalt, nickel, copper, zinc, cadmium and lead. Spectrometric method of flame atomic absorption.

- TCVN 6197-1996 (ISO 5961-1994) - Water quality - Determination of cadmium by atomic absorption spectrometry.

- TCVN 6626-2000 (ISO 11969-1996) - Water quality – Determination of arsenic. Atomic absorption spectrometric method (hydride technique).

- TCVN 6658:2000 (ISO 11083:1994), Determination of chromium (VI) – Spectrometric method using 1,5-diphenylcarbazide

- TCVN 6665:2011 (ISO 11885:2007) - Water quality – Determination of selected elements by inductively coupled plasma optical emission spectrometry (ICP-OES).

- TCVN 7876:2008, Water - Determination of organochlorine pesticides content. Liquid-liquid extraction gas chromatographic method

-TCVN6216-1996(ISO 6439-1990) - Water quality - Determination of phenol index. 4-aminoantipyrine spectrometric methods after distillation.

- TCVN 6336-1998 (ASTM D 2330-1998) - Standard test method for methylene blue active substances.

In case the method for determination of the parameters provided in this Regulation has not been guided in any national regulations, similar regulations on methods of determination by international organizations shall apply.

3.3. Methods of analysis with similar or higher accuracy than regulations referred in Section 3.2may be accepted.

4. IMPLEMENTATION ORGANIZATION

4.1. This Regulation replaces TCVN 6774:2000-Water quality- Freshwater quality guidelines for protection of aquatic lifes in the List of Vietnamese environmental standards promulgated together with the Minister of Natural Resources and Environment's Decision No. 35/2002/QĐ-BKHCNMT of June 25, 2002.

4.2. State environment administration agencies are responsible for guiding, examining and supervising the implementation of this Regulation.

4.3. In case the national standards referred in this Regulation are amended, supplemented or replaced, such amendments, supplements or replacements shall apply.