

No: 16/2008/QD-BTNMT

Hanoi, December 31, 2008

DECISION

On promulgating National Technical Regulation on Environment

MINISTER OF NATURAL RESSOURCES AND ENVIRONMENT

*Pursuant to the Law on Standards and Technical Regulation on June 29, 2006;
Pursuant to Decree No. 127/2007/ND-CP on August 1, 2007 of the Government detailing
the implementation of some articles of the Law on Standards and Technical Regulations;
Pursuant to Decree No. 25/2008/ND-CP on March 4, 2008 of the Government regulating
functions, tasks, powers and organizational structure of the Ministry of Natural Resources
and Environment;*

*At the proposal of the General Director of Department of Environment and the Director of
Legal Department,*

DECIDES:

Article 1: To issue together with this Decision 08 national technical standards on the environment as follows:

1. QCVN 08:2008 / BTNMT - National Technical Regulation on surface water quality;
2. QCVN 09:2008 / BTNMT - National Technical Regulation on underground water quality;
3. QCVN 10:2008 / BTNMT - National Technical Regulation on coastal water quality;
4. QCVN 11:2008 / BTNMT - National Technical Regulations on the effluent of aquatic products processing industry.
5. QCVN 12:2008 / BTNMT - National technical regulation on the effluent of pulp and paper mills
6. QCVN 13:2008 / BTNMT - National technical regulation on the effluent of textile industry

QCVN 10 : 2008/BTNMT

7. QCVN 14:2008 / BTNMT - National Technical Regulations on domestic wastewater;
8. QCVN 15:2008 / BTNMT - National technical regulation on the pesticide residues in the soils

Article 2. This Decision will take effect 15 days from the date of its publication on the Official Gazette.

Ministers, Heads of ministerial-level agencies and Government attached agencies, Presidents of People's Committees of provinces and cities directly under the Central Government and other organizations and individuals concerned shall implement this Decision

**FOR THE MINISTER
DEPUTY MINISTER**

Tran Hong Ha



QCVN 10: 2008/BTNMT

**NATIONAL TECHNICAL REGULATION ON
COASTAL WATER QUALITY**

(This English version is for reference only)

HANOI - 2008

Foreword

QCVN 10:2008/BTNMT is compiled by the Committee of National Technical Regulations on water quality, submitted for approval by the General Department of Environment and the Legal Department and issued under the Decision No.16/2008/QD-BTNMT dated on 31 December 2008 of the Minister of Natural Resources and Environment.

NATIONAL TECHNICAL REGULATION ON COASTAL WATER QUALITY

1. General requirements

1.1. Scope

1.1.1. This Technical Regulation specifies critical values of parameters for coastal water quality

1.1.2. This regulation is applied to evaluate and control the quality of coastal waters for the purposes of sport, water recreation, aquaculture and other purposes.

1.2. Term explanation

Coastal water and sea water in the bay, port and shore areas within 03 nautical miles (about 5.5 km.)

2. Specification

Critical values of coastal water quality parameters are provided in Table 1

Table 1: Critical values of coastal water quality parameters

No.	Parameters	Unit	Critical values		
			Agricultural and aquatic conservation areas	Beach, water sport areas	Other areas
1	Temperature	⁰ C	30	30	-
2	pH		6,5-8,5	6,5-8,5	6,5-8,5
3	Total suspended solid (TSS)	mg/l	50	50	-
4	Dissolved oxygen (DO)	mg/l	≥ 5	≥ 4	-
5	COD (KMnO ₄)	mg/l	3	4	-
6	Amonium (NH ⁺ ₄) (calculated by N)	mg/l	0,1	0,5	0,5
7	Fluoride (F ⁻)	mg/l	1,5	1,5	1,5
8	Sulfur (S ²⁻)	mg/l	0,005	0,01	0,01
9	Cyanide (CN ⁻)	mg/l	0,005	0,005	0,01

QCVN 10 : 2008/BTNMT

10	Arsenic (As)	mg/l	0,01	0,04	0,05
11	Cadmium(Cd)	mg/l	0,005	0,005	0,005
12	Lead (Pb)	mg/l	0,05	0,02	0,1
13	Chromium III (Cr ³⁺)	mg/l	0,1	0,1	0,2
14	Chromium VI (Cr ⁶⁺)	mg/l	0,02	0,05	0,05
15	Copper (Cu)	mg/l	0,03	0,5	1
16	Zinc (Zn)	mg/l	0,05	1,0	2,0
17	Manganese (Mn)	mg/l	0,1	0,1	0,1
18	Iron (Fe)	mg/l	0,1	0,1	0,3
19	Mercury (Hg)	mg/l	0,001	0,002	0,005
20	Oil and fat slicks	mg/l	Null	Null	-
21	Mineral oil and fat	mg/l	Not detected	0,1	0,2
22	Total phenol	mg/l	0,001	0,001	0,002
23	Plant protection chemical: organic chlorine				
	Aldrin + Dieldrin	µg/l	0,008	0,008	-
	Endrin	µg/l	0,014	0,014	-
	B.H.C	µg/l	0,13	0,13	-
	DDT	µg/l	0,004	0,004	-
	Endosulfan	µg/l	0,01	0,01	-
	Lindan	µg/l	0,38	0,38	-
	Clordan	µg/l	0,02	0,02	-
Heptachlor	µg/l	0,06	0,06	-	
24	Plant protection chemical: organic phosphorus				
	Parathion	µg/l	0,40	0,40	-
	Malathion	µg/l	0,32	0,32	-
25	Herbicide chemicals				
	2,4D	mg/l	0,45	0,45	-
	2,4,5T	mg/l	0,16	0,16	-
	Paraquat	mg/l	1,80	1,80	-
26	Total radiation activity α	Bq/l	0,1	0,1	0,1
27	Total radiation activity β	Bq/l	1,0	1,0	1,0
28	Coliform	MPN/ 100ml	1000	1000	1000

Note: Sign (-) means “not allocated”

3. Method of determination

3.1. Sampling for coastal water quality monitoring shall apply these national standards as follows:

- TCVN 5992:1995 (ISO 5667-2: 1991) Water quality. Sampling. Guidance on sampling techniques
- TCVN 5993:1995 (ISO 5667-3: 1985) Water quality. Sampling. Guidance on the preservation and handling of samples
- TCVN 5998:1995 (ISO 5667-9: 1987) Water quality. Sampling. Guidance on sampling from marine waters

3.2. Methods of analysis used for determination of coastal water quality parameters shall be carried out in compliance with the guidance of national standards or equivalent analysis standards of the international organization:

- TCVN 4557-1988 Waste water. Determination of temperature
- TCVN 6492-1999 (ISO 10523-1994) Water quality. Determination of pH
- TCVN 5499-1995. Water quality. Winkler method for determination of dissolved oxygen
- TCVN 6625-2000 (ISO 11923-1997) Water quality. Determination suspended solids by filtration through glass-fibre filters
- TCVN 6491-1999 (ISO 6060-1989) Water quality. Determination of the chemical oxygen demand
- TCVN 6494-1999 Water quality. Determination of dissolved fluoride, chloride, nitrite, orthophosphate, bromide, nitrate and sulfate ions, using liquid chromatography of ions.
- TCVN 6195-1996 (ISO 10359-1-1992) Water quality. Determination of fluoride. Part 1: Electrochemical probe method for potable and lightly polluted water
- TCVN 5988-1995 (ISO 5664-1984) Water quality. Determination of ammonium. Distillation and titration method
- TCVN 6181-1996 (ISO 6703-1-1984) Water quality. Determination of total cyanide

QCVN 10 : 2008/BTNMT

- TCVN 5991-1995 (ISO 5666-3-1984) Water quality. Determination of total mercury by flameless atomic absorption spectrometry. Method after digestion with bromine
- TCVN 6002-1995 (ISO 6333-1986) Water quality. Determination of manganese. Formaldoxime spectrometric method
- TCVN 6177-1996 (ISO 6332-1988) Water quality. Determination of iron. Spectrometric method using 1,10-phenantroline
- TCVN 6193-1996 (ISO 8288-1986) Water quality. Determination of cobalt nickel, copper, zinc, cadmium, and lead. Flame atomic absorption spectrometric methods
- TCVN 6197-1996 (ISO 5961-1994) Water quality. Determination of cadmium by atomic absorption spectrometry
- TCVN 6222-1996 (ISO 9174-1990) Water quality. Determination of total chromium. Atomic absorption spectrometric methods
- TCVN 6626-2000 (ISO 11969-1996) Water quality. Determination of arsenic. Atomic absorption spectrometric method (hydride technique)
- TCVN 6216-1996 (ISO 6439-1990) Water quality. Determination of phenol index. 4-aminoantipyrine spectrometric methods after distillation
- TCVN 5070-1995 Water quality. Weight method for determination of oil and oil product
- TCVN 6053-1995 (ISO 9696-1992) Water quality. Measurement of gross alpha activity in non-saline water. Thick source method
- TCVN 6219-1995 (ISO 9697-1992) Water quality. Measurement of gross beta activity in non-saline water
- TCVN 6187-1-1996 (ISO 9308-1-1990) Water quality. Detection and enumeration of coliform organisms thermotolerant coliform organisms and presumptive Escherichia coli. Part 1: Membrane filtration method

If there are not national standards guiding analysis methods for parameters specified in this Technical Regulation, apply the corresponding analysis standards of the international organizations.

4. Implementation

This Technical Regulation comes into effect and replaces TCVN 5943:1995 Water quality. Coastal water quality standard mentioned in List of mandatory environment Vietnam standards that was issued together with Decision No. 35/2002/QĐ-BKHVNMT dated on June 25, 2002 of the Minister of Science, Technology and Environment.

Where national standards cited in this Technical Regulation are revised, amended or replaced, apply the newest versions.