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LOCAL STANDARD
OF GUANGDONG PROVINCE (P. R. China)

DB44/26-2001
DB 4426-1989 is abolished

Discharge Limits of Water Pollutants

水污染物排放限值

Issued on: August 20, 2001 **Implemented on: January 1, 2002**

Jointly issued by: Environmental Protection Bureau of Guangdong Province;

Administration of Quality and Technology Supervision Bureau of Guangdong Province.

Table of Contents

Foreword

All technical contents in this Standard are mandatory requirements.

This Standard is the revision to DB 4426-1989 *Discharge Standard for Water Pollutants*.

Compared with DB 4426-1989, the major changes of this Standard are as follows:

— It is prepared according to requirements of GB/T 1.1-2000;

— Clarify the scope of application;

— Add terms and definitions;

— Adjust the control zone division and standard grading;

— Adopt annual restrictions;

— In Phase I (the first time-period), 16 new controlling items are added; and the standard values of the previous items are basically maintained at Level 1 and 2 standard values of the previous standard. In Phase II (the second time-period), 46 new controlling items are added; the maximum allowable discharge concentration of chromaticity, biochemical oxygen demand for suspended solids, chemical oxygen demand, petroleum, animal and vegetable oils, ammonia nitrogen, and other items are appropriately to be stricter;

— Add the supporting monitoring requirements and analytical methods.

Appendix A, B and C of this Standard are normative.

This Standard was proposed by Guangdong Environmental Protection Bureau.

This Standard was approved by the People's Government of Guangdong Province.

This Standard was drafted by: Guangdong Environmental Protection Monitoring Station.

The main drafters of this Standard: Liu Jun, Liu Yangzhen, and Liang Zhiguang.

This Standard was first-time issued in 1989; and this is the first revision.

Introduction

In order to control the water pollution; protect the water quality; guarantee the human health; maintain the ecological balance; and promote the economic and social development, this Standard is drafted with consideration of the actual situation in Guangdong Province, according to the *Environmental Protection Law of the People's Republic of China*; *Water Pollution Prevention and Control Law of the People's Republic of China*; *Marine Environment Protection Law of the People's Republic of China;* and other relevant provisions.

This Standard replaces DB 4426-1989 *Discharge Standard for Water Pollutants*.

Since the implementation date of this Standard, DB 4426-1989 shall be abolished.

Discharge Limits of Water Pollutants

1 Scope

This Standard stipulates the discharge limits of 74 water pollutants, in year-limit; and also stipulates a variety of requirements in the implementation standard.

This Standard is applicable to Guangdong Province's existing units' [Translator: "unites" is defined in 3.3 / 3.4 of Chapter 3. However, it should be replaced with "existing organizations / enterprises". Hereinafter it is marked as "UNIT/UNITS"] discharge management of water pollutants from; environmental impact assessment on the construction project, design, completion and acceptance of environmental protection facilities for the construction project; and discharge management after acceptance and production - except those industries such as shipping, shipping industry, offshore petroleum development industry, aerospace propellant use, weapon industry, sewage marine disposal engineering.

2 Normative references

The articles contained in the following documents have become part of this Standard when they are quoted herein. For the dated documents so quoted, all the modifications (excluding corrections) or revisions made thereafter shall not be applicable to this Standard. For the undated documents so quoted, the latest editions shall be applicable to this Standard.

GB 3097 Marine water quality standard

GB 8703 Regulations for radiation protection

GB 12997 Water quality - Technical regulation on the design of sampling programs

GB 12999 Water quality sampling - Technical regulation of the preservation and handling of samples

GHZB 1 Environmental quality standard for surface water

Technical requirements for completion inspection and acceptance of construction project environment protection installations (on trial)

74 items and 83 detection and analysis methods are shown Table 6

3 Terms and Definitions

For the purpose of this Standard, the following terms and definitions apply.

3.1

5.2.2 For the routine monitoring on the industrial wastewater, the monitoring frequency shall be determined according to the production cycle. For production cycle is shorter than 8, the wastewater shall be sampled every 2 hours. For production cycle is longer 8, the wastewater shall be sampled every 4 hours. Other wastewater sampling: at least twice in 24 hours. The maximum allowable discharge concentration shall be calculated according to the daily mean value.

5.2.3 The supervision and management of the environmental protection department and the monitoring of pollution charges can be sampled randomly according to the actual situation. The maximum allowable discharge concentration shall be calculated according to one-time concentration.

5.3 Sample collection and storage

5.3.1 Wastewater sample collection shall be consistent with provisions of GB 12997.

5.3.2 Sample storage shall be consistent with provisions of GB 12999.

5.4 Drainage water-volume

The drainage water-volume shall be controlled according to the maximum allowable drainage water-volume or the minimum allowable water reuse rate. Both are calculated according to monthly mean value.

5.5 Statistics

The usage amount of raw materials, product yield, etc., of the enterprise shall be based on the statutory monthly or annual statements.

5.6 Analytical method

The analytical methods of each item are shown in Table 6. The analytical method shall adopt the national method standard. If there is no national method standard, methods listed in the footnote of Table 6 can be temporarily used. After the issuance of the national method standard, it shall be executed.

6 Standard Implementation

6.1 This Standard shall be supervised and implemented by the competent departments of environmental protection administration of the above-county-level people's government.

6.2 For control zones specified in this Standard, if executing standards of the corresponding levels cannot guarantee the water environment quality standard of the functional water area, the prefecture-level-city people’s government can propose to formulate the discharge limits that are stricter than this Standard; or to supplement the pollutant items and discharge limits that are not listed in this Standard. And implement

them after approved by the provincial government.

6.3 After the issuance of this Standard, if there is newer-issued or newer-revised national water-pollutant discharge standard is stricter than this Standard, it shall execute the corresponding national water-pollutant discharge standard according to the application scope; this Standard shall not be executed.

Table 1 Maximum Allowable Discharge Concentration for Pollutants of First Class

Unit: milligrams per liter (Except total α radioactivity, and total β radioactivity)

Serial No.	Pollutants	Scope of application	Maximum allowable discharge concentration
1	Total mercury	Caustic soda and PVC industries	0.005
		Other discharge UNITS	0.05
2	Alkyl mercury	All discharge UNITS	Must not be detected
3	Total cadmium	All discharge UNITS	0.1
4	Total chromium	All discharge UNITS	1.5
5	Hexavalent chromium	All discharge UNITS	0.5
6	Total arsenic	All discharge UNITS	0.5
7	Total lead	All discharge UNITS	1.0
8	Total nickel	All discharge UNITS	1.0
9	Benzo [a] pyrene	All discharge UNITS	0.00003
10	Total beryllium	All discharge UNITS	0.005
11	Total silver	All discharge UNITS	0.5
12	Total α radioactivity	All discharge UNITS	1.0 Bq/L
13	Total βradioactivity	All discharge UNITS	10 Bq/L
14	Active chlorine	Mercury electrolytic method, in caustic soda industry	5.0
		Membrane electrolytic method, in caustic soda industry	20
		Ion-exchange membrane electrolytic method, in caustic soda industry	2.0
15	Asbestos	Membrane electrolytic method, in caustic soda industry	50
16	Chloroethylene	PVC industry	2.0

		Calcium magnesium phosphate	0.4 m^3/ton of products (≥500,000 tons / year) 0.75 m^3/ton of products (≥200,000 tons / year) 1.0 m^3 / ton of products (<200,000 tons / year)
		Ammonium phosphate	0.3 m^3/ton of products (≥240,000 tons / year) 0.4 m^3/ton of products (≥120,000 tons / year) 0.6 m^3/ton of products (<120,000 tons / year)
		Triple superphosphate	0.3 m^3/ton of products (≥400,000 tons / year) 0.4 m^3/ton of products (≥200,000 tons / year) 0.6 m^3/ton of products (<200,000 tons / year)
		Nitric phosphate	1.0 m^3 / ton of products
22	Caustic soda industry	Mercury electrolytic method	1.5 m^3 / ton of products
		Membrane electrolytic method	5.0 m^3 / ton of products
		Ion exchange membrane electrolytic method	1.5 m^3 / ton of products
23	PVC industry	Calcium carbide wastewater by calcium carbide method	5.0 m^3 / ton of products
		PVC wastewater by calcium carbide method	4.0 m^3 / ton of products
		PVC wastewater by ethylene oxychlorination method	5.0 m^3 / ton of products
24	Printing and dyeing industry		2.5 m^3/100 m cloth (width of 914 mm)
25	Synthetic ammonia industry		Large enterprise: 10 m^3 / ton of ammonia Medium-sized enterprise: 60 m^3/ton of ammonia Small enterprise: 50 m^3 / ton of ammonia
26	Natural latex rubber processing		20 m^3 / ton of raw rubber

Table 4 Maximum Allowable Discharge Concentration for Pollutants of Second Class

(Phase II)

Unit: milligram per liter (except pH, fecal coliform and coliform)

Serial No.	Pollutants	Scope of application		Level I standard	Level II standard	Level III standard
1	PH	All discharge UNITS		6-9	6-9	6-9
2	Chromaticity	All discharge UNITS		40	60	---
3	Suspended solids	Mining, mineral processing and coal dressing industries		70	200	---
		Pulping, pulping and paper-making, paper-making		100	100	400
		Synthetic ammonia industry	Large enterprise	60	60	400
			Medium-sized enterprise	100	100	400
		Ammonium phosphate, triple superphosphate and nitric phosphate industries		30	50	200
		Urban Level II wastewater treatment plant		20	30	---
		Other discharge UNITS		60	100	400
4	Biochemical oxygen demand after five days	Pulping, pulping and paper-making	Wood pulp	50	70	600
			Non-wood pulp	50	100	600
		Natural latex rubber processing, alcohol, monosodium glutamate, leather and chemical fiber pulp industries		20	70	600
		Cane sugaring, ramie degumming, wet-progress fiber board, dye, scouring, PVC and paper-making		20	60	600
		Textile dyeing and finishing, breeding, slaughtering and meat product processing		20	40	300
		Urban Level II wastewater treatment plant		20	30	---
		Other discharge UNITS		20	30	300
5	Chemical oxygen demand	Pulping, pulping and paper-making		200	350	1000
		Alcohol, monosodium glutamate and pharmaceutical crude drug industries		100	250	1000
		Bio-pharmaceutical, leather, ramie degumming and chemical fiber pulp industries, natural latex rubber processing, synthetic fatty acids, wet-process fiber board, dye, scouring and organophosphorus pesticide industries		100	200	1000
		Textile dyeing and finishing industry		100	130	500
		Paper-making		100	130	1000
		PVC industry		80	100	500
		Breeding, slaughtering and meat product processing		70	100	500
		Petrochemical engineering industry (including petroleum refining)		60	120	500
		Urban Level II wastewater treatment		40	60	---
		Other discharge UNITS		90	110	500
6	Petroleum	Synthetic ammonia industry		5.0	5.0	20
		Other discharge UNITS		5.0	8.0	20
7	Animal and vegetable oils	All discharge UNITS		10	15	100
8	Volatile phenol	Synthetic ammonia industry		0.1	0.1	2.0

		PVC wastewater by calcium carbide method	4.0 m^3 / ton of products
		PVC wastewater by ethylene oxychlorination method	5.0 m^3 / ton of products
28	Printing and dyeing industry		2.5 m^3/100 m cloth (width of 914 mm)
29	Synthetic ammonia industry		Large enterprise: 10 m^3 / ton of ammonia Medium-sized enterprise: 50 m^3 / ton of ammonia
30	Natural latex rubber processing		20 m^3 / ton of raw rubber
a Products are calculated based on the concentration of 100%. b The wastewater produced by P_2S_5, $PSCl_3$, PCl_3 raw materials is not included. c The wastewater produced by chloral is not included.			

Appendix C

(Normative)

Calculation of maximum allowable annual total discharge amount of pollutant

Calculation of maximum allowable annual total discharge amount of certain pollutant:

$$L_{total} = L_{Negative} \times Y \times 10^{-3}$$

Where:

L_{total} — Maximum allowable annual total discharge amount of certain pollutant (ton/year);

$L_{Negative}$ — Maximum allowable discharge load of certain sewage (kg/ton of products);

Y — Annual output of approved products (ton/year of products).

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