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**NATIONAL STANDARD OF THE PEOPLE'S
REPUBLIC OF CHINA**

中华人民共和国国家标准

GB 50014-2006

**Code for Design of Outdoor Wastewater
Engineering**

室外排水设计规范

Issued on January 18, 2006

Implemented on June 01, 2006

**Issued by General Administration of Quality Supervision, Inspection and
Quarantine of the People's Republic of China**

Ministry of Construction of People's Republic of China

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Chief Editorial Department: Shanghai Construction and Communications Committee

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NOTICE

This code is written in Chinese and English. The Chinese text shall be taken as the ruling one in the event of any inconsistency between the Chinese text and the English text.

Notification of Ministry of Construction of the People's

Republic of China

No.409

Notice on Promulgation for the National Standard "Code for Design of Outdoor Wastewater Engineering" from Ministry of Construction of the People's Republic of China

Now "Code for Design of Outdoor Wastewater Engineering" is approved to be the national standard, its number is GB 50014—2006, it is implemented from June 1,2006. In it, the items of 1.0.6,4.1.4,4.3.3,4.4.6,4.6.1,4.10.3,4.13.2,5.1.3,5.1.9,5.1.11,6.1.8,6.1.18,6.1.19,6.1.23,6.3.9,6.8.22,6.11.4,6.11.8(4),6.11.13,6.12.3,7.1.3,7.3.8,7.3.9,7.3.11,7.3.13 are the obligatory items, and must be executed strictly. The former "Code for Design of Outdoor Wastewater Engineering" GBJ 14—87 AND "Local Revision notification of Engineering Construction Standard"(No. 12 in 1997) are superseded.

This code is chiefly issued by China Planning Press, under the organization of Standard Ration Research Institute in Ministry of Construction of the People's Republic of China.

Ministry of Construction of the People's Republic of China

January 18, 2006

Preface

According to “Notification of the print and distribution of the establish, revision of engineering construction national standard in year 2002 to 2003” of Ministry of Construction of the People’s Republic of China (construction standard(2003) No 102,the former national standard” Code for Design of Outdoor Wastewater Engineering” GBJ 14—87 (Version 1997) was revised totally together by Shanghai General Municipal Engineering Design and Research Institute organized by Shanghai Construction Committee.

The main technology contains in the revision of this code include: adding the contains of the utilization of water resource (including the renovated water recycling and storm water collection utilization), terms and symbols, non excavation technology and laying of twin tube, anti -sunken, interception basin, the intersection of renovated water pipe and drinking water pipe, deodorization, biological removal of nitrogen and phosphorus , sequencing batch activated sludge method, aerated biological filters , wastewater advanced treatment and recycling, the disposal, the disposal, inspection and control of the sludge; adjusting the contains of the integrated runoff coefficient, the output of pollution of each person per day in the domestic wastewater, the space of the inspection basin in the section of direct line pipe, land treatment, etc; adding the contains of the course coefficient in the plastic pipe, economization on energy of the water pumping, oxidation ditch; deleting the double -layer sedimentation tank.

The items with bold face in this code are the obligatory items and must be executed strictly.

This code is under the management of Ministry of Construction of the People's Republic of China and the obligatory items are under the explanation of it. The daily organization is under Shanghai Construction and Communications Committee, the detail technical contains are under the explanation of Shanghai General Municipal Engineering Design and Research Institute. The users of this Code are kindly required to summarize experience and collect materials, and send any suggestion or comment in this regard to Management Group of National Standard of “ Code for Design of Outdoor Wastewater Engineering ” in Shanghai General Municipal Engineering Design and Research Institute(Post Code: 20092,No. 901 Zhong Shan Second North Street, Shanghai.) at any time for reference in future revision.

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Participating editorial units:

Beijing General Municipal Engineering Design and Research Institute

China North East Municipal Engineering Design and Research Institute

North China Municipal Engineering Design and Research Institute

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Contents

1	GENERAL	10
2	TERMS AND SYMBOLS	12
2.1	TERMS	12
2.2	SYMBOLS	20
3	DESIGNED FLOW AMOUNT AND WATER QUALITY	23
3.1	DOMESTIC SEWERAGE AMOUNT AND INDUSTRIAL WASTEWATER AMOUNT	23
3.2	STORM WATER AMOUNT	24
3.3	COMBINED WATER AMOUNT	25
3.4	DESIGNED WATER QUALITY.....	26
4	SEWERAGE PIPE DITCH AND ATTACHED STRUCTURES	27
4.1	GENERAL REQUIREMENTS	27
4.2	CALCULATION OF WATER POWER.....	28
4.3	PIPE.....	30
4.4	EXAMINATION WELL.....	31
4.5	WATER DROP WELL.....	32
4.6	WATER SEAL WELL	32
4.7	STORM-WATER INLET	33
4.8	INTERCEPTING WELL.....	33
4.9	WATER OUTLET	33
4.10	SEWER SYSTEM OF GRADE SEPARATION ROAD.....	33
4.11	INVERTED SIPHON.....	34
4.12	CANAL.....	34
4.13	PIPE INTEGRATION	35
5	PUMPING STATION	37
5.1	GENERAL	37
5.2	DESIGN FLOW AND DESIGN LIFT.....	37
5.3	COLLECTING BASIN	38
5.4	DESIGN OF PUMP HOUSE	39
5.5	WATER OUTLET FACILITY	40
6	SEWAGE TREATMENT	42
6.1	CHOICE OF FACTORY LOCATION AND GENERAL LAYOUT	42
6.2	GENERAL PROVISIONS.....	44
6.3	BAR SCREEN	45
6.4	GRIT CHAMBER.....	46
6.5	SEDIMENTATION TANK	47
6.6	ACTIVATED SLUDGE PROCESS.....	49
6.7	CHEMICAL WAY OF ELIMINATING PHOSPHORUS.....	56
6.8	OXYGEN SUPPLYING FACILITY	57

6.9	BIOLOGICAL MEMBRANE METHODS	59
6.10	BACKFLOW SLUDGE AND SURPLUS SLUDGE.....	62
6.11	WATER NATURAL PROCESSING	63
6.12	SEWAGE DEEPLY PROCESSING AND REUSE.....	65
6.13	DISINFECTION	67
7	SLUDGE PROCESSING AND HANDLING	68
7.1	GENERAL REQUIREMENTS	68
7.2	SLUDGE THICKENINGS.....	68
7.3	SLUDGE DIGESTION.....	68
7.4	SLUDGE MECHANICAL DEWATERING.....	71
7.5	SLUDGE TRANSPORTATION	72
7.6	SLUDGE DESICCATION BURNING	73
7.7	SLUDGE COMPREHENSIVE UTILIZATION	74
8	EXAMINATIONS AND CONTROL	74
8.1	GENERAL REQUIREMENTS	74
8.2	EXAMINATION	74
8.3	CONTROLS.....	75
8.4	COMPUTERS CONTROL MANAGEMENT SYSTEM	75
APPENDIX A	METHOD OF ESTABLISHING RAINSTORM INTENSITY FORMULA	76
APPENDIX B	THE SMALLEST NET DISTANCE BETWEEN THE DRAINAGE CHANNEL AND OTHER UNDERGROUND PIPES(CONSTRUCTION).....	77
	INSTRUCTIONS OF THIS REGULATION	79

1 General

1.01 This Code has been worked out for the purpose of carrying out the scientific views of development for the design of wastewater engineering in China, meeting the national laws and specifications, reaching the requirements to control the water pollution, improving and protecting the environment, improving the health of people and ensuring the safety.

1.02 This code applies to the design for permanent outdoor wastewater engineering that is newly built, expanded built or rebuilt in urban, industrial district and residential district.

1.03 The design for wastewater engineering shall be mainly according to the approved general planning of the cities, towns, and the special planning of the wastewater engineering, it shall be proceeded from the whole condition, according to the planning year limit, scale of engineering, economic benefit, social benefit and environment benefit, the relation of industrial and agriculture, urbanization and non urbanization district, near future and future, concentration and decentralization, discharging and utilization in urban shall be correctly treated. After the overall verification, the protection of environment, economization of lands, advanced technology, reasonable economic, reliable safety can be reached to fit the local real conditions.

1.04 The choice of the sewerage system(separate system and combined system) shall be determined according to the general planning of the urban, combining the integrated consideration of the local landform characteristics, hydrological conditions, water body status, weather characteristics, former sewerage facilities, degree of the wastewater treatment, the water exit utilization and so on. Different sewerage system can be adopt in different district in the same urban .The sewerage system shall set wastewater dam facilities. For the district with high requirement of protection of the water body, the initial storm water can be dammed, adjusted, stored and treated. In the district that is lack of water, the storm water shall better be collected, treated and integrated used.

1.05 The design of sewerage system shall consider integrate the following factors:

- 1 The reuse of the wastewater, the reasonable disposal of the sludge.
- 2 Coordinate with the wastewater and sludge treatment and disposal system in the adjacent district.
- 3 Coordinate with the water supply system and removal system of the flood water system in the adjacent district or in the district.
- 4 The probability of admitting the industrial wastewater and doing the concentrated treatment and disposal.
- 5 Properly rebuild the former wastewater engineering facilities to fully play the efficiency of the engineering.

1.06 The water quality of the industrial wastewater switching into the urban sewerage system shall be carrying out according to the relative standard, and shall not have influence with the normal operation of the urban sewerage pipe ditch and the wastewater treatment factories; it shall not have damage for the curing management person, shall not have the influence of the reuse and safe discharging of the out water after treatment, shall not have the influence of the treatment and disposal of the sludge.

1.07 The design of the wastewater engineering shall adopt new technology, new process, new material and new facilities that are assayed and tried to be true on the basis of continually summing up the scientific,



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