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PEOPLE'S REPUBLIC OF CHINA**

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**Technical specifications of domestic pollution control for town
and village**

(English Translation)

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Foreword

To implement the "Environmental Protection Law of the People's Republic of China", "Water Pollution Prevention and Control Law of the People's Republic of China" Dyeing Prevention and Control Law and the Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Wastes, guiding rural pollution control and improving rural areas the quality of the environment, promote the construction of new countryside, and develop this standard.

This standard specifies the technical requirements for pollution control in rural areas.

This standard is the first release.

This standard was formulated by the Science and Technology Standards Department of the Ministry of Environmental Protection.

This standard is mainly drafted by. Beijing Environmental Protection Research Institute, Tsinghua University.

This standard was approved by the Ministry of Environmental Protection on July 9, 2010.

This standard has been implemented since January 1, 2011.

This standard is explained by the Ministry of Environmental Protection.

Rural life pollution control technical specifications

1 Scope of application

This standard specifies the technical requirements for pollution control in rural areas.

This standard applies to the supervision and management of rural life pollution control.

2 Normative references

The contents of this standard refer to the terms in the following documents. For undated references, the valid version applies to this standard.

GB 4284 Contaminant control standard for agricultural sludge GB 5084 Farmland Irrigation Water Quality Standard GB 7959 fecal harmless hygiene standard GB 8172 Urban Waste Agricultural Control Standard GB 9958 Rural Household Biogas Fermentation Process Regulations GB 13271 Boiler Air Pollutant Emission Standard GB 16889 Domestic Waste Landfill Pollution Control Standard GB 19379 Rural household sanitary standard GB 50014 Outdoor Drainage Design Code GB/T 4750 household biogas digesters standard atlas GB/T 16154 civil water heating coal stove thermal performance test method GB J 125-89 Basic terminology standard for water supply and drainage design CJJ/T 65-2004 City and Environment Hygiene Terminology Standard SL 310 Village and Town Water Supply Engineering Technical Specifications

3 Terms and definitions

The following terms and definitions as defined in CJJ/T 65-2004, GB J 125-89 apply to this standard.

Rural and township pollution Refers to domestic sewage, domestic garbage, waste gas, people (animals) generated in the activities of rural residents in daily life or providing services for daily life.

Feces and other pollution. It does not include pollutants from industrial activities that provide services for daily life (such as agricultural product processing, concentrated livestock and poultry farming).

Black water Refers to the high concentration of domestic sewage that the toilet flushes the manure.

Grey water Refers to low-concentration domestic sewage such as kitchen water, laundry and bath water other than flushing water.

Decentralized treatment Refers to the treatment of domestic pollutants produced by farmers, neighborhoods or independent buildings by means of local treatment, without the need for a wide range of tubes Net or collect transportation systems.

Centralized treatment Refers to the collection of domestic pollutants (sewage or garbage) generated in a certain area through pipelines or vehicles, and transported (shipped) to designated locations.

And how to handle it.

Low energy consumption and decentralized wastewater treatment Low-energy consumption

areas such as constructed wetlands, land treatment, oxidation ponds, purification biogas digesters, and small sewage treatment plants (buried) the technology is suitable for centralized collection and treatment of small-scale sewage and black water treatment alone.

4 Rural classification

In order to facilitate the classification and guidance of rural life pollution control, this standard is based on the economic conditions, infrastructure and environmental natural conditions of rural areas.

Divide the countryside into three different types.

a) Developed rural areas refer to good economic conditions [per capita net income > 6,000 yuan/(person·a)], complete infrastructure, residential construction Medium or neat, a market town or village with a certain proportion of buildings.

b) The more developed rural areas refer to better economic conditions [per capita net income of 3 500 to 6,000 yuan/(person·a)], with certain infrastructure or A town or village with certain development potential, relatively concentrated and tidy residential construction, and mainly bungalows.

c) Underdeveloped rural areas refer to poor economic conditions [per capita net income 5 Rural domestic sewage pollution control

5.1 Source control technology

5.1.1

The source of rural domestic sewage can be controlled by the technical route of Figure 1.

Grey water artificial wetland, land treatment and other technical reuse Blackwater domestic sewage agricultural compost, three septic tanks, purified biogas tanks, etc.

Figure 1 source control technology route

5.1.2

It is advisable to use non-water flushing sanitary wares, such as manure and urine collection toilets and double hopper funnel toilets. The construction of the toilet can refer to GB 19379.

Or directly use equipment products.

5.1.3

The use of fecal and urine-differentiated sanitary latrines shall meet the following requirements.

(1) It is recommended to use organic matter with humidity 1.5 m). Land treatment technologies include slow percolation, rapid percolation, and surface flow.

(1) Main design parameters.

- a) The annual hydraulic load of the slow percolation system is 0.5-5 m/a, the shallowest depth of groundwater is greater than 1.0 m, and the soil permeability coefficient is preferably 0.036~ 0.36 m/d;
 - b) The annual hydraulic load of the rapid infiltration system is 5 to 120 m/a, and the ratio of the flooding period to the drying period should be less than 1;
 - c) The annual hydraulic load of the surface flow system is 3-20 m/a.
- (2) When designing the land, the soil particle composition and soil organic matter content should be adjusted according to the soil conditions of the application site.
- (3) Land treatment systems shall not be used in concentrated water supply protection belts, aquifer outcrops, fractured rock formations and lava areas.

5.3.3 Stabilization pond

The Stabilization Pond is suitable for use in rural areas where lakes, ponds, depressions and unused water surfaces are available. It is advisable to choose the type to handle the pond regularly.

Oxygen ponds, facultative ponds, aerobic ponds, etc. The aeration pond should be used in places where the land area is limited.

(1) Stabilization ponds shall take necessary anti-seepage treatment and shall be provided with sanitary protection belts between residential areas.

Main design parameters of different types of stable ponds.

- a) anaerobic pond surface load (BOD₅) 15 ~ 100 g/(m² · d);
- b) facultative pond surface load (BOD₅) 3 ~ 10 g/(m² · d);
- c) aerobic pond surface load (BOD₅) 2 ~ 12 g/(m² · d), the total residence time can be 20 ~ 120 d;
- d) Aeration pond surface load (BOD₅) 3 ~ 30 g/(m² · d).

Areas with high annual average temperature use high BOD₅ surface load, and areas with low annual average temperature use low BOD₅ surface load.

(2) The sludge accumulation volume of the stabilized pond sludge is 40-100 L/(a·person), which should be operated in parallel and rotated to remove sludge. Stable pond the site should be selected downstream of the drinking water source; the sludge in the pond should be properly treated, and the sludge dewatering should be dried naturally by sludge drying bed; sludge as farmland fertilizer when using materials, it should comply with the relevant provisions of GB 4284.