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

GB 8702-2014

Controlling limits for electromagnetic environment

电磁环境控制限值

(English Translation)

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Foreword

This Standard was formulated so as to implement the "People's Republic of China Environmental Protection Law", strengthen the electromagnetic environment management and protect public health.

This Standard is an integrated revision to GB 8702-88 Electromagnetic radiation protection regulations and GB 9175-88 Environmental health standards for electromagnetic waves. This Standard referred to the International Commission on Non-Ionizing Radiation Protection (ICNIRP) "Guidelines for Exposure to Time-varying Electric Fields, Magnetic Fields and Electromagnetic Fields (300 GHz and below), 1998", and "IEEE standard of 0~3 kHz electromagnetic field safety level" of the Institute of Electrical and Electronics Engineers (IEEE). It also considered the practice of electromagnetic environment protection in China. As long as the limits of this Standard are met, it encourages the electric field, magnetic field, electromagnetic field facilities (equipment) owners to follow the precautionary principle, actively take effective measures and reduce public exposure.

This Standard specifies the field limits, evaluation methods and relevant facilities (equipment) exemptions of electric field, magnetic field, electromagnetic field (1Hz ~ 300GHz) of controlling public exposure in the

electromagnetic environment.

This Standard was first issued in 1988. This is the first revision.

The main content of this revision are as follows.

- added the public exposure controlling limits for the electric field and magnetic field in the 1 Hz to 100 kHz band;
- deleted the occupational exposure limits;
- deleted the administrative content requirements;
- adjusted the monitoring requirements;
- supplemented the scope of the exchange of power transmission facilities.

Since the implementation of this Standard, GB 8702-88 Electromagnetic radiation protection regulations and GB 9175-88 Environmental health standards for electromagnetic waves are repealed simultaneously.

This Standard were proposed by Environmental Protection Department of Science and Technology Standards Division, Department of Radiation Safety Supervision Division.

The drafting organization of this Standard. Environmental Protection Department of Radiation Environmental Monitoring Technology Center.

This Standard was approved on September 8, 2014 by Ministry of Environmental Protection.

This Standard shall be implemented since January 1, 2015.

This Standard shall be interpreted by Ministry of Environmental Protection.

Controlling limits for electromagnetic environment

1 Scope

This Standard specifies the field limits, evaluation methods and relevant facilities (equipment) exemptions of electric field, magnetic field, electromagnetic field (1Hz ~ 300GHz) of controlling public exposure in the electromagnetic environment.

This Standard is applicable to the evaluation and management of controlling public exposure in the electromagnetic environment.

This Standard is NOT applicable to the evaluation and management of controlling patients or escort personnel exposure to treatment or diagnosis; is NOT applicable to the evaluation and management of controlling exposures of wireless communication terminal, household appliances to users. It cannot be used as product quality requirements for facilities (equipment) that generate electric field, magnetic field, electromagnetic field.

2 Normative references

This Standard refers to the following documents or the terms thereof. For undated references, the latest edition of the referenced document applies.

HJ 681, Electromagnetic environmental monitoring method for AC electric power transmission and distribution project (on trial)

HJ/T 10.2, Guideline on management of radioactive environmental

Protection electromagnetic radiation monitoring Instruments and Methods

Environmental Monitoring Management Measures (State Environmental

Protection Administration Decree No. 39)

3 Terms and definitions

The following terms and definitions apply to this Standard.

3.1 electromagnetic environment

the sum of all electromagnetic phenomena present at a given place

3.2 public exposure

all public electric field, magnetic field, electromagnetic field exposure, excluding occupational exposure and medical exposure

3.5 electromagnetic field

the field of electrical and magnetic states determined by four related vectors

of electric field strength, electric flux density, magnetic field strength, magnetic induction strength, and characterized by the current density and body charge density

3.6 electric field strength

the force of the vector field E , whose force acting on the stationary charged particles is equal to the product of E and the charge of the particles, in volts per meter (V/m)

4.1 Public exposure controlling limits

For the public exposure caused by controlling electric field, magnetic field, electromagnetic field, the root mean values of electric field, magnetic field and electromagnetic field parameters in environment shall meet requirements of Table 1.

4.2 Evaluation methods

When the public exposure is in the electric field, magnetic field, electromagnetic field of multiple frequencies, it shall consider the exposure caused by the electric field, magnetic field, electromagnetic field of multiple frequencies, so as to meet the following requirements.

5 Exemption range

From the perspective of electromagnetic environmental protection management, the following facilities (equipment) that generate electric field, magnetic field and electromagnetic field shall be exempt from management.

6 Monitoring

The monitoring of electromagnetic environment shall be carried out in accordance with the National Environmental Monitoring Regulations, HJ/T