



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

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Standard for pollution control on hazardous waste incineration

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1 Scope

This Standard specifies the requirements for ecological and environmental protection during the site selection, operation, monitoring, waste storage, mixing and incineration disposal of hazardous waste incineration facilities, as well as implementation and supervision.

This Standard applies to pollution control and environmental management of existing hazardous waste incineration facilities (excluding special PCB waste and medical waste incineration facilities), as well as environmental impact assessment of new hazardous waste incineration facility construction projects, design and construction of hazardous waste incineration facilities, completion acceptance, pollution discharge permit management, and pollution control and environmental management during operation after completion.

Special standard implemented by hazardous waste incineration facilities of the published special national pollution control standards or environmental protections standards.

The pollutant emission limits of high-temperature heat treatment facilities such as hazardous waste melting, pyrolysis, and gasification, if there are no special national pollution control standards or environmental protection standards, it shall be implemented in accordance with this Standard.

This Standard does not apply to the coordinated disposal of hazardous waste using boilers and industrial furnaces.

2 Normative References

The following documents are essential to the application of this Document. For the dated documents, only the versions with the dates indicated are applicable to this Document; for the undated documents, only the latest version (including all the amendments) is applicable to this Document.

GB 8978 Integrated wastewater discharge standard

GB 12348 Standard of noise at boundary of industrial enterprises

GB 14554 Emission standards for odor pollutants

GB 16297 Integrated emission standard of air pollutants The process by which hazardous waste undergoes combustion and other reactions under high temperature conditions to achieve harmlessness and reduction.

3.3 Incineration facility

A device that disposes of hazardous waste by incineration to reduce its quantity, size and eliminate its hazardous characteristics, including a feeding device, incinerator, flue gas purification device and control system, etc.

3.4 Incineration capacity

The design capacity of an incineration facility to incinerate hazardous waste per unit time.

3.5 Incineration residues

Incineration residues, fly ash and wastewater treatment sludge discharged after the incineration of hazardous waste.

3.6 Loss of ignition

The percentage of the mass reduction of the incineration residue after burning to the original mass of the incineration residue. It is calculated according to Formula (1):

Where:

P - loss of ignition, in %;

A - the mass of the original incineration residue at room temperature after drying at (105 +/- 25)°C for 1 h, in g;

B - the mass of the incineration residue after being calcined at (600 +/- 25)°C for 3h and then cooled to room temperature, in g.

3.7 High temperature section of incinerator

At the outlet of the incinerator combustion chamber and upstream of the outlet, the flue gas temperature generated by combustion is in the range of $\geq 1100^{\circ}\text{C}$.

3.8 Flue gas residence time

The duration that the flue gas generated by combustion is in the high temperature section ($\geq 1100^{\circ}\text{C}$) can be calculated by the ratio of the effective volume of the high temperature section of incinerator to the flue gas flow rate.

3.13 Toxic equivalency factor (TEF)

The ratio of the affinity properties of dioxin congeners and 2,3,7,8-tetrachlorodibenzo-p-dioxin for aromatic receptors (Ah receptors). Please see Appendix A for the toxic equivalence factors of typical dioxin congeners.

3.14 Toxic equivalent quantity (TEQ)

The concentration of each dioxin congener is converted into an equivalent concentration equal to the toxicity of 2,3,7,8-tetrachlorodibenzo-p-dioxin. The toxic equivalent quantity is the product of the measured concentration by the toxic equivalent factor of the isomer. It is calculated according to Formula (4):

Where:

TEQ - toxic equivalent quantity;

TEF - toxic equivalency factor.

3.15 Standard conditions

The gas state at a temperature of 273.15 K and a pressure of 101.325 kPa. The concentration limits of atmospheric pollutant emissions specified in this Standard are based on dry gas under standard conditions.

3.16 Average value

The arithmetic mean of the test values of pollutant concentration in a certain number of samples collected within a certain period of time. The monitoring of dioxins shall complete the collection of no less than 3 samples within 6h to 12h; the monitoring of heavy metal pollutants shall complete the collection of no less than 3 samples within 0.5h to 8h.

3.17 1-hour average value The arithmetic mean of any pollutant concentration within 1 h; or the arithmetic mean of the test values of 3 to 4 samples collected at equal time intervals within 1 h.

3.18 24-hour average value The arithmetic mean of the 1-hour average values within 24 consecutive hours. The number of valid hourly average values shall be no less than 20.

3.19 Daily average value

The daily average mass concentration of pollutants is calculated using the 1-hour average value (concentration of dioxin toxic congener x TEF)

3.22 New incineration facility

New construction, reconstruction and expansion of hazardous waste incineration facilities with approved environmental impact assessment documents after the implementation date of this Standard.

4.1 The site selection of hazardous waste incineration facilities shall comply with the laws and

regulations on ecological and environmental protection and relevant statutory planning requirements, and comprehensively consider the basic factors such as the service area of the facilities, transportation, geological environment, etc., to ensure that the facilities are in a relatively stable environment in the long term. Hazardous waste incineration facilities are encouraged to be located in concentrated areas of municipal facilities such as circular economy parks. The functional layout of each facility in this area can be adjusted according to the environmental impact assessment documents.

4.2 The site selection of incineration facilities shall not be located in the ecological protection

red line areas, permanent basic farmland concentration areas and other areas requiring special protection designated by the State Council and relevant competent departments of the State Council and the people's governments of provinces, autonomous regions and municipalities directly under the Central Government.

4.3 The site of the incineration facility shall be set at a certain protective distance from sensitive

targets. The protective distance shall be determined comprehensively based on the site conditions, incineration disposal technology and process, pollutant emission characteristics and their diffusion factors; and shall meet the requirements of the environmental impact assessment documents and approval opinions.

5.1.2 Storage facilities shall be equipped with temporary storage facilities and partitions for