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

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Environmental Dioxins monitoring technical specification

环境二噁英类监测技术规范

(English Translation)

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Foreword

In order to implement the Law of the People's Republic of China on Environmental Protection and the Law of the People's Republic of China on Prevention and Control of Water Pollution, the Chinese people Law of the Republic of China on Prevention and Control of Atmospheric Pollution "and" Law of the People's Republic of China on Prevention and Control of Environmental Pollution by Solid Waste, "which regulates the dioxin in the environment British class monitoring technology and behavior, the development of this standard.

This standard specifies the technical requirements for environmental monitoring of dioxins in water, gas, soil, sediment and solid waste.

Appendix A of this standard is a normative appendix, Appendix B ~ D are informative appendices.

This standard is released for the first time.

This standard by the Environmental Protection Department of Environmental Monitoring Division and Science and Technology Standards Division to develop.

This standard was drafted. China Environmental Monitoring Station, Zhejiang Provincial Environmental Monitoring Center, Hubei Provincial Environmental Monitoring Center

Station and Ministry of Environmental Protection South China Institute of Environmental Science.

This standard MEP approved on December 28, this standard since April 1, 2018 come into operation.

This standard is interpreted by the MEP.

Environmental dioxin monitoring technical specifications

1 Scope of application

This standard specifies the technical requirements for the monitoring of dioxins in water, gas, soil, sediment and solid waste, including monitoring Procedures, monitoring site, laboratory analysis, personnel requirements, report preparation, quality assurance and quality control, waste disposal and other technical requirements.

This standard applies to environmental investigations, environmental impact assessment of construction projects, environmental acceptance of construction projects completed, supervisory monitoring and commissioned monitoring and other monitoring process of dioxin monitoring.

Dioxins in pollution accidents emergency monitoring can refer to the implementation of this standard.

2 Normative references

This standard references the following documents or the terms. For undated references, the effective version applies to this standard.

Pulp and paper industry water pollutant discharge standards Marine monitoring code - Part 3. Sample collection, storage and transport GB 18485 Domestic Waste Incineration Pollution Control Standard GB/T 16157-1996 Determination of particulate matter and gaseous pollutants sampling method in stationary source exhaust HJ 77.1-2008 Water quality - Determination of dioxins - Isotope dilution high resolution gas chromatography - High resolution mass spectrometry HJ 77.2-2008 Ambient air and exhaust - Determination of dioxins - Isotope dilution high resolution gas chromatography - High resolution mass spectrometry HJ 77.3-2008 Solid waste - Dioxins - Determination of dioxins by isotope dilution high-resolution gas chromatography-high resolution mass spectrometry HJ 77.4-2008 Soil and sediment - Determination of dioxins - Isotope dilution high resolution gas chromatography - High resolution mass spectrometry Technical Specification for the Preservation and Management of Water Quality Samples HJ 494-2009 Water quality sampling technical guidance Technical specifications for design of water quality sampling plan HJ 664-2013 Ambient Air Quality Monitoring Technical Specifications (Trial Implementation) Technical specification for sampling and sampling of industrial solid wastes

Technical requirements for soot sampler HJ/T 55-2000 Technical guidelines for monitoring unorganized emissions of air pollutants HJ/T 75-2007 Fixed Pollutant Source Discharge Continuous Monitoring Technical Specifications (Trial Implementation) Technical Specification for Surface Water and Wastewater Monitoring Technical Specifications for Monitoring Total Amount of Water Pollutants Emission Technical Specification for Groundwater Environmental Monitoring Soil Environmental Monitoring Technical Specifications Technical Specification for Hazardous Waste Identification HJ/T 365-2007 Hazardous waste (including medical waste) Incineration disposal facilities Dioxin emission monitoring technical specifications Stationary source exhaust gas monitoring technical specifications

3 Terms and definitions

The following terms and definitions apply to this standard.

Dioxins polychlorinated dibenzo-p-dioxins (PCDDs) and polychlorinated dibenzofurans (PCDFs) the generic term for polychlorinated dibenzo-p-dioxins (PCDDs) and polychlorinated dibenzofurans (PCDFs). This standard only for all 2,3,7,8-position chlorine atom-substituted dioxins and the like. Including seven kinds of tetrachloro-octachlorodibenzo-p-Dioxins and 10 kinds of tetrachloro-octachlorodibenzofurans, a total of 17 species, see Appendix A.

Toxicity equivalency factor (TEF) Ratio of affinity properties of 2,3, 8, 8-tetrachlorodibenzo-p-dioxins to Ah receptors for each dioxin analogue.

Toxicity equivalent concentration toxicity equivalency quantity (TEQ) Concentrations of dioxin-like congeners were converted into equivalent concentrations of 2,3,7,8-tetrachlorodibenzo-p-dioxin toxicity, toxic the equivalent concentration is the product of the measured concentration and the equivalent toxicity factor. Dioxin toxic equivalent concentration for all seizures Measure the concentration of toxic equivalent concentrations of similar substances, calculate the equivalent concentration of dioxins by the following formula.

$TEQ = (\text{Dioxin congeners concentration} \times TEF)$ (1) 3.4 Standard condition standard condition the gas temperature is 273.15 K and the atmospheric pressure is 101.325 kPa.

Instantaneous water sample Samples taken randomly from the water discontinuity are called instantaneous water samples.

Integrated water sample Instantaneous water samples taken simultaneously from different sampling points are mixed into one sample (time should be as close as possible to get Needed information), called integrated water samples.

Equal time of mixed sample Means the collection of water samples of equal volume at equal time intervals at the same sampling point within a certain period of time.

Sediment

Surface particles or particles by a variety of water washed into the water after the settlement process eventually in the bottom of the water Deposition, the formation of sediment.

4.1.1 Pre-investigation

Before monitoring, through the consultation, research and field surveys, etc. necessary to collect information for monitoring purposes and monitoring the current status of the surrounding environment, to confirm the sampling site conditions are in line with the requirements of this standard.

4.1.2 Equipment preparation

Prepare related equipment as required to ensure good operation and meet monitoring requirements.

4.1.3 Security

Dioxin monitoring activities should pay attention to personnel safety and avoid accidents.

4.2 Monitoring program

Monitoring programs include project overview, monitoring purposes, monitoring points, monitoring frequency and monitoring time, monitoring staff arrangements, Contact information, sampling methods and analytical methods, quality assurance measures, report preparation requirements.

4.3 Site monitoring

4.3.1

on-site monitoring Surveillance sampling point overview of the surrounding environment, sources of emissions and so on. Detailed record of the site monitoring results.

4.3.2 Field measurement

Actual measurement of meteorological, hydrological, working conditions and other parameters, fill in the sampling record measurement results.

4.3.3 Site sampling

On-site monitoring and on-site measurement is completed, the scene sampling.