

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

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Technical specification for environmental monitoring of odor

恶臭污染环境监测技术规范

(English Translation)

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Foreword

In order to carry out "Law of the People's Republic of China on Environmental Protection" and "Law of the People's Republic of China on Prevention and Control of Atmospheric Pollution", strengthen the air Pollution prevention and control, protection and improvement of ecological environment, protection of human health, regulate the monitoring of odor pollution, the development of this standard.

This standard specifies the environmental air and various types of malodorous sources of pollution (including water) discharged in different forms of odor pollution monitoring Measuring point layout, sample collection and processing, laboratory analysis, data processing, quality assurance and so on.

This standard Appendix A and Appendix B is an informative annex.

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, Tianjin Environmental Monitoring Center this standard MEP approved on December 29, 2017.

This standard since March 1, 2018 into effect.

This standard is interpreted by the MEP.

Fetid odor pollution monitoring technical specifications

1 Scope of application

This standard specifies the environmental air and various types of malodorous sources of pollution (including water) discharged in different forms of odor pollution monitoring Measuring technology.

This standard applies to the use of laboratory analysis of ambient air, organized sources and unorganized sources of emissions Foul odor monitoring.

2 Normative references

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

GB/T 14675 air quality malodor three points comparison Odor bag method Determination of Particulate Matter and Gaseous Pollutants in Exhaust of Fixed Pollution Sources GB/T 16157 HJ/T 55 Guidelines for Unorganized Emissions Monitoring of Air Pollutants

3 Terms and definitions

The following terms and definitions apply to this standard.

Stink odor

All odorous gases that irritate olfactory organs cause unpleasant feelings and damage the living environment.

Odor concentration

Dilution factor for serial dilution of odorous samples to odor threshold with odorless air.

Odor threshold odor threshold the olfactory threshold includes a sensation threshold that can be present as an olfactory odor and an identification threshold that can determine the odor characteristic. In this standard Sensory threshold is used.

Ratio of proper odor results the weighted statistical value of the sniffing resolution of the sniffing member.

Perimeter boundary

Means the legal boundaries of the stench discharge unit. If there is no legal boundary, then the actual boundary.

Stench sensitive point odor sensitive point Refers to the crowd gathering area, including people's places of residence, venues and so on.

4.1.1 Sampling location

According to GB/T 16157 gas pollutants sampling method of the relevant requirements.

With a vacuum flask to collect foul gas samples, the sampling position should be selected at the exhaust pressure is positive pressure or atmospheric pressure at the point.

4.1.2 Sampling points

According to GB/T 16157 gas pollutants sampling method of the relevant requirements.

4.2.1 Point layout

Follow HJ/T 55 in the relevant requirements.

Winds and wind speeds should be monitored during sampling of malodorous monitoring of unorganized emissions. Should be arranged in the downwind direction of the perimeter Monitoring point. Under normal circumstances, the point set up in the perimeter of the main wind direction of the downwind axis and wind direction change standard deviation $\pm S^\circ$ range or within the stench orientation of the odor, as shown in Figure 1. $\pm S^\circ$ calculation and measurement method reference HJ/T 55, measured every minute Secondary wind angle, continuous determination of 10 times, whichever is the average and calculate the standard deviation range.

When the measured circumference unconditionally sets the monitoring point, the monitoring point can be set within the circumference. In principle, the distance from the circumference does not exceed 10 Meter. When the discharge source is close to the wall (perimeter of the unit) and the wind speed is less than 1.0m/s, additional monitoring points will be set up outside the wall.

When two or more units of unorganized emission sources are adjacent to each other, the unorganized emission sources to be tested shall be selected in the upwind direction when the concentration of odor monitoring, the distribution method with the former.

Rain, snow and the weather, due to pollutants will be absorbed, affecting the representativeness of the monitoring data should not be odorless organized emission monitoring.

Figure 1 under normal circumstances monitoring point settings diagram

4.2.2 The number of sampling points Generally set 3 points, according to changes in wind conditions may be appropriate to increase or decrease the monitoring point.

4.3 Ambient air sampling point

Site monitoring of malodor, spot investigation (pollution occurs at the time, place, etc.) way to determine the sampling point.

For monitoring of malodor in the water area, if the polluted water area is close to the shore, the side of the river is selected for monitoring when the wind direction is downwind, taking the shore as the perimeter.

4.4.1 Sampling frequency of organized emission sources

a) Continuous organized emission sources According to the production cycle to determine the sampling frequency, the number of samples collected not less than 3 times, whichever is the maximum measurement Value. Production cycle within 8h, the sampling interval of not less than 2h; production cycle is greater than 8h, the sampling interval of not less than 4h.

b) Intermittent organized sources should be sampled at the peak of the odorous pollution concentration, the number of samples collected is not less than 3 times, whichever is the maximum measured value.

4.4.2 Sampling frequency of unorganized emission sources

a) Continuous unorganized sources are collected every 2 hours and collected 4 times, whichever is the maximum.

b) Intermittent, unorganized sources should be sampled at the highest level of malodour contamination for a minimum of 3 samples, whichever is greater the maximum measured value.

4.4.3 Ambient air sampling frequency

For the monitoring of ambient air-sensitive spots, according to the site survey, the investigation identified the sampling period, the number of samples collected at least 3 times, whichever is the maximum measured value.

5.1.1.1 System components

Vacuum bottle sampling system consists of vacuum bottles, washing bottles, drying filters and suction pump and other components, shown in Figure 2.

1- three-way valve; 2- vacuum gauge; 3- drying filter; 4- vacuum bottle; 5- washing bottle; 6- suction pump

Figure 2 vacuum bottle sampling system