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**INDUSTRY STANDARD OF THE
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**Technical requirements for automatic monitoring system of
environmental noise**

环境噪声自动监测系统技术要求
(English Translation)

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Appendix A (Normative) noise monitoring sub-station performance indicators and testing methods applicable.7

i 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 Environmental Noise Pollution, Standardize the performance of automatic environmental noise monitoring system to improve acoustic environment monitoring capabilities, the development of this standard.

This standard specifies the technical requirements for environmental noise automatic monitoring system, performance indicators and testing methods.

Appendix A of this standard is normative appendix.

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, Beijing Environmental Protection Monitoring Center, Zhuhai Gaoling Information Technology Limited company.

This standard MEP approved on December 14, 2017.

This standard since March 1, 2018 into effect.

This standard is interpreted by the MEP.

1 environmental noise monitoring system technical requirements 1 scope of application this standard specifies the technical requirements for environmental noise automatic monitoring system, performance indicators and testing methods.

This standard applies to the application of automatic environmental noise monitoring system selection and testing.

2 Normative references this standard references the following documents or the terms of them. For dated references, the effective version is valid Used for this standard.

GB 4208 enclosure protection (IP code) GB/T 3241 electro-acoustic octave and fractional octave filters GB/T 3785.1 Electroacoustic sound level meter Part 1 specification GB/T 15173 electroacoustic sound calibrator HJ 660 Environmental Monitoring Information Transmission Technical Specification

3 Terms and definitions the following terms and definitions apply to this standard.

Automatic monitoring system of environmental noise Based on noise monitoring equipment, data communications technology and computer application software, automatic noise monitoring and real-time ring the system of statistical analysis of environmental noise data generally consists of one or more noise monitoring stations and a noise monitoring system.

Noise monitoring sub-station noise monitoring sub station Noise monitoring sub-station is an outdoor sampling of environmental noise automatic monitoring system, generally divided into two types of fixed and mobile Types of. Noise monitoring stations include all-weather outdoor microphone, noise acquisition and analysis unit, communication unit, power control unit and chassis and other supporting security unit.

Weatherproof outdoor microphone. refers to the wind, rain, dust, interference designed to meet the long-term outdoor continuous use microphone.

2 noise acquisition and analysis unit. a noise signal acquisition and data analysis capabilities, and can save a certain amount of data.

Communication unit. Data communication between noise monitoring substation and noise monitoring system.

Power control unit. to provide power supply to prevent the impact of external power supply jitter on the measurement accuracy, protection noise monitor Stations are protected from external surges.

Chassis. All-weather protection box for placing noise acquisition and analysis unit, communication unit, power control unit, etc.

Wind, rain, anti-theft effect.

Noise monitoring system noise monitoring system Environmental noise automatic

monitoring system of data statistics, analysis part of the noise monitoring station to achieve the operational status monitoring, Data collection, storage, audit, query, statistics and report generation and other functions.

Noise monitoring sub-station local noise ground noise induced by noise monitoring sub station Noise refers to the noise emitted by the substation during normal operation.

Noise automatic monitoring of raw data of noise automatic monitoring the data measured by the minimum measurement period set by the automatic noise monitoring system is the basis for the statistics and analysis of other periods according to.

Data acquisition rate During the monitoring period, due to the instrument software and hardware failure and other reasons, the actual collection of noise automatic monitoring of the original data the percentage (in DAR) of the number of and in principle the number of times the noise should be automatically monitored for raw data.

100%

DAR $x = (1)$

Where. n - the actual acquisition of noise during the monitoring period automatically monitor the number of raw data;

N- In the monitoring period should theoretically collect noise automatically monitor the number of raw data.

4 technical requirements

4.1.1 Appearance and structure

34.1.1.1 Part of noise monitoring substation measuring instruments shall be manufactured CMC marking of measuring instruments (imported products should be made in our country quality Technical supervision department measuring instruments type approval certificate) and product nameplate, the nameplate should be marked with the instrument name, model, production Unit, serial number, date of manufacture, level of accuracy and manufacturer.

4.1.1.2

The parts should be connected reliably without any obvious defects on the surface. The operation keys are flexible to use and have accurate positioning.

4.1.1.3

Each display part of the scale, the figures clear, solid color, there should be no reading defects.

4.1.1.4

Chassis dust and waterproof performance should be consistent with GB 4208 IP 55 requirements. Chassis casing should be corrosion-resistant.

4.1.1.5

Installation should be firm, according to the user's own geographical location, in general areas should be able to withstand 10 winds in the coastal areas should be able to withstand 12 winds.

4.1.2 Environmental conditions

4.1.2.1

Noise monitoring sub-station should work under the following environmental conditions.

- a) Ambient temperature. $-30 \sim 50$ °C. If the noise monitoring substation is arranged in other temperature environment, measures should be taken to ensure the instrument the device can work normally.
- b) Relative humidity. $0 \sim 100\%$ (no condensation).
- c) Environmental pressure. $65 \sim 108$ kPa.

4.1.3 All-weather outdoor microphone

4.1.3.1

The sound pressure sensitivity of the microphone at 250 Hz shall be greater than 30 mV/Pa.

4.1.3.2

Microphone Directivity Response. 0° and 90° incidence should be supported.

4.1.3.3

Microphones should support long-term outdoor use, and have windproof, rainproof, dustproof, anti-interference and other functions.

4.1.3.4

The microphone hood shall not be damaged at a wind speed of 30 m/s.

4.1.3.5

Microphone holder structure should facilitate the microphone installation, removal and sound calibration operation.

4.1.4 Noise acquisition and analysis unit

4.1.4.1

Shall comply with the requirements of GB/T 3785.1 for a sound level meter.