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**INDUSTRY STANDARD OF THE
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**Technical guideline for environmental risk assessment of
tailings pond**

尾矿库环境风险评估技术导则（试行）

(English Translation)

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Foreword

In order to implement the Environmental Protection Law of the People's Republic of China, protect the ecological environment, assess the environmental risk of tailings, standard.

This standard specifies the general principles, contents, procedures, methods and technical requirements for tailings reservoir environmental risk assessment.

Appendix A, Appendix B, Appendix C, Appendix D are normative and Appendix E is an informative appendix.

This standard is the first release.

This standard is proposed by the Environmental Emergency and Accident Investigation Center of the Ministry of Environmental Protection.

This standard is organized by the Ministry of Environmental Protection Science and Technology Standards Division.

The main drafting of this standard. the Ministry of Environmental Protection of the satellite environment application center, the Environmental Protection Department of Environmental Planning Institute, the Chinese Section Institute of Process Engineering, Environmental Protection Institute of Environmental Standards, Beijing Mining and Metallurgy Research Institute.

This standard is approved by the Ministry of Environmental Protection on March 6, 2015.

This standard is implemented as of April 1, 2015.

This standard is explained by the Ministry of Environmental Protection.

Technical Guidelines for Environmental Risk Assessment of Tailings (Trial)

1 Scope of application

This standard specifies the general principles, contents, procedures, methods and technical requirements for tailings reservoir environmental risk assessment.

This standard applies to the risk assessment of the tailings during operation. It does not apply to the storage of radioactive tailings, accompanied by radioactivity Environmental risk assessment of tailings in tailings.

The environmental risk assessment of wet storage of industrial waste residue and power plant ash storage can be carried out according to this standard.

2 Normative reference documents

The contents of this standard refer to the following documents. For undated references, the valid version applies to this standard quasi.

"Technical Requirements for Geological Hazard Assessment (Trial)" (Land and Resources [2004] No. 69)

3 Terms and definitions

The following terms and definitions apply to this standard.

Tailings

Refers to the construction of dams or troughs to cover the metal and nonmetallic mines for ore sorting after tailings, wet the place where waste or other industrial waste is produced during the smelting process.

Sudden environmental events Refers to pollutants or radioactive substances due to pollution or natural disasters, production safety accidents and other factors, resulting in toxic Harmful substances into the atmosphere, water, soil and other environmental media, suddenly caused or may cause environmental degradation, endangering the public Public health and property safety, or damage to the ecological environment, or cause significant social impact, need to take urgent measures to to deal with the incident, including air pollution, water pollution, soil pollution and other sudden environmental pollution incidents and radiation pollution Pieces.

Environmental risk

Refers to the possibility of sudden environmental events during the operation of the tailings pond and the degree of harm that may occur in sudden environmental events.

Environmental risk receptors Refers to the sudden environmental events may be harmed

outside the enterprise crowd, with a certain social value or ecological environment function of units or regions.

Environmental risk assessment According to the characteristics of the tailings of the tailings of the environmental risk characteristics, the tailings reservoir environmental risk level, identify the tailings reservoir may lead to sudden loop Environmental risk factors, and its systematic environmental risk analysis, predict the possible consequences, put forward environmental risks Prevention and control and environmental safety hazard investigation and treatment measures recommended process.

Environmental security risks Refers to the rules during the operation of the tailings, due to not comply with relevant laws, regulations, rules, standards, procedures and management systems or may develop into an insecure state or defect that does not comply with the relevant provisions and may result in sudden environmental events.

Key Environmental Supervision Tailings Refers to the end of the environmental risk through the tailings of the link, identify the environmental risks, the need for environmental protection authorities focus on monitoring Management, supervision and supervision of tailings enterprises to carry out environmental risk assessment, environmental safety hazard investigation and management, environmental emergency preparedness plan Tailings for environmental emergency management.

Characteristic contaminants Refers to the tailings composition and tailings water composition, can reflect the characteristics of the surrounding environment of typical pollutants.

Environmental hazards Refers to the tailings of the reservoir contained in the characteristics of pollutants, potential energy and other environmental hazards on the surrounding environment of the dangers.

3.10

Peripheral environmental sensitivity Refers to the tailings of the surrounding various types of environmental risk receptors, environmental factors such as the sensitivity.

3.11

Control mechanism reliability Refers to the possibility of reducing the occurrence of sudden environmental events in the tailings pond and reducing the degree of harm after the event of sudden environmental events the effectiveness and reliability of surface control mechanisms.

4.1 Characteristics of pollutant control requirements

Characteristics of pollutants control the implementation of the EIA approved the relevant requirements, EIA approved after the country or local to develop more stringent pollutants Emission standards, the implementation of new emission standards, emission standards

and environmental impact assessment are not specified in the project, with reference to other relevant standards Quasi-execution.

4.2 Assessment of Environmental Risk Receptor Survey

4.2.1

Investigation of water environment risk receptors Assessment. The lower reaches of tailings are not less than 10 km.

4.2.2

Other types of environmental risk Receptor survey Scope of assessment.

A) valley type, near mountain type, cut river type tailings. downstream of not less than 80 times the dam height.

B) other types of tailings. downstream of not less than 40 times the dam height.

4.2.3

The actual operation can be based on the actual situation to expand the scope of assessment.

4.3.1 Overall process

Tailings reservoir environmental risk assessment procedures (see Figure 1), by the tailings reservoir environmental risk assessment preparation, tailings reservoir environment Risk prejudgment, tailings reservoir environmental risk classification, tailings reservoir environmental risk analysis and reporting preparation of four stages.

Figure 1 Working Procedure for Environmental Risk Assessment of Tailings

4.3.2 Preparation of tailings bank environmental risk assessment

The main contents of the preparatory work include the collection of relevant information and information.

4.3.3 Pretreatment of environmental risk of tailings

From the type, size, the surrounding environment sensitivity, safety, historical events and environmental violations of the five aspects of the tailings Library environmental risk to predict, to determine whether it is a key environmental supervision tailings, whether the need for further environmental risk assessment estimate.

4.3.4 Classification of Environmental Risk Classification of Tailings

The use of AHP, environmental hazards from the tailings (H), the surrounding environment sensitivity (S), the control mechanism can be Reliability (R) three aspects of the