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GB/T 44429-2024

Risk management-Large scientific installations-General principles

风险管理 大科学装置 总则

Issued on: August 23, 2024 **Implemented on: August 23, 2024**

Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting is required.

Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents.

This document was proposed and coordinated by the National Technical Committee on Risk Management Standardization (SAC/TC 310).

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Introduction

Large scientific facilities are completed through large-scale investment and engineering construction, and after completion, they are operated stably and continuously through long-term scientific and technological Large scientific facilities are necessary for achieving breakthroughs in many areas of modern science and technology.

It is an indispensable scientific and technological infrastructure to safeguard national economic development, national security and social progress, and is the key to building a strong national It is an important condition for becoming a national large-scale scientific research base with international competitiveness. It is the source of many high-tech technologies and the cradle of high-tech industries.

Large scientific facilities usually have the following characteristics.

The scientific and technological significance is significant, the impact is wide and long-term, the construction scale and cost are large, and the construction time is long; a) The technology is comprehensive and complex, requiring the development of a large number of non-standard equipment during construction, and has the dual nature of engineering and development; b) Its output is scientific knowledge and technological achievements, rather than direct economic benefits. After completion, it must be operated stably for a long time and not Only through continuous development and sustained scientific activities can the predetermined scientific and technological goals be achieved;

c) The entire process from project establishment, construction to utilization has shown strong openness and international characteristics. d) This document is compiled under the guidance of GB/T 24353-2022 and combined with the characteristics and actual situation of China's large scientific facilities.

The environmental information of large scientific facilities inside and outside, the determination of risk criteria, and the use of systematic methods and tools to identify, analyze, evaluate and respond to potential risks Risk management helps large scientific facility organizations and personnel effectively manage the risks that large scientific facilities may face at various stages of their life cycle and take necessary measures.

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Countermeasures and guide the implementation of management work.

This document serves as a general guideline for risk management of large scientific facilities. During implementation, it can be used as a reference and selection based on the internal and external environment of large scientific facilities. Select to use.

General Principles of Risk Management for Large Scientific Facilities

1 Scope

This document defines the principles, processes and implementation of risk management for large scientific facilities.

This document applies to the risk management of large scientific facilities throughout their life cycle, and other facilities may refer to it for reference.

2 Normative references

GB/T 24353-2022

GB/T 27921-2023

3 Terms and definitions

The following terms and definitions apply to this document.

3.1 large scientific installation

It will be completed through large-scale investment and engineering construction, and after completion, it will be realized through long-term stable operation and continuous scientific and technological activities.

Large-scale facilities with scientific and technological goals.

3.2 Risk

The adverse impact of uncertainty on the entire life cycle of large scientific facilities.

3.3 Risk Management

Directs and controls the systematic application of management policies, procedures, and practices to communicate, consult, clarify the environment, and identify, Activities to analyze, evaluate, respond to, monitor and review risks of large scientific facilities.

4.1 Coordination

When carrying out risk management of large scientific facilities, it is advisable to clarify the

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rights and responsibilities of all parties and coordinate stakeholders to participate in the construction and operation of large scientific facilities.

Take into account the risk management process and its implementation, and coordinate with other management processes.

4.2 Inclusiveness

Large scientific facilities are complex and technologically complex. Stakeholders should combine their knowledge, opinions and cognition to participate in risk management in a timely manner and help improve the organization Organize risk awareness and promote full communication of risk management information for large scientific facilities.

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