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

GB 9132-2018

Replacing GB 16933-1997; GB 9132-1988

**Safety requirements for near surface disposal of low and
medium level radioactive solid waste**

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Foreword

To implement the Law of the People's Republic of China on Environmental Protection, the Law of the People's Republic of China on Prevention and Control of Radioactive Pollution

The Nuclear Safety Law, to prevent and control radioactive waste pollution, improve environmental quality, and develop this standard.

This standard specifies the general requirements for the near surface disposal of radioactive solid waste, and the site selection, design, construction and transportation of the near surface disposal site.

General requirements for line, shutdown, monitoring, and environmental monitoring, safety process analysis, and quality assurance.

This standard is a revision of the Regulations on Shallow Stratigraphic Disposal of Low and Medium Level Radioactive Solid Wastes (GB 9132-1988).

This standard was first published in 1988. This is the first revision.

The main contents of this revision.

- The standard name was changed to "Safety Regulations for Near-surface Disposal of Low- and Medium-Level Radioactive Solid Wastes";
- Added "2 normative references";
- Add "waste pack", "safety full process system analysis", "passive safety characteristics", etc. in "3 terms and definitions"

language;

- Revised the "Basic Requirements for Waste Disposal" in the "4 General Rules". Change "site selection" to Chapter 6, "Waste Pack"

As Chapter 5;

- According to the provisions of HJ/T 23, the "site selection procedure" in "6 Site Selection" was revised to increase environmental protection requirements;
- The activity concentration of low-level radioactive solid waste proposed for near-surface disposal should meet the requirements of the Classification of Radioactive Waste. supplied The requirements for waste characteristics, and the "waste packaging requirements" were revised according to the relevant standards of our country, and the "waste packaging requirements" were changed to "waste".

"Package requirements", stipulate that the disposal site should establish waste acceptance criteria;

- Defining the requirements for the disposal unit in the "Design and Construction of the Disposal Site" for receiving high surface dose rate waste packages

At the disposal site, the requirements for "equipment that should be set up for remote or remote transport and placement of waste packages" are proposed;

- Added the chapter on establishing a digital information management system for waste disposal and formulating a contingency plan in the chapter "Operation of 8 Disposal Sites"

In the stage of simultaneous construction and operation of the disposal site, it is proposed to ensure that relevant construction activities do not affect the safety of operating facilities.

begging;

- In the chapter "Close of 9 Disposal Sites", the relevant contents of the three phases after the closure of the disposal site were deleted, and the disposal was specified.

The closure of the site shall comply with the requirements for closing the license file;

- Increase "10 monitoring after shutdown of the disposal site" and "Environmental monitoring of the disposal site";

- Change "9 Safety Evaluation" to "12 Safety Full Process System Analysis";
- Add "13 Quality Assurance";
- Increase the requirements for the contents of the waste package file in Appendix A (Normative Appendix).

From the date of implementation of this standard, the Provisions for the Disposal of Low-Level and Medium-Level Radioactive Solid Wastes (GB 9132-1988),

Waste Acceptance Guidelines for Near-surface Disposal of Radioactive Waste (GB 16933-1997) is abolished.

Appendix A of this standard is a normative appendix.

This standard is formulated by the Department of Radiation Source Safety Supervision and the Department of Science and Technology Standards of the Ministry of Ecology and Environment.

This standard was drafted. China Nuclear Power Engineering Co., Ltd.

This standard is approved by the Ministry of Ecology and Environment on July 10, 2018.

This standard has been implemented since January 01, 2019.

This standard is explained by the Ministry of Ecology and Environment.

Safety regulations for near-surface disposal of low- and medium-level radioactive solid wastes

1 Scope of application

This standard specifies the general requirements for the near surface disposal of radioactive solid waste, and the site selection, design, construction and transportation of the near surface disposal site.

General requirements for line, shutdown, monitoring, and environmental monitoring, safety process analysis, and quality assurance.

This standard applies to near-surface disposal of low- and medium-level radioactive solid waste. Medium level radioactive solid waste due to considerable amount

Long-lived nuclides cannot rely solely on guardianship measures to ensure the safe disposal of waste and require a higher level of exposure than low-level radioactive solid waste

Inclusion and isolation measures.

This standard does not apply to the disposal of radioactive waste, natural radioactive waste generated during the development and utilization of uranium ore, and radiation.

Cave disposal and drilling disposal of waste.

2 Normative references

This standard refers to the terms of the following documents. For undated references, the valid version applies to this standard.

GB 12711 Low and medium level radioactive solid waste packaging safety standards

GB 14569.1 Low and medium level radioactive waste solidified body performance requirements - cement solidified body

GB 18871 Basic standards for ionizing radiation protection and radiation source safety

GB 50011 seismic design code for buildings

GB 50223 Seismic fortification classification standard for building engineering

EJ 1186 Characterization of radioactive waste bodies and waste packages

Classification of Radioactive Waste (Ministry of Environmental Protection, Ministry of Industry and Information Technology, National Defense Science and Technology Industry Bureau Announcement No. 65 of.2017)

3 Terms and definitions

The following terms and definitions apply to this standard.

3.1

Near surface disposal

The radioactive waste is placed in a facility tens of meters below the surface of the ground or below the surface of the earth, and an engineering barrier is placed.

3.2

Waste package

Waste-prepared products, including waste bodies and containers, as well as possible linings for handling, transport, storage and/or

Disposition requirements.

3.3

Organized control

Control of waste disposal sites by government agencies or their designated units. This control includes active (monitoring, supervision and facilities)

Maintenance) or passive (restricted land use) controls.