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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB 15848-2009

Replacing GB 15848-1995

Regulations for radiation and environmental protection in uranium exploration

铀矿地质勘查辐射防护和环境保护规定

Issued on: May 6, 2009 **Implemented on: February 1, 2010**

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Standardization Administration of the PRC

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Foreword

All the technical contents of this standard is mandatory. This standard replaces GB 15848-1995 "uranium radiation protection and environmental regulations." The standards are compared with GB 15848-1995 mainly the following changes.

a) in accordance with applicable laws, regulations and standards are not consistent with the revised terms of the content of the original standard;

b) increase the training and emergency response content;

c) of the original section of the standard of a reasonable adjustment and consolidation. The Standard Annexes A and B are normative appendix Appendix C is informative appendix. The standard proposed by China National Nuclear Corporation. This standard by the National Standardization Technical Committee on Nuclear Energy (SAC/TC58) centralized. This standard was drafted. China Nuclear Industry Geological Bureau of Nuclear Industry Er - Ba brigade. The main drafters of this standard. Gu Hua, Ding busy students, Zhang Junyi, Dai-Ming Shen, Xie Kaijing. This standard replaces the standards previously issued

as follows:

--- GB 15848-1995. Uranium exploration and radiation protection regulations on environmental protection

1 Scope

GB 15848 covers the stage before a uranium mine exists: geological exploration, where drilling, trenching, adits and core handling expose workers to radon and to ore dust, and where the spoil and the drilling fluids can contaminate ground and water. It sets the radiation protection requirements for the work - the monitoring of radon and external dose, the ventilation of underground workings, the handling and storage of cores and samples - together with the environmental protection provisions and the restoration of the site once exploration ends. Issued on 6 May 2009, in force since 1 February 2010, replacing GB 15848-1995. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the edition it replaces are taken from there. The clause text, the tables and the numeric limits are not reproduced on this page - they are in the document itself, which is delivered in full in English translation.

This standard provides for uranium exploration in radiation workers and the public dose constraint value, workplace radiation protection, occupational Illumination management, environmental protection and emergency requirements. This standard applies to the production, research and education sectors uranium geology, and engage in other geological department containing natural radioactive substances can also refer to carried out.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB 11215 General provisions Nuclear Radiation Environment Quality Evaluation

GB 11806 Regulations for the Safe Transport of Radioactive Substances

GB 16297 Air Pollutant Emission Standards

GB 18871-2002 ionizing radiation protection and safety of radiation sources basic standards

3 Terms

The following terms and definitions apply to this standard.

3.1 In order to search for and identify uranium resources, exploration and use various means to understand the geology of the ground, recognizing that uranium mineralization conditions and environment, integrated Cooperative prospect of uranium mineralization, determine the favorable area, find uranium ore belt, proven uranium scale, find out the process of uranium-containing layer and the output capacity of the case.

3.2 Underground exploration of uranium resources carried out prospecting operations.

3.3 Uranium content of uranium produced during geological exploration in more than one ten thousandth of uranium ore.

3.4 Uranium exploration generated during the waste rock (less than one ten thousandth grade uranium) and other solid wastes in general.

3.5 Radon concentration in air time integration. By showing the concentration of radon daughters by different units, exposure units are not the same. When the concentration of radon daughters in J/m3 when the units of exposure expressed in J · h/m3. 3.6 (Radon progeny and Radon (222Rn) daughters of complete decay of 210Pb (but not including 210Pb decay) and (220Rn) daughters of complete decay to stable When 208Pb, the sum of alpha particles emitted energy in joules (J).

3.7 radon(All radon or unit volume present in the air All short-lived daughter atoms decay product mixture by any decay chains respectively Decays to 210Pb (RaD) or total 208Pb alpha particles emitted during the energy in joules per cubic meter (J/m3).

3.8 Unit volume of air contained in the long-lived radionuclides alpha radioactive aerosol total alpha activity, in units of becquerels [Harrell] per cubic meter (Bq/m3). Usually short-lived radon daughters by the analysis unit volume of total alpha activity obtained after complete decay.

4 General Provisions

4.1 Radiation protection should comply with the legitimacy of the practice, the risk of potential exposure and dose limiting restrictions, protection and security, optimization, and dose constraints Principles potential exposure hazard constraints; environmental protection should implement environmental regulations promulgated by the state, standards, adhere to the "polluter pays" principle. Environmental impact assessment should be carried out according to the law before

4.2 uranium exploration project construction.

4.3 uranium exploration project in radiation protection and environmental protection facilities

with the main project should be designed, constructed and put into use.

4.4 pipe uranium exploration units should set up regulatory agencies radiation protection and environmental protection, the development of the unit radiation protection and environmental protection Management requirements and contingency plans, radiation protection monitoring. Engaged in uranium exploration personnel radiation safety, and environmental protection knowledge Training, and regularly review assessment.

4.5 Uranium geological exploration unit protection and safety should develop an outline, which should include.

a) to determine the measures and resources to achieve the objectives of protection and safety needs, and ensure the correct implementation of these measures and the provision of these resources;

b) keep such measures and resources, regular review, and regularly verify protection and safety objectives are achieved;

c) Identification of any failure or defect protection and safety measures and resources, and take steps to correct it and prevent it from happening again;

d) according to protection and security needs, to make easy consultation and cooperation among the parties concerned arrangements;

e) Save fulfill the responsibilities of the record.

5 Dose limiting

5.1 GB 18871-2002 comply with Appendix B of B. 1. The provisions relating to workers and the public dose constraint values.

5.2 engaged in uranium exploration career staff annual effective dose constraint value is not higher than 15mSv.

5.3 Pregnant women, nursing women may not engage in uranium exploration wells pit jobs, other jobs in the uranium effective dose constraint value of not more than 1mSv.

5.4 younger than 18 years old to accept the learning process involves radiation exposure employment training apprentices and younger than 18 years of age need to use Students radioactive sources, should control its occupational exposure annual effective dose does not exceed 6mSv.

5.5 Practice with radiation exposure of members of the public about the critical groups are subjected dose estimates shall not exceed the following limits.

a) annual effective dose, 1mSv; Under

b) special case, if the average annual dose of five consecutive years does not exceed 1mSv, the effective dose of a single year can be increased To 5mSv.