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

GBZ 98-2020

Replacing GBZ 235-2011; GBZ 98-2017

Health standards for radiation workers

放射工作人员健康要求及监护规范

(English Translation)

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1 Scope

This standard specifies the occupational health requirements, basic principles and technical requirements of occupational health monitoring for radiation workers.

This standard applies to the health monitoring of radiation workers.

2 Normative references

The following documents are essential for the application of this document. For dated references, only the dated version applies to this document.

For undated references, the latest edition (including all amendments) applies to this document.

GB/T 16148 Radionuclide Intake and Internal Exposure Dose Estimation Specification
GB/T 18199 Medical Treatment and Treatment Plan for Persons Exposed by External Radiation Accidents
GBZ 95 Diagnosis of occupational radiation cataract
GBZ 96 Diagnostic Criteria for Internal Radiation Sickness
GBZ 97 Occupational Radiation Oncology Judgment Standard
GBZ 99 Diagnostic criteria for subacute radiation sickness under external irradiation
GBZ 100 External Beam Radiation Bone Injury Diagnosis
GBZ 101 Diagnostic Criteria for Radiation Thyroid Diseases
GBZ 104 Occupational External Exposure Acute Radiation Sickness Diagnosis
GBZ 105 Occupational External Exposure Chronic Radiation Sickness Diagnosis
GBZ 106 Diagnosis of Occupational Radiation Skin Injury
GBZ 107 Diagnosis of Occupational Radiation Gonadal Diseases
GBZ 112 General Principles for the Diagnosis of Occupational Radiation Diseases
GBZ 113 Principles of Nuclear and Radiological Accident Intervention and Medical Treatment
GBZ/T 163

Long-term effects of occupational external radiation acute radiation sickness medical follow-up specification GBZ 188 Occupational Health Monitoring Technical Specifications GBZ 215 Principles of Medical Examination and Treatment of Overexposure Personnel GBZ/T 216 Specification for the treatment of human body surface radionuclide contamination GBZ 219 Diagnostic criteria for radiation skin cancer GBZ/T 244 Method for Estimating Skin Dose Due to Ionizing Radiation GBZ/T 248 Occupational health examination of radiation workers for detection of chromosomal aberrations in peripheral blood lymphocytes GBZ/T 261 Specification for Organ Dose Reconstruction of Exposed Persons in External Radiation Accidents GBZ/T 301 Method for estimating the dose of ocular lens due to ionizing radiation WS/T 187 Method for estimating exposure dose for lymphocyte micronuclei WS/T 583 Specification for medical treatment of personnel contaminated with radionuclides

3 Terms and Definitions

The following terms and definitions apply to this document.

radiation worker

Any person employed in radiation work full-time, part-time or temporarily.

occupational health surveillance of radiation worker Medical examinations to ensure that radiation workers are competent for the tasks they intend to undertake or undertake before and during their employment and evaluation. It mainly includes occupational health inspection and occupational health monitoring file management.

Adaptability assessment judgment on worker fitness the results of various health examinations are analyzed by authorized physicians according to the corresponding health standards, and their suitability and Competent for the work undertaken to evaluate and sign off.

occupational medical examination of radiation workers Medical tests performed to evaluate the health of radiation workers. Including before work, during work, when leaving work, emergency exposure and incidents Therefore, occupational health examination after irradiation.

over exposure

Exposure to an individual at a dose that exceeds the annual equivalent dose and/or annual effective dose limit.

emergency exposure

Exposures in emergencies, including unplanned exposures as a direct result of the emergency and actions taken to mitigate the consequences of the emergency planned exposure to moving persons.

4.1 Basic principles

Radiation workers should have the health conditions to perform their duties without error in normal, abnormal or emergency situations.

4.2 Health Requirements

4.2.1

Clear consciousness, good mental state, no cognitive impairment, no abnormal language expression and writing ability.

4.2.2

No obvious abnormality was found in medical, surgical and dermatological examinations, which did not affect normal work.

4.2.3

Uncorrected visual acuity or corrected visual acuity should not be lower than 4.9, no red-green color blindness; no hearing impairment in whisper or stopwatch test.

5.1.7 All personnel engaged in radiation work in the employer shall be included in the management of radiation workers, and shall receive occupational health inspections in accordance with the law.

The unit shall provide the name of the radioactive factor according to the classification of occupational disease hazard factors.

5.2 Determination of occupational health inspection items and inspection methods

5.2.1

Occupational health inspection items and the content of the "Occupational Health Checklist for Radiation Workers" are in accordance with the relevant regulations of the national health administrative department Implementation, in which the determination of occupational health inspection items should follow the consideration of the name of the radiation factor, the type of occupational exposure, and the inclusion of radiation-sensitive organs, etc.

Principles; meet the minimum requirements of national laws and regulations and the general requirements of health examination, the content of which refers to Appendix A, and the chief examiner as needed You can suggest to the employer to add some optional inspection items and other inspection items.

5.2.2

The occupational health examination items for radiation workers include basic information, routine medical examination and special medical examination.

Basic information and routine medical examination methods are required to be implemented in accordance with the corresponding provisions of GBZ 188, and past medical history and occupational exposure history should be recorded in detail (Department, type of work, starting time, operation method, workload, occupational exposure type and name of radiation factor), if exposure history and other occupational the occupational history should also be recorded, in which the exposure history should include medical exposure, and the dose data should be recorded in the occupational health examination form; special medical examination items include Including cytogenetic examination and ophthalmological examination, cytogenetic examination includes chromosomal aberration analysis of peripheral blood lymphocytes and lymphocyte microscopic examination.

For nuclear rate test, the technical requirements shall comply with the corresponding regulations of GBZ/T 248 and WS/T 187, and the ophthalmic examination shall comply with the corresponding regulations of GBZ 95.

5.3 Occupational health inspection report

5.3.1

The entrusted occupational health inspection agency shall follow the same principles as GBZ 188 when issuing occupational health inspection reports for radiation work units.

Generally includes summary reports and individual reports.

5.3.2

The summary report is a comprehensive summary of the occupational health inspection results of the entrusting unit, generally including the basic information of the unit, the classification of the inspection results.

Analysis and adaptability evaluation of three parts. The basic information includes the name of the inspected unit, the name of the radioactive factor, the number of persons to be inspected by the inspected unit, the actual the number of people inspected, the type of occupational exposure, the time and location of the inspection, etc.; the analysis of the inspection results includes the list of persons with no abnormality, various abnormalities or diseases.

List of patients and treatment suggestions, list of reviewers, and a list of personal occupational health examination results. tests related to radiological hazards Abnormal findings include abnormal chromosomal aberration rate and/or lymphocyte micronucleus rate in peripheral blood lymphocytes, white blood cells and micronuclei in blood cell analysis.

If the board is abnormal, etc., the re-examination results need to be provided, and the eligibility evaluation will be given according to the re-examination results.