

[Organization logo]

[Organization name]

Commented [45A1]: All fields in this document marked by square brackets [] must be filled in.

STANDARD OPERATING PROCEDURE FOR RADIOACTIVE HAZARDS

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Commented [45A2]: Adapt to the existing practice in organization.

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Commented [45A3]: This is only necessary if document is in paper form; otherwise, this table should be deleted.

Change history

Date	Version	Created by	Description of change
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1. Purpose, scope and users

The purpose of this document is to define measures of protection from identified radioactive hazards.

This document applies to all work activities in [organization name] where radioactive hazards emerge.

Users of this document are all employees of [organization name] whose work places have identified radioactive hazards.

2. Reference documents

- ISO 45001:2018 standard, clause 8.1
- OH&S Manual
- OH&S Policy
- OH&S Objectives
- Procedure for Addressing Risks and Opportunities and OH&S Hazards
- Procedure for Operational Control
- Procedures for Preparedness and Emergency Response
- List of Legal and Other Requirements
- Procedure for Incident Investigation

3. Radioactive Hazards Identification

The [Job title] responsible for OH&S (Occupational Health & Safety) risk assessment is obliged to

identify radioactive hazards in all work areas where these types of hazards emerge.

Workplaces with such hazards must be clearly identified with signage.

Identifying radioactive hazards must be conducted in all processes, in parts of processes where this is relevant.

Radioactive hazards may emerge during manufacturing, processing, handling, disposal, use, storage, and transport of radioactive materials as well as in medical services.

Typical radioactive hazards include, but are not limited to:

- Direct exposure to radiation and radiation emitters
- Inhalation of radionuclides
- Drinking without proper protective measures
- Radioactive contamination of the body
- Unauthorized persons' entrance and access to facilities and tools

Commented [45A4]: This is a must, because radioactive incidents may affect a wider population and geographic areas with catastrophic long-term effects.

Commented [45A5]: Note:
According to some research, half of the radiation to which the population is exposed comes from medical sources such as CT scans, x-rays, and nuclear medicine.

Commented [45A6]: Adapt to organization's needs.

Commented [45A7]: Medical diagnostic tools and procedures.

Commented [45A8]: E.g. operating x-ray equipment.

Commented [45A9]: Air, food, and water polluted by radiation.

Commented [45A10]: Interlocks, etc.

Commented [45A11]: Visitors must be familiar with all associated safety hazards.

[organization name]

- Inadequate handling of working tools
- [Redacted]
- [Redacted]
- [Redacted]
- [Redacted]

Commented [45A12]: This can cause accidental release of radioactive material.

Commented [45A13]: This often causes radiation-related incidents.

Commented [45A14]: For example: tools, used protective equipment, etc.

4. Safety at work controls against radioactive hazards

[Job title] must ensure that the following controls against radioactive hazards are established:

- [Redacted]
- [Redacted]
- [Redacted]
- Keeping records of radioactive sources
- Keeping records of materials and raw materials that, in technical or technological processes, [Redacted]
- [Redacted]
- Determining working conditions and implementation of the prescribed safety measures against the harmful effects of ionizing radiation
- [Redacted]
- [Redacted]
- [Redacted]
- Security systems that automatically close the source in case of uncontrolled actions
- [Redacted]
- [Redacted]
- [Redacted]
- Adequate fire protection

Commented [45A15]: For example: protective suits that cover the entire body, adequate gloves, glass screens, glasses, masks with or without filters.

Commented [45A16]: Follow legislative requirements.

Commented [45A17]: Adapt to legislative requirements.

Commented [45A18]: This is very often a legislative requirement.

Commented [45A19]: Adapt to legislative requirements.

Commented [45A20]: Adapt to legislative requirements.

Commented [45A21]: If it's in the same room, then it's usually lead cabins and screens with lead glass. If it's in a different room, then it must be a switch that doesn't allow turning on of devices if doors of the room where source is housed are not closed.

Commented [45A22]: Artificial ventilation is required in areas where there are sources of ionizing radiation.

Commented [45A23]: For example: protective suit, aprons, goggles, gloves.

Commented [45A24]: Fire protection measures have special significance, because, besides the damage from the fire, there is a further danger of large-scale contamination.

5. Controls for risk reducing

[Job title] must ensure that the following controls are established in order to mitigate radioactivity-related risks:

- [Redacted]
- [Redacted]
- [Redacted]
- Review and evaluation of any control strategy

Commented [45A25]: For example:

- Ground and Gamma scanners
- Air Monitoring Equipment
- Radon Test Kits
- Geiger Counters
- Dosimeters

Commented [45A26]: If possible. Some risks or possibilities for big accidents cannot be avoided.

- Barriers of lead, concrete, or water provide protection from penetrating radiation such as
- [Redacted]
- [Redacted]
- [Redacted]
- [Redacted]
- [Redacted]

Commented [45A41]: If it's too close, or it takes a long time to set it up.

Commented [45A42]: Note: Once temporary shielding is installed, it cannot be removed without authorization.

Commented [45A43]: For example: specially designed constructions and devices.