

The Swedish Radiation Protection Institute's Regulations on Categorisation of Workplaces and Workers at Work with Ionising Radiation;

issued on October 29th 1998.

On the basis of § 7 of the Swedish Radiation Protection Ordinance (1988:293) the Swedish Radiation Protection Institute has issued regulations as follow.¹

§ 1 These regulations apply to practices with ionising radiation where humans may get radiation doses such that

1. the annual effective dose² exceeds 1 millisievert (mSv) or
2. the annual equivalent dose² to the lens of the eye exceeds 15 mSv or
3. the annual equivalent dose to the hands, fore-arms or the skin exceeds 50 mSv.

Categorisation of workers and surveillance of workplaces

§ 2 Anyone who runs a practice shall classify the workers into category A or B. A worker shall belong to category A if the likelihood is not negligible that

1. the annual effective dose exceeds 6 (mSv) or
2. the annual equivalent dose to the lens of the eye exceeds 45 mSv or
3. the annual equivalent dose to the hands, fore-arms or the skin exceeds 150 mSv.

Judging the likelihood according to the first section the risk of mistakes or accidents shall be taken into account even if the work normally does not imply large doses. Classifying as category A shall be carefully considered for workers listed in annex 1

Workers not belonging to category A shall belong to category B. For those workers surveillance of doses shall be performed in such an extent that it is possible to demonstrate that this classification is correct.

§ 3 Anyone who runs a practice shall ensure that the working environment is surveyed regarding radiation by

1. measurements of external doses where it is not clear that the field of radiation is geometrically limited, marked or otherwise well known and
2. checks of the concentration of activity in the air and on surfaces that might be contaminated if there are radioactive substances in the workplace.

§ 4 The surveillance of workplaces shall be made using suitable methods with respect to present kinds of radiation, energies and the physical and chemical properties of radioactive substances. The results shall be recorded and, if necessary, provide possibilities to calculate individual doses.

¹ Council Directive 96/29/Euratom (May 13, 1996)

² The concepts effective dose and equivalent dose are defined in the Swedish Radiation Protection Institute's regulations (SSI FS 1998:4) on dose limits at work with ionising radiation.

Controlled area

§ 5 A workplace where the workers may get any of the annual doses pointed out in section 2, or from which radioactive contamination may be spread shall be a controlled area.

§ 6 Anyone who runs a practice shall for each controlled area lay down local instructions, in written, about how the work should be performed and what protective measures should be taken by those who work in the area. The instructions shall be adjusted according to the kind of work and the radiation sources and be available at the workplace.

§ 7 A controlled area shall be delineated and access restricted to authorised persons by which is meant such persons who have been sufficiently trained with respect to

1. the risks that the work may imply,
2. the protective measures to be taken and
3. the local instructions that apply for the area.

Temporary visitors may have access to a controlled area only if accompanied by an authorised person.

§ 8 If there are radioactive substances which may contaminate surrounding areas, anyone who runs a practice shall take appropriate measures to prevent contamination outside the controlled area.

§ 9 A controlled area shall be marked with labels telling that it is a controlled area and what kind of sources that are located within the area.

Protected area

§ 10 A workplace that is not a controlled area, according to section 5, but upon which these regulations apply shall be a protected area.

§ 11 Anyone who runs a practice shall for each protected area lay down local instructions, in written, adjusted according to the kind of work and the radiation sources. The instructions shall be available at the workplace.

Written instructions may be replaced by instructions verbally if this is judged to be sufficient.

§ 12 A protected area shall be marked with labels telling that it is a protected area and what kind of sources that are located within the area. A protected area that is marked according to previous regulations does not need to be marked once again.

These regulations enter into force on July 1st 1999.

On behalf of the Board of the Radiation Protection Institute

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Examples on practices where category A shall be considered

Further works that are not listed in the table may exist.

<i>Practice</i>	Persons whose belonging to category A shall be carefully considered
<i>Medical, odontologic or veterinary radiology</i>	Anyone who takes part in work with fluoroscopy or more than 30 exposures per week and stays with the patient not behind a radiation shield or or anyone who takes part in a work where the hands or some other unprotected part of the body is within or close to the primary beam
<i>Service or installation of equipment for which a licence is required</i>	Anyone who installs, performs service, changes radioactive sources, or checks the equipment. This also applies to accessories if radiation is emitted during the work.
<i>Intracavitary and interstitial therapy with sealed sources</i>	Anyone who handles radioactive sources or nurses patients during the treatment
<i>Radiotherapy except Grenz ray therapy</i>	Anyone who handles the sources
<i>Practices with open radioactive sources emitting g-radiation</i>	Anyone who works with more than 100 MBq at the same moment
<i>Practices with open radioactive sources emitting b-radiation</i>	Anyone who works with more than 10 MBq at the same moment if the maximum β -energy is more than 0.3 MeV or anyone who works with more than 100 MBq at the same moment if the maximum β -energy is between 0.1 and 0.3 MeV
<i>Nuclear industry</i>	Anyone who works within a controlled area
<i>Radiography except x-rays used within sealed boxes with interlock</i>	Anyone who takes part in the work
<i>Work with accelerators except shielded ones in production lines</i>	Anyone who has access to the accelerator room
<i>Practices with sealed sources in industry or research</i>	Anyone who routinely takes part in work in positions where the dose rate exceeds 6 μ Sv/h or where it is possible to occasionally be within a radiation field having a dose rate exceeding 100 μ Sv/h
<i>Transport</i>	Anyone who routinely is in positions where the dose rate exceeds 6 μ Sv/h or for longer periods must be in positions where the dose rate exceeds 20 μ Sv/h