

Unofficial translation from Icelandic, Act. 44 / 2002:

**Enacted on May 7<sup>th</sup>, 2002, except cf. art. 23.**

*Altered by legislation 28/2008 (enacted Jan 1<sup>st</sup> 2009) and 88/2008 (enacted Jan 1<sup>st</sup> 2009, save for provisional clause VII which was enacted on Jun 21<sup>st</sup> 2008)*

## **Act on radiation protection**

### **SECTION I**

#### **Objectives and scope**

##### Article 1

This act is to secure that necessary safety measures are taken against radiation from radioactive materials and radiological equipment for the purpose of limiting the detrimental effects of such radiation. An effort shall be made to ensure that all exposures to radiation resulting from any practice covered by this act are as low as reasonably achievable, economic and social factors being considered.

The objectives of the act shall be realized through detailed measures, for example, the inspection of any handling of radioactive materials and radiological equipment, studies and research, monitoring of radioactive substances in the environment, measures against radiological emergencies, and through education and guidelines on radiation protection.

##### Article 2

The act applies to:

- 1 Safety measures against radiation in respect of any practices that could cause a risk of radiation exposure to persons, for example, upon the production, import, export, delivery, possession, installation, use, handling and disposal of radioactive substances and radiological equipment.
- 2 Safety measures in practices that result in increased levels of natural radiation from the environment.
- 3 Safety measures against ionizing radiation from radioactive substances and radiological equipment insofar this does not fall under the auspices of other parties according to international conventions.
- 4 Monitoring and research in respect of radioactive substances in the environment and foodstuffs.
- 5 [The radiological aspects of radiation emergency preparedness .]<sup>1)</sup>

<sup>1)</sup> 28/2008, art. 1

##### Article 3

In this act the definitions of the following terms are as follows:

- 1 *Radiation*: ionizing and non-ionizing radiation.

- 2     *Ionizing radiation:* radiation from radioactive substances, X-rays, or other radiation with similar biological effects.
- 3     *Non-ionizing radiation:* ultraviolet radiation and all other electromagnetic radiation with longer wave length, for example, microwaves or other electromagnetic waves that have similar biological effects, as well as electromagnetic fields.
- 4     *Radiological equipment:* electrical equipment producing radiation, for example, X-ray equipment and sun lamps.
- 5     *Medical radiation:* any radiation of individuals for diagnosing or treating disease, for scientific research or judicial purposes.
- 6     *Practice:* work activity that may cause ionizing radiation exposure to individuals.
- 7     *Effective dose:* a measure of the quantity of ionizing radiation where the health risk of an individual constitutes the basis.
- [8]    *Holder:* A person or entity who has received a license from the Icelandic Radiation Safety Authority for use of radioactive materials or radiological equipment emitting ionizing radiation.]<sup>1)</sup>
- [9]<sup>1)</sup>    *Designated supervisor:* an employee who has the appropriate education and experience, appointed by a holder to act on his behalf as being responsible for a practice in respect of radiation protection.
- [10]<sup>1)</sup>    *Quality assurance:* any organized or planned measure deemed as necessary to create sufficient trust in that facilities, system, system parts, or measures work in a satisfactory manner and in accordance with accepted standards.
- [11]<sup>1)</sup>    *Quality control:* the part of the quality assurance that applies to measures (planning, coordination, implementation) that are intended to maintain quality or improve it. Quality control entails controlling, assessing and keeping inside the set limits any characteristic factors regarding the effectiveness of equipment that may be defined, measured and monitored.

<sup>1)</sup> 28/2008, art. 2

## **SECTION II**

### **The Icelandic Radiation Safety Authority**

#### Article 4

The Icelandic Radiation Safety Authority is an institute under the auspices of the Minister of Health and Social Security. The institute's role is to undertake safety measures against radiation from radioactive substances and radiological equipment.

The minister appoints the director of the Icelandic Radiation Safety Authority for a term of five years at a time. The director shall have a university degree in the institute's sphere of activity. The director is in charge of the management of the institute. He shall see to it being operated in accordance with existing laws and regulations at all times, and is responsible for its daily operation.

#### Article 5

The Icelandic Radiation Safety Authority undertakes:

- 1 Monitoring and supervising the implementation of this act, and the regulations and rules set on grounds of the act.
- 2 Any inspections and research deemed as necessary cf. this act, and the regulations and rules set on grounds of the act.
- 3 Monitoring workers' exposure to ionizing radiation, and maintaining a dose register of the results of the dose estimates for every worker.
- 4 Regular assessment of the total ionizing radiation exposure of the general public from practices under this act.
- 5 Regular assessment of patients' exposure to ionizing radiation from practices under this act.
- 6 Monitoring and researching radioactive substances in foodstuffs and the environment.
- 7 Instruction regarding radiation protection for workers who work with radiation, as well as disseminating information to the general public and the mass media.
- 8 Research in the field of radiation protection.
- 9 [The radiological part of radiation emergency preparedness, including the analysis of threat, preparedness and operation of radiation monitoring systems, and coordination of preparedness with internationally accepted practices.]<sup>1)</sup>
- [10 Necessary dosimetry and maintenance of national standards for use of ionizing radiation Iceland] <sup>1)</sup>
- [11] <sup>1)</sup> Collaborating with foreign authorities in the field of radiation protection and nuclear issues.
- [12] <sup>1)</sup> Other factors pertaining to the implementation of this act, and other projects in the field of radiation protection in accordance with further decisions thereon by the minister.

The minister may request the institute to address certain matters or projects relating to the duties under this act.

The institute shall prepare, apply for and maintain accreditation regarding certain factors of research and inspections carried out by the institute.

The institute is authorized to enter into agreements on certain factors of the implementation with parties who meet the professional criteria of the institute.

Parties engaging in practices covered by this act shall [assist the institute gathering the necessary information]<sup>1)</sup> to facilitate that the assessment cf. items 4 and 5 is as realistic as possible.

<sup>1)</sup> 28/2008, art. 3

#### Article 6

The minister appoints the Radiation Protection Council, which is a professional advisory body for the Icelandic Radiation Safety Authority. The council shall consist of three persons with expertise in the institute's field of work.

### **SECTION III**

#### **[Permit issuance and reporting for import etc.]<sup>1)</sup>**

##### Article 7

The production, import, [export,]<sup>1)</sup> ownership, storing, delivery or disposal of radioactive substances, be they pure, mixed with other substances or installed in equipment, are subject to licenses by the Icelandic Radiation Safety Authority. The granting of licenses is subject to conditions set by the institute, including on the handling of radioactive substances upon the end of their use. Applications for such licenses shall be made on the institute's forms or in another format acceptable by the institute.

A license is not required in respect of radioactive substances if their total content or their concentration per mass unit is under the exemption limits as determined by the Icelandic Radiation Safety Authority. Additionally, such licenses are not required for phosphorescence watches, pocket compasses, meters, and other such equipment containing very small quantities of radioactive substances, cf. further decisions by the Icelandic Radiation Safety Authority.

The import of radiological equipment capable of producing ionizing radiation is subject to reporting. [Importers shall dispatch a notification to the Icelandic Radiation Safety Authority no later than the first of February each year on any such equipment imported in the previous year. Domestic producers shall also dispatch such notifications on domestic buyers of equipment subject to reporting.]<sup>1)</sup>

<sup>1)</sup> 28/2008, art. 4

The minister may decide by means of a regulation that the import of certain categories of radiation equipment capable of producing non-ionizing radiation, be subject to reporting.

### **SECTION IV**

#### **Assessment of the benefits and risks of using radiation**

##### Article 8

Any new types or categories of practices that may cause ionizing radiation exposure to people shall be assessed in advance with respect to the economic, social or other benefits in comparison with the risk of detrimental health impact such radiation may have. Parties intending to initiate such a practice shall send a report to the Icelandic Radiation Safety Authority on such an assessment of the pending practice. Initiating the practice prior to receiving the consent of the Icelandic Radiation Safety Authority is prohibited and upon receiving an evaluation by the Directorate General of Public Health in instances of medical activities. A review shall be made of a practice already

taking place with respect to an assessment cf. paragraph 1, when new essential information is available on its benefits or consequences.

## **SECTION V**

### **Use of radioactive substances and radiological equipment**

#### Article 9

Any use of radioactive substances or radiological equipment shall be in accordance with this act, and the regulations and rules implemented on grounds of the act. [Use of radioactive substances, except of those referred to in paragraph 2 of article 7, and of radiological equipment producing ionizing radiation is prohibited without a license by the Radiation Safety Authority.]<sup>1)</sup> Changes in practices that affect radiation protection are also subject to the authorization of the Icelandic Radiation Safety Authority. The issuance of a license is subject to conditions set by the institute. Applications for such licenses shall be made on the institute's forms or in another format acceptable by the institute. In the instance of a new practice, an assessment of the use shall be performed, cf. Article 8.

By means of a regulation, the minister may decide that the use of certain categories of radiological equipment emitting non-ionizing radiation be subject to authorization.

<sup>1)</sup> 28/2008, art. 6

#### Article 10

The [holder]<sup>1)</sup> is responsible for the use of radioactive substances and radiological equipment, and for instruments, equipment and any practices in respect of radiation protection being in accordance with this act, and the regulations and rules set according to the act.

In instances of a practice using ionizing radiation, the [holder]<sup>1)</sup> shall appoint a designated supervisor who has the appropriate education and experience. The Icelandic Radiation Safety Authority shall be informed of his name, education and experience. The appointment of the designated supervisor is subject to the approval of the Icelandic Radiation Safety Authority. The designated supervisor, who acts on grounds of a mandate by the [holder]<sup>1)</sup>, is responsible for the practice being in accordance with this act, and the regulations and rules set according to the act.

In instances of practices using ionizing radiation, an appropriate [quality]<sup>1)</sup> control scheme shall be implemented for radiation protection.

The minister implements in a regulation further provisions regarding the education, experience and duties of designated supervisors, and on the arrangement and execution of the [quality]<sup>1)</sup> control.<sup>1)</sup> 28/2008, art. 6

#### Article 11

Parties working on grounds of this act shall organize the appropriate response to radiological accidents, and shall provide information on special risk factors according to further rules thereon set by the Icelandic Radiation Safety Authority. They shall notify the Icelandic Radiation Safety Authority if a radiological accident occurs. They shall conduct an initial assessment of the possible consequences, and shall take all the appropriate measures to limit such consequences.

## Article 12

The storage and disposal of radioactive substances shall always be in accordance with the rules set by the Icelandic Radiation Safety Authority. The same applies to other waste, equipment or packaging containing radioactive substances, or are contaminated by them.

The Icelandic Radiation Safety Authority shall be notified when an instrument or equipment capable of emitting ionizing radiation is finally taken out of use. For as long equipment contains radioactive substances or is capable of emitting ionizing radiation, it shall be kept in safe storage, and shall be safeguarded in accordance with the rules set by the minister, cf. paragraph 4, Article 10. The Radiation Safety Authority is authorized to demand the disposal or removal of radioactive substances and radiological equipment no longer in use. If the institute's demands on the disposal or removal are not met within a specified deadline, the institute may carry this out at the [holder's]<sup>1)</sup> expense.

<sup>1)</sup> 28/2008, art. 8

## **SECTION VI**

### **Radiation protection at workplaces**

## Article 13

Any radiation exposure of workers and members of the public from practices covered by this act shall be as low as reasonably achievable, economic and social factors being taken into account.

In instances of practices where work takes place using radiation, ionizing, as well as non-ionizing radiation, measures shall be taken to protect the workers and others against radiation. Such measures shall be in accordance with the scope of the risk in question. In instances of practices using ionizing radiation, appropriate monitoring shall be carried out of the workers' exposure and that of other persons relating to the practice. The workers shall have adequate education and shall be given training and instruction ensuring their sufficient competence and knowledge of radiation protection, as well as on the safe use of radiation. Visitors and others who have access to the workplace shall be provided with information on the rules that need to be abided by for radiation protection purposes.

The appropriate measures shall be taken in instances of practices resulting in increased natural ionizing radiation for protecting the employees against such radiation.

The minister sets further provisions in a regulation on radiation protection at workplaces, including the arrangement of radiation protection and safety measures for reducing radiation, the age limits of those working with ionizing radiation, the effective dose to workers, apprentices and members of the public, as well as on monitoring effective doses, and the medical monitoring of persons working with ionizing radiation, the classification of work areas and warning signs, shielding and installations of premises, education, professional training, and instructions to persons using radiation, or who work at areas where radiation is used.

Measures for protecting workers at workplaces against the detrimental effects of non-ionizing radiation are subject to the Act on Working Environment, and Health and Safety in the Workplace, and the rules set according to the said act.

#### Article 14

The dose register, which the Icelandic Radiation Safety Authority shall maintain on the results of individual radiation monitoring, cf. item 3, paragraph 1, Article 5, is subject to the Act on the Protection and Processing of Personal Data. The results shall be stored for the entire period the worker is subjected to ionizing radiation in his work, and until such time he reaches the age of 75, or would have become 75 years of age, however, under no circumstances for less than 30 years after the relevant person stops working in the position causing him to be exposed to ionizing radiation. Special notes shall be made of results that are not based on individual monitoring. The effective dose of a radiation accident shall be especially recorded, as well as the circumstances of the radiation, and the measures taken.

The results of individual monitoring shall be accessible by the worker, his employer, and the workplace physician, as well as by the health authorities according to further rules set by the minister.

### **SECTION VII Medical radiation**

#### Article 15

The designated supervisor, cf. Article 10, is responsible for the use of medical radiation. He shall see to it that only competent persons with recognized special education carry out medical radiation.

Upon the use of medical radiation, the designated supervisor, or the person he has requested to carry out such radiation, shall consider whether the use of radiation is justifiable with respect to the objective of the exposure, the patient's symptoms and condition.

Upon the use of medical radiation, the designated supervisor shall ensure that the radiation exposure is as low as reasonably achievable for the intended purpose of the exposure, the instruments and the equipment available, as well as other factors of impact.

Appropriate plans for quality assurance and quality control of the practice, shall be set at any such place where medical radiation is used.

#### Article 16

Parties intending to examine a group of people, for example, because of scientific research, and will use ionizing radiation, shall obtain an authorization by the Icelandic Radiation Safety Authority. Such an examination may not be launched until after the institute's authorization has been granted, and also subject to the opinion of the Directorate General of Public Health.

## **SECTION VIII**

### **Inspection of radiological equipment and radioactive substances**

#### Article 17

According to Article 5, the Icelandic Radiation Safety Authority conducts regular inspections of the use of radioactive substances and radiological equipment for which licenses are required, cf. this act.

The personnel of the Icelandic Radiation Safety Authority are authorized access to any such location where radioactive substances and radiological equipment capable of producing ionizing radiation are used and stored. An effort shall be made to ensure that such inspection causes as limited disturbance as possible of the daily operation of instruments and substances.

The Administration of Occupational Safety and Health conducts inspections and takes measures to prevent detrimental effects on employees of non-ionizing radiation in accordance with the provisions of the Act on Working Environment, Health and Safety in the Workplace, and the rules set on grounds of the said act.

The minister sets in a regulation further provisions on the arrangement and implementation of the inspections by the Icelandic Radiation Safety Authority.

#### Article 18

[Registered holders]<sup>1)</sup> of radiological equipment and radioactive substances shall implement the improvements, which the Icelandic Radiation Safety Authority deems as necessary, inside a specified deadline, otherwise it is permissible to stop any further use of instruments and equipment until improvements have been made.

In the instance of the safety equipment being significantly lacking, the Icelandic Radiation Safety Authority shall stop any further use of radioactive substances and radiological equipment until such time that improvements have been made.

<sup>1)</sup> 28/2008, art. 9

#### Article 19

The registered [holder]<sup>1)</sup> of radioactive substances or radiological equipment capable of producing ionizing radiation shall pay a charge for the regular inspections by the Icelandic Radiation Safety Authority, cf. Article 17, for evaluating applications for licenses, [cf. Articles 7, 9]<sup>1)</sup>, as well as for monitoring the employees' radiation doses, cf. item 3, paragraph 1, Article 5. The minister sets a tariff because of such control subject to proposals by the Icelandic Radiation Safety Authority. The tariff shall be based on the costs of such control. <sup>1)</sup> 28/2008, art. 10

## **SECTION IX**

### **Installation and repairs of radiological equipment**

<sup>1)</sup> 28/2008, art. 12

#### Article 20

Only persons, who meet the criteria of the Icelandic Radiation Safety Authority in respect of knowledge and experience, may repair or install radiological equipment capable of emitting ionizing radiation.

. Parties who undertake such repairs must inform the Icelandic Radiation Safety Authority no later than four weeks after the completion of the task. Persons undertaking the installation of such radiological equipment, repairing or changing it with respect to ionizing radiation, shall ensure that the equipment's safety arrangement is in accordance with law and regulations, or other rules set on grounds of them, and shall immediately notify the Icelandic Radiation Safety Authority if this is not the case.  
<sup>1)</sup> 28/2008, art. 11

## **SECTION X** **Various provisions**

### Article 21

By means of a regulation, the minister sets further provisions on the implementation of this act and on the activities of the Icelandic Radiation Safety Authority, as well as setting a tariff for the service measurements made by the Icelandic Radiation Safety Authority, subject to the institute's recommendations.

### Article 22

A breach of the provisions of this act is subject to fine or imprisonment for up to 2 years, unless other law stipulates more severe penal action. <sup>1)</sup>  
<sup>1)</sup> 28/2008, art. 6

### Article 23

This act shall take effect immediately, however, on 1 January 2003 in respect of the provisions on non-ionizing radiation, response, cf. item 9, paragraph 1, Article 5, and accreditation cf. paragraph 3, Article 5. The act's provisions on inspections shall be reviewed inside of 5 years from the act's entry-into-force. Upon the entry-into-force of this act, Act no. 117/1985, The Radiation Protection Act, becomes invalid.