Republic of Latvia

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Procedures for Licensing and Registering Activities with Sources of Ionising Radiation

Issued pursuant to

Section 11, Paragraph two, Clauses 1, 2, 3, 4, and 5, Section 1, Paragraph five, Section 12, Paragraph two, Section 13, Paragraph eight, Section 14, Paragraph one, and Section 29, Paragraph four of the law On Radiation Safety and Nuclear Safety

I. General Provision

- 1. This Regulation prescribes:
- 1.1. the criteria to be followed in order to commence activities with sources of ionising radiation:
- 1.2. the activities with sources of ionising radiation not requiring a license or registration as such activities cannot be influenced by human actions, or the potential dose of ionising radiation and the adverse effects of the exposure are so insignificant that they can be ignored from the radiation safety aspect;
 - 1.3. the activities with sources of ionising radiation that require registration;
- 1.4. the procedures for issuing, suspending, and cancelling a licence for activities with sources of ionising radiation;
- 1.5. the procedures for registering and suspending activities with sources of ionising radiation, and the procedures for cancelling the registration of such activities;
 - 1.6. the amount and payment procedures of the State fee;
- 1.7. the procedures for public discussions of the creation of ionising radiation objects of national significance or making substantial changes therein;
- 1.8. the sample form for a report on activities with sources of ionising radiation, as well as the procedures for filling in and submitting a report on activities with sources of ionising radiation;
 - 1.9. the minimum qualification requirements for the work manager;
- 1.10. activities with sources of ionising radiation which require civil liability insurance, and the minimum amount of the civil liability insurance.

II. Activities with Sources of Ionising Radiation which do not Require a Licence or Registration, and Activities with Sources of Ionising Radiation which Require Registration

- 2. A licence or registration for activities with sources of ionising radiation (hereinafter the licence or registration) shall not be required, if the source of ionising radiation is:
 - 2.1. a radioactive substance which conforms to at least one of the following conditions: 2.1.1. the total radioactivity for the relevant radionuclide does not exceed the

- 2.1.2. the specific radioactivity for the relevant radionuclide per unit of mass does not exceed the value indicated in Annex 1 to this Regulation, and the total quantity of the radioactive substance does not exceed 1000 kg;
- 2.2. a cathode-ray tube intended for obtaining a visual image, conforming to at least one of the following conditions:
 - 2.2.1. the maximum difference of potentials of the cathode-ray tube does not exceed 30 kV, and under operating conditions corresponding to the conditions of the manufacturer the dose rate of ionising radiation caused by the cathode-ray tube is less than 1 μ Sv per hour in the distance of 0.1 m from any reachable surface point of the apparatus;
 - 2.2.2. the difference of potentials is less than 5 kV;
- 2.3. an electrical apparatus (including an electron microscope) which conforms to at least one of the following conditions:
 - 2.3.1. the maximum difference of potentials of the apparatus does not exceed 30 kV, and under operating conditions corresponding to the conditions of the manufacturer the dose rate of ionising radiation caused by the apparatus is less than 1 μ Sv per hour in the distance of 0.1 m from any reachable surface point of the apparatus;
 - 2.3.2. the difference of potentials is less than 5 kV;
- 2.4. an installation or apparatus which contains a sealed source of radiation, and the total radioactivity, specific radioactivity, or both values of radioactivity of the radioactive substance in this source of radiation for the relevant radionuclide exceed the values indicated in Annex 1 to this Regulation, if, under operating conditions corresponding to the conditions of the manufacturer the dose rate of ionising radiation caused by the source of ionising radiation is less than $1\,\mu Sv$ per hour in the distance of 0.1 m from any reachable surface point of the apparatus and the foreseeable effective dose of radiation per an inhabitant is less than $10\,\mu Sv$ per year;
- 2.5. smoke detectors in which an americium nuclide (241 Am) is used, if the total radioactivity for one detector does not exceed 74 kBq, and their total number 100 units;
- 2.6. thorium (²³²Th) alloys in electrodes of luminescent lamps, gas discharge pipes, and electron television tubes, as well as in filaments of heated gas lamps, if the total number of units of the relevant articles provided for storage in one undertaking does not exceed 10 000 units per year;
- 2.7. thorium (²³²Th) in special alloys in aviation engines or fire-resistant laboratory installations, if their total mass in one undertaking or in one particular place does not exceed 1000 kg;
- 2.8. thorium (²³²Th) in welding electrodes, if the concentration of thorium is less than five per cent and the total quantity of such electrodes to be stored in one undertaking or one specific place or the total quantity of such electrodes to be used within a year does not exceed 1000 kg;
- 2.9. tritium (³H) and krypton (⁸⁵Kr) in luminescent and special lamps, as well as gas discharge pipes the radioactivity of which in one article does not exceed the values indicated in Annex 1 to this Regulation and the total number of units of the relevant articles to be stored concurrently in one undertaking does not exceed 10 000;
- 2.10. a natural radioactive material the specific radioactivity of which exceeds the values indicated in Annex 1 to this Regulation, if the material has not been specifically processed in order to increase its specific radioactivity, and, upon carrying out activities with such material, the total dose of ionising radiation received by one person does not exceed 1 mSv per year;
- 2.11. a mixture of radionuclides, if parts of each radionuclide thereof or its total or specific sum of radioactivity in the total quantity divided by the value indicated in Annex 1 to this Regulation for the relevant radionuclide is less than or equal to 1.

- 3. The licence or registration shall not be required for the following activities with sources of ionising radiation not containing a radioactive substance:
 - 3.1. purchase;
 - 3.2. transportation or movement;
 - 3.3. bringing in from a European Union Member State;
 - 3.4. bringing out to a European Union Member State;
- 3.5. transit from one European Union Member State to another European Union Member State.
- 4. If in accordance with Annex 1 to this Regulation other radionuclides (daughter nuclides) which are referred to in Annex 2 to this Regulation emerge as a result of the disintegration process of the radionuclide (parent nuclide), the values of radioactivity indicated in Annex 1 to this Regulation shall apply not only to the parent nuclide, but also to the relevant daughter nuclides. In such case in order to determine whether the licence or registration is necessary for activities with sources of ionising radiation, the value specified for the parent nuclide shall be used.
- 5. Registration shall be required for the following activities:
- 5.1. the storage, trade, export, and import, bringing in for short-term demonstration, calibration, testing, or for other similar purposes without an intended activity of use, transit, if at least one of the states to which a source of ionising radiation is brought or from which it is brought out is not a European Union Member State, of sources of ionising radiation not containing radioactive substances, as well as dismantling and liquidation of a source of ionising radiation used in one's activity;
 - 5.2. activities with sources of ionising radiation in dental practice;
- 5.3. the use of sources of ionising radiation not containing radioactive substances osteodensitometry and mammography equipment for the purposes of medical exposure;
- 5.4. the use of sources of ionising radiation not containing radioactive substances for the purposes of non-medical exposure, if the activities are carried out in a specific room according to the plan of premises (assembly plan);
- 5.5. activities with radioactive substances, if their total radioactivity exceeds the limits which are specified in Annex 1 to this Regulation by not more than 10^3 (including);
- 5.6. other activities with sources of ionising radiation which do not conform to the activities specified in the law On Radiation Safety and Nuclear Safety requiring licensing, and to Paragraphs 2 and 3 of this Regulation.

III. Criteria for Commencing Activities with Sources of Ionising Radiation and Qualification Requirements for Work Managers and Workers

- 6. A licence for activities which are related to the creation or use of an ionising radiation object of national significance, or for making substantial changes may be requested by an institution of direct administration of the Republic of Latvia, a derived public person, and a commercial company registered in the Republic of Latvia or another European Union Member State.
- 7. Only an institution of direct administration of the Republic of Latvia, a derived public person, and a commercial company registered in the Republic of Latvia or another European Union Member State may be the operator of a nuclear facility.
- 8. A licence for the storage of radioactive waste until their disposal, if the planned period of storage is more than a year, as well as for the disposal of radioactive waste may be requested by an institution of direct administration of the Republic of Latvia, a derived public person, and

a commercial company registered in the Republic of Latvia or another European Union Member State.

- 9. A legal person registered outside the European Union Member States may request the licence or registration, if it is registered in the Republic of Latvia, except in the cases referred to in Paragraph 8 of this Regulation.
- 10. A legal person registered outside the European Union Member States, a natural person who is not a citizen or national of a European Union Member State, or an international organisation may request:
- 10.1. the licence or registration for the short-term bringing in of a source of ionising radiation for the purposes of demonstration, calibration, testing, or other similar purposes, if the presence of the source of ionising radiation in Latvia does not exceed 30 days and the applicant for such licence has a licence or authorisation, or registration for the performance of activities with the source of ionising radiation to be brought in the relevant foreign country;
- 10.2. the licence or registration for each individual transit carriage of sources of ionising radiation.
- 11. In order to receive a licence or to register an activity, the applicant for the licence or registration (hereinafter the applicant):
- 11.1. shall ensure safe operation and storage of the source of ionising radiation, as well as fulfil the technical requirements indicated in the operational documents of the manufacturer;
- 11.2. reduce the risks related to the structure and use of the source of ionising radiation to the health and life of the worker or another person, taking into account the potential effect of ionising radiation, electric shock, and mechanical danger;
- 11.3. prepare measuring equipment corresponding to the specific nature of the foreseeable works;
 - 11.4. ensure readiness for radiation accidents and elimination of their consequences;
 - 11.5. ensure conformity of the qualification of workers with the duties to be carried out;
- 11.6. ensure the development of radiation safety and nuclear safety quality assurance programmes;
- 11.7. harmonise the assembly plan for the placement of the source of ionising radiation with a radiation safety, nuclear safety, or medical physics expert certified in the relevant field and ensure the development of a description for ensuring protection against ionising radiation, as well as receive an opinion of a radiation safety, nuclear safety, or medical physics expert certified in the relevant field that the operation circumstances of the room, building, or territory conform to the conditions of the manufacturer for the performance of activities with the source of ionising radiation, and the planned activities with the source of ionising radiation do not cause direct threats to the workers, inhabitants, and the environment;
- 11.8. prepare a storage facility of the source of ionising radiation corresponding to the physical protection requirements;
- 11.9. develop an environmental monitoring programme corresponding to the use of the source of ionising radiation;
 - 11.10. develop a radioactive waste management plan.
- 12. The qualification of a work manager who performs activities related to medical exposure shall conform to the following criteria:
 - 12.1. one of the following qualifications in radiodiagnostic practices has been obtained:
 12.1.1. a certificate of a doctor-radiologist in radiodiagnostic practices, a certificate of a doctor-radiologist in radiotherapy or education of a medical physicist and work experience of at least two years with sources of ionising radiation in

radiodiagnostic practices has been obtained, including also the time when education in issues of radiation safety or radiation safety and nuclear safety was acquired.

If radionuclides are used in radiodiagnostic practices, work experience of at least two years in work with radioactive substances in medicine shall be required;

- 12.1.2. a certificate of a radiographer and work experience of at least five years with sources of ionising radiation in radiodiagnostic practices has been obtained, including also the time when education in issues of radiation safety or radiation safety and nuclear safety was acquired. If radionuclides are used in radiodiagnostic practices, work experience of at least three years in work with radioactive substances in medicine shall be required;
- 12.2. in radiotherapy a certificate of a doctor-radiologist in radiotherapy or education of a medical physicist and work experience of at least three years with sources of ionising radiation in radiotherapy has been obtained, including also the time when education in issues of radiation safety or radiation safety and nuclear safety was acquired. If radionuclides are used in radiotherapy, work experience of at least three years in work with radioactive substances in medicine shall be required;
- 12.3. in dental practice a certificate in the speciality of a dentist or a certificate of a doctor-radiologist, or education of a medical physicist or radiographer and work experience of at least one year with sources of ionising radiation in radiodiagnostic practices has been obtained, including also the time when education in issues of radiation safety or radiation safety and nuclear safety was acquired. If also cone beam computed tomography is carried out in dental practice, the dentist must have additional education for carrying out of such examinations.
- 13. The qualification of a work manager who performs activities not related to medical exposure shall conform to the following criteria:
 - 13.1. higher education has been obtained;
- 13.2. a training programme developed by an educational institution in the field of radiation safety and nuclear safety has been completed or a programme in the field of medical physics has been completed. Additional training in the field of radiation safety and nuclear safety is not necessary, if activities with such sources of ionising radiation are performed the total dose rate of ionising radiation caused by which in a direct radiation beam in the distance of one metre from the source of ionising radiation is equal to 0.1 Sv/h or less, and the work manager has completed any of the following study subjects in the programme of higher education radiation chemistry, radiochemistry, radiobiology, nuclear physics, radiation physics, or study programme related to a nuclear reactor, processing cycle of nuclear fuel, or designing and operation of radioactive waste processing objects;
- 13.3. experience in work with sources of ionising radiation has been gained, including also the time when education in issues of radiation safety and nuclear safety was acquired:
 - 13.3.1. experience of at least one year, if activities with such sources of ionising radiation are performed the total dose rate of ionising radiation caused by which in a direct radiation beam in the distance of one metre from the source of ionising radiation is equal to 0.1 Sv/h or less;
 - 13.3.2. experience of at least three years if activities with such sources of ionising radiation are performed which are not referred to in Sub-paragraph 13.3.1 of this Regulation.
- 14. The work manager who performs activities related to radiation in veterinary practice shall require a higher veterinary medical education and a certificate of veterinary practice.
- 15. If the applicant only uses such source of ionising radiation servicing of which does not provide for direct presence of workers and the total dose rate of ionising radiation in the distance

of one metre from the source of ionising radiation is less than 1 Sv/h, the qualification of the work manager shall conform to at least the following minimum criteria:

- 15.1. general secondary or vocational secondary education has been acquired;
- 15.2. a programme of courses developed by an educational institution in the field of radiation safety and nuclear safety has been completed;
 - 15.3. work experience of at least one year in work with sources of ionising radiation.
- 16. The operator shall ensure the following for the work manager:
- 16.1. not less than once in five years training in issues of radiation safety within the scope of the training programme developed by an educational institution.

The following training shall not be required:

- 16.1.1. if activities with such sources of ionising radiation are performed the total dose rate of ionising radiation caused by which in a direct radiation beam in the distance of one metre from the source of ionising radiation is equal to 0.1 Sv/h or less, and the work manager has completed any of the following study subjects in the programme of higher education radiation chemistry, radiochemistry, radiobiology, nuclear physics, radiation physics, or study programme related to a nuclear reactor, processing cycle of nuclear fuel, or designing and operation of radioactive waste processing objects;
 - 16.1.2. if the work manager leads works in veterinary practice;
- 16.2. extraordinary training and examination of knowledge, if work or official duties change, as well as new equipment or new procedure is introduced in work with the sources of ionising radiation.
- 17. In order to perform activities with sources of ionising radiation, a worker shall require at least the general secondary education or vocational secondary education and completion of a training programme developed by an educational institution in the field of radiation safety and nuclear safety. The worker shall not need an additionally completed programme in the field of radiation safety and nuclear safety:
- 17.1. if activities with such sources of ionising radiation the total dose rate of ionising radiation caused by which in a direct radiation beam in the distance of one metre from the source of ionising radiation is equal to 0.1 Sv/h or less, are performed by a worker who has completed any of the following study subjects in the programme of higher education radiation chemistry, radiochemistry, radiobiology, nuclear physics, radiation physics, or study programme related to a nuclear reactor, processing cycle of nuclear fuel, or designing and operation of radioactive waste processing objects;
- 17.2. if the activities with sources of ionising radiation in veterinary practice are performed by a veterinarian who has obtained a certificate of veterinary practice.
- 18. The qualification and education requirements for workers who perform activities with sources of ionising radiation in medicine shall be determined in the Medical Treatment Law.
- 19. The operator shall ensure the following for a worker:
- 19.1. not less than once a year a briefing (a note in the relevant logbook shall be made) on issues of radiation safety;
- 19.2. not less than once in five years training in issues of radiation safety within the scope of the programme of courses developed by an educational institution.

Re-training after every five years shall not be required:

19.2.1. if activities with such sources of ionising radiation the total dose rate of ionising radiation caused by which in a direct radiation beam in the distance of one metre from the source of ionising radiation is equal to 0.1 Sv/h or less, are performed by a worker who has completed any of the following study subjects in the programme of higher education – radiation chemistry, radiochemistry, radiobiology, nuclear

physics, radiation physics, or study programme related to a nuclear reactor, processing cycle of nuclear fuel, or designing and operation of radioactive waste processing objects;

- 19.2.2. if the worker performs activities with sources of ionising radiation in veterinary practice;
- 19.3. extraordinary training and examination of knowledge, if work or official duties change, new equipment or new procedure is introduced in work with the sources of ionising radiation.
- 20. A training programme in the field of radiation safety and nuclear safety harmonised with the Radiation Safety Centre of the State Environmental Service (hereinafter the Centre) and the relevant professional association of the sector shall include:

20.1. for workers:

- 20.1.1. theoretical training on the requirements of the laws and regulations in radiation safety and nuclear safety and in ensuring health protection of workers;
- 20.1.2. theoretical and practical training on safe working methods, protective equipment, and radiation safety and nuclear safety;
- 20.2. for work managers:
- 20.2.1. theoretical training on the requirements of the laws and regulations in radiation safety and nuclear safety and in ensuring health protection of workers;
- 20.2.2. theoretical and practical training on safe working methods, protective equipment, and radiation safety and nuclear safety;
- 20.2.3. theoretical and practical training on assessing the dose of ionising radiation, the culture of radiation safety and nuclear safety, and also quality assurance and quality control of radiation safety and nuclear safety;
- 20.3. training multiple-choice test in which a positive evaluation is received if at least 70 % of all questions asked are answered correctly.

IV. Registration of Activities with Sources of Ionising Radiation and Issuing of the Licence

- 21. The applicant shall submit a written application to the Centre:
- 21.1. for the registration of activities with sources of ionising radiation (Chapter I of Annex 3);
- 21.2. for the receipt of the licence for activities with sources of ionising radiation (Chapter II of Annex 3).
- 22. The applicant may submit the documents referred to in this Regulation in the form of an electronic document, if they have been prepared in accordance with the laws and regulations regarding drawing up of electronic documents.

23. The applicant:

- 23.1. may submit a written application to the Centre for the registration of activities with sources of ionising radiation or for the receipt of the licence (hereinafter the application) for several activities with one or several sources of ionising radiation;
- 23.2. within 10 working days after purchase of sources of ionising radiation not containing a radioactive substance, shall submit an application for the registration of activities with sources of ionising radiation or for the receipt of the licence;
- 23.3. if it has several sources of ionising radiation, and registration and licensing is required for activities with such sources of ionising radiation, may:
 - 23.3.1. receive a licence for all activities with sources of ionising radiation;
 - 23.3.2. receive a licence for activities requiring a licence, and register such activities which require registration.

- 24. If during review of the application the information indicated in Paragraph 29 of this Regulation has changed, the operator shall, within five working days after occurrence of the changes, notify the Centre thereof in writing.
- 25. Registration shall be without limited period of time, except in the cases referred to in Paragraph 26 of this Regulation.
- 26. The Centre shall determine the term of validity of registration, if the operator:
- 26.1. requests the performance of registration for a specific period of time by indicating the time period;
- 26.2. brings in the source of ionising radiation for short-term demonstration, calibration, testing, or other similar purposes by indicating the time period;
- 26.3. carries a source of ionising radiation not containing a radioactive substance in transit, and at least one of the countries to which the source of ionising radiation is brought or from which it is brought is not a European Union Member State.

In such case the time period of registration shall be up to one year;

- 26.4. carries a source of ionising radiation containing a radioactive substance in transit by indicating the time period;
- 26.5. exports or imports a source of ionising radiation containing a radioactive substance by indicating the time period.
- 27. The term of validity of the licence, except in the cases referred to in Paragraph 28 of this Regulation, shall be 10 years.
- 28. The Centre shall determine the term of validity of the licence:
- 28.1. up to four years for designing an ionising radiation object of national significance or a nuclear object of national significance;
- 28.2. up to 10 years for the construction of an ionising radiation object of national significance or a nuclear object of national significance;
 - 28.3. up to three years:
 - 28.3.1. for the use of smoke detectors containing plutonium;
 - 28.3.2. for the carriage of sources of ionising radiation containing a radioactive substance and radioactive waste or for international carriage of spent nuclear fuel;
 - 28.4. shorter than referred to in Paragraph 27 of this Regulation, if the operator:
 - 28.4.1. requests the issuance of the licence for a shorter period of time, indicating the time period;
 - 28.4.2. brings in the source of ionising radiation for short-term demonstration, calibration, testing, or for other similar purposes, indicating the time period;
 - 28.4.3. carries a source of ionising radiation containing a radioactive substance in transit, indicating the time period;
 - 28.4.4. exports or imports a source of ionising radiation containing a radioactive substance, indicating the time period.
- 29. The Centre shall indicate the following in the licence and registration certificate:
- 29.1. the number, date of issuance, and term of validity of the licence or registration certificate;
 - 29.2. the operator to which the licence or registration certificate has been issued:
 - 29.2.1. for a natural person the given name, surname, personal identity number, address of the declared place of residence;
 - 29.2.2. for a legal person the firm name or name, registration number in the relevant register (if applicable), legal address;

- 29.2.3. for an institution of direct administration or a derived public person the name, legal address;
- 29.3. the activities with sources of ionising radiation;
- 29.4. the sources of ionising radiation;
- 29.5. the address, place of performing activities (for example, department, block, room) or territory in which performance of activities with sources of ionising radiation is permitted;
- 29.6. other restrictions for activities with sources of ionising radiation which conform to the purpose and objective (if any) of the administrative act, for example, the amount of products to be produced in the installation of ionising radiation, the maximum permitted capacity, or technical constraints.
- 30. The Centre shall issue the licence or registration certificate in the form of an electronic document or upon a request of the applicant (making a note in the application indicated in Annex 3) in the form of a printed document.
- 31. In order to repeatedly receive a licence, the operator shall submit an application to the Centre at least three months before the expiry of the term of operation of the licence.
- 32. In order to make amendments to the licence or changes in registration, the operator shall submit a relevant application to the Centre (Annex 3):
- 32.1. within 10 working days, if the information indicated in Sub-paragraph 29.2 of this Regulation in relation to the name or address has changed;
- 32.2. within 20 working days before changes in the information indicated in Subparagraphs 29.3, 29.4, 29.5, and 29.6 of this Regulation.
- 33. If the operator has changed the type of the merchant (for example, from a natural person to a limited liability company), it shall, within five working days, inform the Centre thereof by submitting an application of the cancellation of the licence or registration and an application for the receipt of a new licence or registration (Annex 3).
- 34. If the operator decides to discontinue the use of the source of ionising radiation and to store the source of ionising radiation not containing a radioactive substance for more than three months, the operator shall, within 10 working days prior to commencing storage, submit an application to the Centre for the making of amendments to the licence or changes in registration in which the following information shall be indicated:
 - 34.1. about the source of ionising radiation intended for storage;
- 34.2. about the place (address) and room where the source of ionising radiation shall be stored;
- 34.3. the physical protection measures of the source of ionising radiation, if the storage is intended at another place (address) or room.
- 35. If the operator after the case referred to in Paragraph 34 of this Regulation wishes to recommence the use of the source of ionising radiation, it shall, not later than 20 working days prior to commencing the use, submit the application referred to in Annex 3 to this Regulation to the Centre for the making of amendments to the licence or changes in registration in order to recommence the use of the source of ionising radiation. After review of the application the Centre shall take a decision to make amendments or changes or to refuse to make an amendment to the licence or changes in the registration.
- 36. If the operator alienates a source of ionising radiation not containing a radioactive substance used in its activity, it shall, not later than 10 working days after alienation of the source, submit the application to the Centre. The following shall be indicated in the application:

- 36.1. information about the alienated source of ionising radiation;
- 36.2. the person who has acquired the source of ionising radiation (for a natural person the given name, surname, personal identity number, for a legal person the firm name or name and registration number in the relevant register (if applicable), but for an institution of direct administration or a derived public person the name). A copy of the delivery–acceptance deed of the source of ionising radiation shall be appended to the application.
- 37. After receipt of the application referred to in Paragraph 36 of this Regulation the Centre shall:
- 37.1. make amendments to the licence or changes in registration, excluding the relevant source of ionising radiation, if the operator performs activities also with other sources of ionising radiation;
- 37.2. if the operator has performed activities with one source of ionising radiation or all sources of ionising radiation are being alienated, cancel the licence or registration.
- 38. If the operator leases a source of ionising radiation not containing a radioactive substance used in its activity, it shall, not later than 10 working days after leasing of the source, submit the relevant application to the Centre. The following shall be indicated in the application:
 - 38.1. information about the leased source of ionising radiation;
- 38.2. the person to whom the source of ionising radiation is leased (for a natural person the given name, surname, personal identity number, for a legal person the firm name or name and registration number in the relevant register (if applicable), but for an institution of direct administration or a derived public person the name).
- 39. The Centre shall make amendments to the licence or changes in registration after receipt of the application referred to in Paragraph 38 of this Regulation.
- 40. If the operator after the case referred to in Paragraph 39 of this Regulation wishes to recommence activities with the source of ionising radiation, it shall, not later than 20 working days prior to recommencing the activity, submit the application referred to in Annex 3 to this Regulation to the Centre for recommencing the use of the source of ionising radiation. After review of the application the Centre shall take a decision to make amendments to the licence or changes in registration or to refuse to make an amendment to the licence or changes in the registration.
- 41. The operator shall, at least five working days before moving the source of ionising radiation containing a radioactive substance to a zone controlled by another operator, inform the Centre thereof in writing.
- 42. The Centre shall, within five working days after issuing the licence or amendments to the licence, or registration or changes in registration, publish the information referred to in Paragraph 29 of this Regulation on the website of the State Environmental Service, in conformity with the requirements for personal data protection.
- 43. The applicant shall pay a State fee for the licence or amendments to the licence, or registration or changes in registration. The rates of the State fee are specified in Annex 4 to this Regulation. The State fee shall be paid before submitting the application to the Centre, making the payment with the intermediation of a provider of payment services which has the right to provide payment services within the meaning of the Law on Payment Services and Electronic Money.

- 44. The Centre shall issue the licence after the applicant submits a copy of the civil liability insurance policy of the operator. The minimum sum of the insurance of civil liability of the operator is specified in Annex 5 to this Regulation.
- 45. If the operator who is a legal person, an institution of direct administration, or a derived public person is being reorganised, the Centre may extend the term of validity of the licence or registration for a time period not exceeding three months until the legal person, the institution of direct administration, or the derived public person which is the successor to the rights and liabilities of the previous operator in relation to activities with sources of ionising radiation, submits an application, and receives a new licence for the relevant activities, or performs registration.
- 46. If due to safety, technological or economic considerations it is necessary to make such changes in activities with objects of ionising radiation of national significance as a result of which the conditions of the licence must be changed, then until making of amendments to the licence the operator shall:
- 46.1. prepare an evaluation on how the basic principles of radiation safety and nuclear safety and laws and regulations will be conformed to;
- 46.2. at least three months prior to introduction of the planned changes submit an application to the Centre for the making of amendments to the conditions of the licence and append the following to the application:
 - 46.2.1. the complete safety assessment;
 - 46.2.2. an updated plan which has been harmonised with the local government on the readiness for accidents and response in emergency situations which may occur due to changes;
 - 46.2.3. an instruction of radiation safety and nuclear safety and a description of the training programme of workers where a security is provided for ensuring a commensurately low level of radiation by choosing radiation safety and nuclear safety measures corresponding to the planned changes in activities with the sources of ionising radiation;
 - 46.2.4. a plan and description of such rooms, buildings, or territories in which activities with the source of ionising radiation will be performed, if the relevant changes affect them;
 - 46.2.5. an updated radiation safety and nuclear safety quality assurance programme;
 - 46.2.6. the evaluation of the potential changes in relation to discharges of radioactive substances in the environment, as well as an updated description of the scheme of ventilation and sewage systems and of the monitoring system, if the relevant changes affect them;
 - 46.2.7. a description of the foreseeable changes for activities with radioactive waste prior to handing over thereof for disposal;
 - 46.2.8. an updated description of the physical protection system which has been harmonised with the Security Police.
- 47. The Centre shall, not less than once a month, inform the Customs Board of the State Revenue Service of the issuance of the licence or registration for the import, export, or transit of sources of ionising radiation, if at least one of the countries to which the source of ionising radiation is brought or from which it is brought is not a European Union Member State. The officials of the customs institutions of the State Revenue Service shall, not less than once a month, inform the Centre of the movement of sources of ionising radiation across the customs borders of the Republic of Latvia.

- 48. If sources of ionising radiation are handed over to another operator, all relevant technical documentation shall also be handed over concurrently with the sources of ionising radiation.
- 49. The operator has an obligation to keep the following documents on activities with sources of ionising radiation:
- 49.1. the documentation related to the work manager and workers while the worker is working for the operator, if the laws and regulations do not prescribe another time period for the storage of documents. Afterwards the relevant documentation shall be transferred to the archives in accordance with the laws and regulations regarding storage of personnel documents and transfer thereof to the archives;
- 49.2. the technical documentation and documents certifying ownership of the source of ionising radiation for the whole time period of use (operation) of the source of ionising radiation;
 - 49.3. until the end of the term of operation of the licence or throughout registration:
 - 49.3.1. the documents which are referred to in Chapter I, Sub-paragraphs 5.1.2, 5.2.1, 5.2.2, 5.2.3, 5.2.4, 5.2.5, 5.2.6, 5.2.8, 5.4.1, 5.4.2, 5.4.3, 5.4.4, 5.4.5, and 5.5.3 of Annex 3 to this Regulation, and contracts which have been entered into with other operators for such activities with sources of ionising radiation which are not performed by the applicant itself;
 - 49.3.2. the documents which are referred to in Chapter II, Sub-paragraphs 5.1.2, 5.2.1, 5.2.2, 5.2.3, 5.2.4, 5.2.5, 5.2.6, 5.2.8, 5.2.9, 5.4.1, 5.4.2, 5.4.3, 5.4.4, 5.4.5, 5.4.6, 5.4.7, and 5.5.3 of Annex 3 to this Regulation, and contracts which have been entered into with other operators for such activities with sources of ionising radiation which are not performed by the applicant itself;
- 49.4. the results of the last inspection of the individual protective equipment and a valid policy of civil liability insurance of the operator.

V. Suspension and Cancellation of the Operation of the Licence and Registration

- 50. The Centre shall examine the issue of temporary suspension or cancellation of the operation of the licence or registration, if:
- 50.1. violations of radiation safety and nuclear safety which can cause substantial threat or harm to the environment or people have been found;
- 50.2. the operator does not submit the information indicated in the laws and regulations to the Centre within a specific period of time.
- 51. The Centre may suspend the operation of the licence issued or registration for a time period of up to six months, evaluating the gravity of the violation.
- 52. If the Centre suspends the operation of the licence or registration in relation to activities with one or several sources of ionising radiation, then according to the conditions of the licence or registration the operator may perform activities with another source of ionising radiation the operation of which has not been suspended.
- 53. The decision to cancel the licence or registration shall be taken, if the Centre finds that the operator:
- 53.1. discontinues activity with sources of ionising radiation and an application has been received in accordance with Sub-paragraph 37.2 of this Regulation;
- 53.2. has changed the type of the merchant (for example, from a natural person to a limited liability company) and an application has been received in accordance with Paragraph 33 of this Regulation. The Centre shall take the decision to cancel the existing licence or registration and issue a new licence or registration;

- 53.3. has not fulfilled the obligations specified in this Regulation and in other laws and regulations in the field of radiation safety and nuclear safety, causing substantial threat or harm to the environment or people, or has not eliminated the established violations within the time period specified in the decision to suspend the operation of the licence or registration;
- 53.4. has provided false or misleading information in order to receive the licence or registration;
- 53.5. within a year has repeatedly violated the radiation safety and nuclear safety requirements laid down in the laws and regulations;
- 53.6. performs activities with the source of ionising radiation, when the operation of the licence or registration has been suspended;
- 53.7. has been excluded from the registers kept by the Enterprise Register of the Republic of Latvia.

VI. Procedures for Issuing a Licence for the Creation of Ionising Radiation Objects of National Significance or Making Essential Changes Therein, and Procedures for Public Discussion of the Creation of Ionising Radiation Objects of National Significance or Making Substantial Changes Therein

- 54. The Centre shall issue a licence for the creation of an ionising radiation object of national significance or making substantial changes therein in the following order:
- 54.1. issue a licence for designing in order to create a new ionising radiation object of national significance or to make substantial changes therein. If an environmental impact assessment is required for the creation of an ionising radiation object of national significance or making substantial changes therein, it shall be carried out prior to submitting the application for the issuance of the licence;
- 54.2. after the project for the creation of an ionising radiation object of national significance or making substantial changes therein has been evaluated, issue a licence for construction in order to create a new ionising radiation object of national significance or to make essential changes therein. A licence for construction must be received before the local government issues a construction permit for the creation of a new ionising radiation object of national significance or making substantial changes therein. Before the Centre issues the licence, a description of the physical protection system harmonised with the Security Police must be acquired;
- 54.3. accept a new or substantially changed ionising radiation object of national significance and issue a licence for inspections of operational parameters (if such are necessary) prior to the use of the object. In order to receive such licence, the applicant shall additionally append the following to the application:
 - 54.3.1. inspection reports on technical safety of such installations which directly or indirectly affect radiation safety and nuclear safety in the relevant ionising radiation object of national significance;
 - 54.3.2. the plan and schedule of inspections of operational parameters;
- 54.4. issue a licence for the operation of a new ionising radiation object of national significance or for resuming the operation of a substantially changed object (operating licence).
- 55. If construction of an object of national significance takes place in accordance with the laws and regulations regarding construction regulations of such structures which are related to radiation safety, then the licence referred to in Sub-paragraphs 54.1 and 54.2 of this Regulation is not required separately.
- 56. The Centre shall, within five working days after receipt of the application and all the documents appended thereto, publish the following information on the website of the State Environmental Service:

- 56.1. the name of the applicant;
- 56.2. the name of the activity and the address of the performance thereof;
- 56.3. the place and time where it is possible to become acquainted with the information included in the application, including the additional materials submitted.
- 57. Within five working days after submitting the application and all the documents appended thereto to the Centre, the applicant shall:
- 57.1. publish a notice of the intended activity in at least one newspaper issued by the relevant local government or in another local newspaper;
 - 57.2. send a notice to the relevant local government;
- 57.2. send a notice of the intended activity to those persons the immovable properties belonging to or in possession of which are bordering the location of the planned or existing ionising radiation object of national significance or are located in the zone of its direct effect.
- 58. The applicant shall indicate the following in the notice of the intended activity:
 - 58.1. the name of the applicant;
 - 58.2. the name of the activity and the address of the performance thereof;
- 58.3. the place in which activities with sources of ionising radiation are or will be performed, as well as the territories subject to potential exposure;
- 58.4. the place where the public may become acquainted with the licence application and the documents appended thereto;
 - 58.5. the date by which the public may submit written proposals to the Centre.
- 59. The public may submit their proposals or an opinion on the issuance of the licence or the conditions thereof to the Centre in writing within 30 days after the day of publication of the notice referred to in Paragraph 58 of this Regulation.
- 60. In addition to that referred to in Paragraph 58 of this Regulation, the public shall have access, at the Centre, to the information which may be used for decision-making, but which has become available only after informing the public in accordance with Paragraph 56 of this Regulation.
- 61. The Centre shall inform the applicant of the proposals received and shall indicate the time period by which the applicant shall provide an explanation of the received proposals.
- 62. The Centre shall examine the proposals expressed during public discussion and submitted in writing for the conditions of issuing the licence and use them for the preparation of the conditions of the licence. If the public expresses a proposal not to issue the licence, the Centre shall issue the licence or take a justified decision to refuse to issue the licence only after the applicant has been given an opportunity to provide its explanation in writing within a time period of not less than 14 days.
- 63. Prior to issuance of the licence in the cases referred to in Sub-paragraphs 54.3 and 54.4 of this Regulation, the Centre shall check the conformity of substantial technical and operational parameters related to radiation safety and nuclear safety with the project.
- 64. After taking of the decision to issue the licence or to refuse to issue the licence the Centre shall, within five working days, inform the local government in the territory of which the creation of an ionising radiation object of national significance or making essential changes therein is intended thereof in writing, and publish the decision to issue the licence or to refuse to issue the licence in a newspaper issued by the local government or, if none, in another local

newspaper. The local government shall publish such information on the website of the local government.

VII. Report on Activities with Sources of Ionising Radiation

- 65. The sample form for a report on activities with sources of ionising radiation and the procedures for filling it in are specified in Annex 6 to this Regulation.
- 66. If changes in the operation of the operator have occurred in the previous calendar year, the operator shall fill in the sample forms of the report in accordance with Paragraph 65 of this Regulation and shall submit them to the Centre until 31 January of the relevant calendar year.

VIII. Closing Provisions

- 67. Cabinet Regulation No. 723 of 20 September 2011, Procedures for Licensing Activities with Sources of Ionising Radiation (*Latvijas Vēstnesis*, 2011, No. 161; 2013, No. 198), is repealed.
- 68. Special permits (licences) and permits for activities with sources of ionising radiation which have been issued until the day of coming into force of this Regulation shall be valid until the end of the term of validity specified therein.
- 69. If a special permit (licence) or permit for the purchase (acquisition into ownership) and storage of a source of ionising radiation has been received until the day of coming into force of this Regulation and, after the end of its term of validity, the operator wishes to continue activities with the source of ionising radiation, the operator shall register the activity or receive the licence.
- 70. If a permit for the purchase (acquisition into ownership) and storage of a source of ionising radiation has been received until the day of coming into force of this Regulation and the operator leases or alienates any of the sources of ionising radiation, then in relation to other sources of ionising radiation the operator shall receive the licence or register activities with other sources of ionising radiation.
- 71. Sub-paragraphs 13.2, 16.1.1, 16.1.2, 17.1, 17.2, 19.2.1, and 19.2.2 of this Regulation in relation to training not being needed shall be in force until 6 February 2018. From 7 February 2018 all work managers and workers who perform activities with sources of ionising radiation need to undergo training once in every five years.
- 72. Chapter I, Sub-paragraphs 5.2.2 and 5.2.3 and Chapter II, Sub-paragraphs 5.2.2 and 5.2.3 of Annex 3 to this Regulation shall come into force on 1 February 2016. Until the day when the abovementioned requirements come into force, the operator shall submit an opinion or harmonisation of a radiation safety, nuclear safety or medical physics expert certified in the relevant field that the operating circumstances of the rooms, buildings or territories provided for activities with sources of ionising radiation conform to the conditions of the manufacturer and the planned activities with the source of ionising radiation do not cause direct threats to workers, inhabitants and the environment.
- 73. The Regulation shall come into force on 1 January 2016.

Informative Reference to the European Union Directives

The Regulation contains legal norms arising from:

- 1) Council Directive 90/641/Euratom of 4 December 1990 on the operational protection of outside workers exposed to the risk of ionizing radiation during their activities in controlled areas:
- 2) Council Directive 96/29/Euratom of 13 May 1996 laying down basic safety standards for the protection of the health of workers and the general public against the dangers arising from ionizing radiation;
- 3) Council Directive 97/43/Euratom of 30 June 1997 on health protection of individuals against the dangers of ionizing radiation in relation to medical exposure, and repealing Directive 84/466/Euratom;
- 4) Council Directive 2003/122/Euratom of 22 December 2003 on the control of high-activity sealed radioactive sources and orphan sources;
- 5) Council Directive 2006/117/Euratom of 20 November 2006 on the supervision and control of shipments of radioactive waste and spent fuel;
- 6) Council Directive 2009/71/Euratom of 25 June 2009 establishing a Community framework for the nuclear safety of nuclear installations;
- 7) Council Directive 2011/70/Euratom of 19 July 2011 establishing a Community framework for the responsible and safe management of spent fuel and radioactive waste;
- 8) Council Directive 2013/59/Euratom of 5 December 2013 laying down basic safety standards for protection against the dangers arising from exposure to ionising radiation, and repealing Directives 89/618/Euratom, 90/641/Euratom, 96/29/Euratom, 97/43/Euratom and 2003/122/Euratom.

Prime Minister Laimdota Straujuma

Acting for the Minister for Environmental Protection and Regional Development – Minister for Justice

Dzintars Rasnačs

Limit Values of Radioactivity below which a Licence or Registration is not Required for Activities with Sources of Ionising Radiation

No.	Radionuclide ¹	Total radioactivity, Bq	Specific radioactivity, Bq/g
1.	³ H	1 x 10 ⁹	1×10^6
2.	⁷ Be	1×10^7	1×10^{3}
3.	¹⁴ C	$1x\ 10^7$	1×10^4
4.	¹⁵ O	1 x 10 ⁹	1×10^2
5.	18 F	1×10^6	1×10^{1}
6.	²² Na	1×10^6	1×10^{1}
7.	²⁴ Na	1×10^5	1×10^{1}
8.	³¹ Si	1×10^6	1×10^3
9.	³² P	1 x 10 ⁵	1×10^{3}
10.	³³ P	1 x 10 ⁸	1 x 10 ⁵
11.	³⁵ S	1 x 10 ⁸	1 x 10 ⁵
12.	³⁶ Cl	1 x 10 ⁶	1 x 10 ⁴
13.	³⁸ Cl	1 x 10 ⁵	1 x 10 ¹
14.	³⁷ Ar	1 x 10 ⁸	1 x 10 ⁶
15.	⁴¹ Ar	1 x 10 ⁹	1 x 10 ²
16.	⁴⁰ K	1 x 10 ⁶	1×10^2
17.	⁴² K	1 x 10 ⁶	1×10^2
18.	⁴³ K	1 x 10 ⁶	1 x 10 ¹
19.	⁴⁵ Ca	1×10^7	1×10^4
20.	⁴⁷ Ca	1 x 10 ⁶	1 x 10 ¹
21.	⁴⁶ Sc	1×10^6	1×10^{1}
22.	⁴⁷ Sc	1×10^6	1×10^2
23.	⁴⁸ Sc	1 x 10 ⁵	1 x 10 ¹
24.	⁴⁸ V	1×10^5	1×10^{1}
25.	⁵¹ Cr	1×10^7	1×10^{3}
26.	⁵¹ Mn	1×10^5	1×10^{1}
27.	⁵² Mn	1×10^5	1×10^{1}
28.	^{52m} Mn	1 x 10 ⁵	1 x 10 ¹
29.	⁵³ Mn	1 x 10 ⁹	1 x 10 ⁴
30.	⁵⁴ Mn	1 x 10 ⁶	1 x 10 ¹
31.	⁵⁶ Mn	1 x 10 ⁵	1 x 10 ¹
32.	⁵² Fe	1 x 10 ⁶	1 x 10 ¹
33.	⁵⁵ Fe	1 x 10 ⁶	1 x 10 ⁴

1 25 1 330 6 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	10 ¹
	10 ¹
	10 ²
	101
	104
	101
	$\frac{10^3}{10^2}$
	10 ²
	101
	104
	10 ⁵
	101
	10 ²
	101
	104
	10^{2}
	101
	104
	10^{3}
	101
	10^{2}
	10^{3}
	10^{2}
	10 ¹
	10 ²
	10^2
	10^{2}
	10^{3}
	104
	10^{5}
	10^5
	10^{3}
	10 ²
	10^{3}
	10 ²
75. 91 Sr 1 x $^{10^5}$ 1 x	10^{1}

76.	⁹² Sr	1 x 10 ⁶	1 x 10 ¹
	90Y	1×10^{5} 1×10^{5}	$\frac{1 \times 10^{3}}{1 \times 10^{3}}$
77. 78.	91 Y	1×10^6 1×10^6	$\frac{1 \times 10}{1 \times 10^3}$
-	91mY		
79.	⁹² Y	1 x 10 ⁶	$\frac{1 \times 10^2}{1 \times 10^2}$
80.		1 x 10 ⁵	$\frac{1 \times 10^2}{1 \times 10^2}$
81.	⁹³ Y	1 x 10 ⁵	1×10^2
82.	⁹³ Zr+	1 x 10 ⁷	1×10^3
83.	⁹⁵ Zr	1 x 10 ⁶	1 x 10 ¹
84.	⁹⁷ Zr+	1 x 10 ⁵	1 x 10 ¹
85.	^{93m} Nb	1 x 10 ⁷	1 x 10 ⁴
86.	⁹⁴ Nb	1 x 10 ⁶	1 x 10 ¹
87.	⁹⁵ Nb	1 x 10 ⁶	1 x 10 ¹
88.	⁹⁷ Nb	1×10^6	1 x 10 ¹
89.	⁹⁸ Nb	1 x 10 ⁵	1×10^{1}
90.	⁹⁰ Mo	1 x 10 ⁶	1×10^{1}
91.	⁹³ Mo	1 x 10 ⁸	1×10^3
92.	⁹⁹ Mo	1 x 10 ⁶	1×10^2
93.	¹⁰¹ Mo	1 x 10 ⁶	1 x 10 ¹
94.	⁹⁶ Tc	1 x 10 ⁶	1 x 10 ¹
95.	^{96m} Tc	1 x 10 ⁷	1 x 10 ³
96.	⁹⁷ Tc	1 x 10 ⁸	1 x 10 ³
97.	^{97m} Tc	1 x 10 ⁷	1 x 10 ³
98.	⁹⁹ Tc	1 x 10 ⁷	1 x 10 ⁴
99.	^{99m} Tc	1 x 10 ⁷	1×10^2
100.	⁹⁷ Ru	1 x 10 ⁷	1 x 10 ²
101.	¹⁰³ Ru	1 x 10 ⁶	1 x 10 ²
102.	¹⁰⁵ Ru	1 x 10 ⁶	1 x 10 ¹
103.	¹⁰⁶ Ru+	1 x 10 ⁵	1 x 10 ²
104.	^{103m} Rh	1 x 10 ⁸	1 x 10 ⁴
105.	¹⁰⁵ Rh	1 x 10 ⁷	1 x 10 ²
106.	¹⁰³ Pd	1 x 10 ⁸	1 x 10 ³
107.	¹⁰⁹ Pd	1 x 10 ⁶	1×10^{3}
108.	¹⁰⁵ Ag	1 x 10 ⁶	1×10^2
109.	108mAg+	1×10^6	1×10^{1}
110.	110mAg	1×10^6	1×10^{1}
111.	111Ag	1×10^6	1×10^3
112.	109Cd	1×10^6	1×10^4
113.	¹¹⁵ Cd	1×10^6	$\frac{1 \times 10^2}{1 \times 10^2}$
114.	115mCd	1×10^6	$\frac{1 \times 10^{3}}{1 \times 10^{3}}$
115.	111In	1×10^6	$\frac{1 \times 10^{2}}{1 \times 10^{2}}$
116.	113mIn	1×10^6 1×10^6	$\frac{1 \times 10^{2}}{1 \times 10^{2}}$
117.	114mIn	1×10^6 1×10^6	$\frac{1 \times 10^{2}}{1 \times 10^{2}}$
11/.	1(1)	1 X 1U	1 X 1U

110	^{115m} In	1 - 106	1×10^2
118.	113 S n	1 x 10 ⁶	
119.	125Sn	1 x 10 ⁷ 1 x 10 ⁵	$\frac{1 \times 10^3}{1 \times 10^2}$
120.	122Sb		
121.	¹²⁴ Sb	1×10^4	$\frac{1 \times 10^2}{1 \times 10^1}$
122.		1×10^6	$\frac{1 \times 10^{1}}{1 \times 10^{2}}$
123.	¹²⁵ Sb ^{123m} Te	1×10^6	$\frac{1 \times 10^2}{1 \times 10^2}$
124.		1 x 10 ⁷	$\frac{1 \times 10^2}{1 \times 10^3}$
125.	^{125m} Te	1×10^7	1×10^3
126.	¹²⁷ Te	1 x 10 ⁶	$\frac{1 \times 10^3}{10^3}$
127.	^{127m} Te	1 x 10 ⁷	1×10^3
128.	¹²⁹ Te	1 x 10 ⁶	1×10^2
129.	^{129m} Te	1 x 10 ⁶	1×10^3
130.	¹³¹ Te	1 x 10 ⁵	1×10^2
131.	^{131m} Te	1 x 10 ⁶	1 x 10 ¹
132.	¹³² Te	1 x 10 ⁷	1 x 10 ²
133.	¹³³ Te	1 x 10 ⁵	1 x 10 ¹
134.	^{133m} Te	1 x 10 ⁵	1 x 10 ¹
135.	¹³⁴ Te	1 x 10 ⁶	1 x 10 ¹
136.	¹²³ I	1 x 10 ⁷	1 x 10 ²
137.	¹²⁵ I	1 x 10 ⁶	1×10^3
138.	¹²⁶ I	1 x 10 ⁶	1×10^2
139.	¹²⁹ I	1 x 10 ⁵	1×10^2
140.	¹³⁰ I	1 x 10 ⁶	1 x 10 ¹
141.	¹³¹ I	1 x 10 ⁶	1×10^2
142.	^{132}I	1 x 10 ⁵	1 x 10 ¹
143.	¹³³ I	1 x 10 ⁶	1 x 10 ¹
144.	^{134}I	1 x 10 ⁵	1 x 10 ¹
145.	¹³⁵ I	1 x 10 ⁶	1 x 10 ¹
146.	^{131m} Xe	1 x 10 ⁴	1 x 10 ⁴
147.	¹³³ Xe	1 x 10 ⁴	1×10^3
148.	¹³⁵ Xe	1 x 10 ¹⁰	1×10^3
149.	¹²⁹ Cs	1 x 10 ⁵	1×10^2
150.	¹³¹ Cs	1 x 10 ⁶	1×10^3
151.	¹³² Cs	1 x 10 ⁵	1 x 10 ¹
152.	^{134m} Cs	1 x 10 ⁵	1×10^3
153.	¹³⁴ Cs	1 x 10 ⁴	1 x 10 ¹
154.	¹³⁵ Cs	1 x 10 ⁷	1 x 10 ⁴
155.	¹³⁶ Cs	1 x 10 ⁵	1 x 10 ¹
156.	¹³⁷ Cs+	1 x 10 ⁴	1 x 10 ¹
157.	¹³⁸ Cs	1 x 10 ⁴	1 x 10 ¹
158.	¹³¹ Ba	1 x 10 ⁶	1×10^2
159.	¹⁴⁰ Ba+	1 x 10 ⁵	1 x 10 ¹

160. 1-30 1 x 10^3 1 x 10^4 1 x 10^2 162. 1-41 162 1 x 10^6 1 x 10^2 163. 1-43 164 1-44 165 1 x 10^5 1 x 10^2 165. 1-43 166 1 x 10^5 1 x 10^2 166. 1-43 166 1-43 167 1 x 10^6 1 x 10^2 166. 1-43 167 1 x 10^6 1 x 10^2 166. 1-43 167 1 x 10^6 1 x 10^2 168. 1-43 164 1 x 10^6 1 x 10^2 168. 1-43 167 1 x 10^6 1 x 10^2 168. 1-43 164 1 x 10^6 1 x 10^2 168. 1-43 169 1 x 10^6 1 x 10^2 1 x 10^4 170. 1-43 169 1 x 10^6 1 x 10^3 1 x 10^4 171. 1-51 158 1 x 10^6 1 x 10^3 1 x 10^4 171. 1-52 153 1 x 10^6 1 x 10^2 1 x 10^4 171. 1-52 152 1 x 10^6 1 x 10^2 1 x 10^4 1 x 10^5 1 x 10^5		1.40		1
162.	160.	¹⁴⁰ La	1 x 10 ⁵	1 x 10 ¹
163.	161.			
164.	162.	¹⁴¹ Ce		
165. 142 Pr	163.			1×10^2
166.	164.			
167. 147Nd	165.		1 x 10 ⁵	1×10^2
168.	166.		1×10^6	1×10^4
169. 147Pm	167.	¹⁴⁷ Nd	1×10^6	1×10^2
170. 149Pm	168.	¹⁴⁹ Nd	1 x 10 ⁶	1×10^2
171.	169.	¹⁴⁷ Pm	1 x 10 ⁷	1×10^4
172. 153Sm	170.	¹⁴⁹ Pm	1 x 10 ⁶	1×10^3
173. 152Eu	171.	¹⁵¹ Sm	1 x 10 ⁸	1×10^4
174. 152mEu 1 x 106 1 x 101 175. 154Eu 1 x 106 1 x 101 176. 155Eu 1 x 107 1 x 102 177. 153Gd 1 x 106 1 x 103 178. 159Gd 1 x 106 1 x 103 179. 160Tb 1 x 106 1 x 103 180. 165Dy 1 x 106 1 x 103 181. 166Dy 1 x 106 1 x 103 182. 166Ho 1 x 105 1 x 103 183. 169Er 1 x 107 1 x 104 184. 171Er 1 x 106 1 x 102 185. 170Tm 1 x 106 1 x 103 186. 171Tm 1 x 108 1 x 104 187. 175Yb 1 x 107 1 x 103 188. 177Lu 1 x 107 1 x 103 189. 181Hf 1 x 106 1 x 101 190. 182Ta 1 x 106 1 x 101 191. 181W 1 x 107 1 x 103	172.	¹⁵³ Sm	1×10^6	1×10^2
175. 154Eu 1 x 106 1 x 101 176. 155Eu 1 x 107 1 x 102 177. 153Gd 1 x 106 1 x 103 178. 159Gd 1 x 106 1 x 101 180. 160Tb 1 x 106 1 x 103 181. 166Dy 1 x 106 1 x 103 182. 166Ho 1 x 105 1 x 103 183. 169Er 1 x 107 1 x 104 184. 171Er 1 x 106 1 x 102 185. 170Tm 1 x 106 1 x 103 186. 171Tm 1 x 108 1 x 104 187. 175Yb 1 x 107 1 x 103 188. 177Lu 1 x 107 1 x 103 188. 177Lu 1 x 107 1 x 103 189. 181Hf 1 x 106 1 x 101 190. 182Ta 1 x 106 1 x 101 191. 181W 1 x 107 1 x 103 192. 185W 1 x 107 1 x 103	173.		1 x 10 ⁶	1×10^{1}
176. 155Eu 1 x 107 1 x 102 177. 153Gd 1 x 107 1 x 102 178. 159Gd 1 x 106 1 x 103 179. 160Tb 1 x 106 1 x 101 180. 165Dy 1 x 106 1 x 103 181. 166Dy 1 x 106 1 x 103 182. 166Ho 1 x 105 1 x 103 183. 169Er 1 x 107 1 x 104 184. 171Er 1 x 106 1 x 102 185. 170Tm 1 x 106 1 x 103 186. 171Tm 1 x 108 1 x 104 187. 1 x 107 1 x 103 188. 177Lu 1 x 107 1 x 103 188. 177Lu 1 x 107 1 x 103 189. 181Hf 1 x 106 1 x 101 190. 182Ta 1 x 107 1 x 101 191. 181W 1 x 107 1 x 103 192. 185W 1 x 107 1 x 104	174.		1 x 10 ⁶	1 x 10 ²
177. 153Gd 1 x 107 1 x 103 178. 159Gd 1 x 106 1 x 101 179. 160Tb 1 x 106 1 x 101 180. 165Dy 1 x 106 1 x 103 181. 166Dy 1 x 106 1 x 103 182. 166Ho 1 x 105 1 x 104 183. 169Er 1 x 107 1 x 104 184. 171Er 1 x 106 1 x 102 185. 170Tm 1 x 106 1 x 103 186. 171Tm 1 x 108 1 x 104 187. 1 x 107 1 x 103 188. 177Lu 1 x 107 1 x 103 189. 181Hf 1 x 106 1 x 101 190. 182Ta 1 x 104 1 x 101 191. 181W 1 x 107 1 x 103 192. 185W 1 x 107 1 x 104 193. 187W 1 x 106 1 x 107 194. 186Re 1 x 106 1 x 102 194. 186Re 1 x 106 1 x 101 197. 191Os	175.		1 x 10 ⁶	1×10^{1}
177. 153Gd 1 x 107 1 x 103 178. 159Gd 1 x 106 1 x 101 179. 160Tb 1 x 106 1 x 101 180. 165Dy 1 x 106 1 x 103 181. 166Dy 1 x 106 1 x 103 182. 166Ho 1 x 105 1 x 104 183. 169Er 1 x 107 1 x 104 184. 171Er 1 x 106 1 x 102 185. 170Tm 1 x 106 1 x 103 186. 171Tm 1 x 108 1 x 104 187. 175Yb 1 x 107 1 x 103 188. 177Lu 1 x 107 1 x 103 189. 181Hf 1 x 106 1 x 101 190. 182Ta 1 x 104 1 x 101 191. 181W 1 x 107 1 x 103 192. 185W 1 x 107 1 x 104 193. 187W 1 x 106 1 x 107 194. 186Re 1 x 106 1 x 102 195. 188Re 1 x 106 1 x 101 197.	176.		1 x 10 ⁷	
178. 159Gd 1 x 106 1 x 101 179. 160Tb 1 x 106 1 x 101 180. 165Dy 1 x 106 1 x 103 181. 166Dy 1 x 106 1 x 103 182. 166Ho 1 x 105 1 x 103 183. 169Er 1 x 107 1 x 104 184. 171Er 1 x 106 1 x 103 185. 170Tm 1 x 106 1 x 103 186. 171Tm 1 x 108 1 x 104 187. 175Yb 1 x 107 1 x 103 188. 177Lu 1 x 107 1 x 103 189. 181Hf 1 x 106 1 x 101 190. 182Ta 1 x 104 1 x 101 191. 181W 1 x 107 1 x 103 192. 185W 1 x 107 1 x 103 193. 187W 1 x 106 1 x 104 194. 186Re 1 x 106 1 x 102 194. 188Re 1 x 106 1 x 101 195. 188Re 1 x 106 1 x 101 197.	177.	¹⁵³ Gd	1 x 10 ⁷	1 x 10 ²
180. 165Dy 1 x 106 1 x 103 181. 166Dy 1 x 106 1 x 103 182. 166Ho 1 x 105 1 x 103 183. 169Er 1 x 107 1 x 104 184. 171Er 1 x 106 1 x 102 185. 170Tm 1 x 106 1 x 103 186. 171Tm 1 x 108 1 x 104 187. 175Yb 1 x 107 1 x 103 188. 177Lu 1 x 107 1 x 103 189. 181Hf 1 x 106 1 x 101 190. 182Ta 1 x 104 1 x 101 191. 181W 1 x 107 1 x 103 192. 185W 1 x 107 1 x 103 193. 187W 1 x 106 1 x 104 193. 187W 1 x 106 1 x 102 194. 186Re 1 x 106 1 x 102 195. 188Re 1 x 106 1 x 101 197. 191Os 1 x 107 1 x 102 198. 191mOs 1 x 107 1 x 103 199.	178.	159 Gd		1×10^3
181. 166Dy 1 x 106 1 x 103 182. 166Ho 1 x 105 1 x 103 183. 169Er 1 x 107 1 x 104 184. 171Er 1 x 106 1 x 102 185. 170Tm 1 x 106 1 x 103 186. 171Tm 1 x 108 1 x 104 187. 175Yb 1 x 107 1 x 103 188. 177Lu 1 x 107 1 x 103 189. 181Hf 1 x 106 1 x 101 190. 182Ta 1 x 104 1 x 101 191. 181W 1 x 107 1 x 103 192. 185W 1 x 107 1 x 103 193. 187W 1 x 106 1 x 104 194. 186Re 1 x 106 1 x 102 194. 188Re 1 x 106 1 x 103 195. 188Re 1 x 105 1 x 102 196. 185Os 1 x 106 1 x 101 197. 191Os 1 x 107 1 x 102 198. 191mOs 1 x 107 1 x 103 199	179.		1 x 10 ⁶	1×10^{1}
182. 166Ho 1 x 105 1 x 103 183. 169Er 1 x 107 1 x 104 184. 171Er 1 x 106 1 x 102 185. 170Tm 1 x 106 1 x 103 186. 171Tm 1 x 108 1 x 104 187. 175Yb 1 x 107 1 x 103 188. 177Lu 1 x 107 1 x 103 189. 181Hf 1 x 106 1 x 101 190. 182Ta 1 x 104 1 x 101 191. 181W 1 x 107 1 x 103 192. 185W 1 x 107 1 x 104 193. 187W 1 x 107 1 x 104 194. 186Re 1 x 106 1 x 102 194. 186Re 1 x 106 1 x 103 195. 188Re 1 x 105 1 x 102 196. 185Os 1 x 106 1 x 101 197. 191Os 1 x 107 1 x 102 198. 191mOs 1 x 107 1 x 102 199. 193Os 1 x 106 1 x 101	180.	¹⁶⁵ Dy	1 x 10 ⁶	1×10^3
183. 169 Er 1 x 107 1 x 104 184. 171 Er 1 x 106 1 x 102 185. 170 Tm 1 x 106 1 x 103 186. 171 Tm 1 x 108 1 x 104 187. 175 Yb 1 x 107 1 x 103 188. 177 Lu 1 x 107 1 x 103 189. 181 Hf 1 x 106 1 x 101 190. 182 Ta 1 x 104 1 x 101 191. 181 W 1 x 107 1 x 103 192. 185 W 1 x 107 1 x 104 193. 187 W 1 x 106 1 x 104 194. 186 Re 1 x 106 1 x 102 194. 188 Re 1 x 106 1 x 103 195. 188 Re 1 x 106 1 x 101 197. 191 Os 1 x 106 1 x 101 197. 191 Os 1 x 107 1 x 102 198. 191 mOs 1 x 107 1 x 103 199. 193 Os 1 x 106 1 x 101	181.	¹⁶⁶ Dy	1 x 10 ⁶	1×10^3
184. 171Er 1 x 106 1 x 102 185. 170Tm 1 x 106 1 x 103 186. 171Tm 1 x 108 1 x 104 187. 175Yb 1 x 107 1 x 103 188. 177Lu 1 x 107 1 x 103 189. 181Hf 1 x 106 1 x 101 190. 182Ta 1 x 104 1 x 101 191. 181W 1 x 107 1 x 103 192. 185W 1 x 107 1 x 104 193. 187W 1 x 106 1 x 102 194. 186Re 1 x 106 1 x 103 195. 188Re 1 x 105 1 x 102 196. 185Os 1 x 106 1 x 101 197. 191Os 1 x 107 1 x 102 198. 191mOs 1 x 107 1 x 103 199. 193Os 1 x 106 1 x 102 200. 190Ir 1 x 106 1 x 101	182.			1×10^3
185. 170 Tm 1 x 106 1 x 103 186. 171 Tm 1 x 108 1 x 104 187. 175 Yb 1 x 107 1 x 103 188. 177 Lu 1 x 107 1 x 103 189. 181 Hf 1 x 106 1 x 101 190. 182 Ta 1 x 104 1 x 101 191. 181 W 1 x 107 1 x 103 192. 185 W 1 x 107 1 x 104 193. 187 W 1 x 106 1 x 102 194. 186 Re 1 x 106 1 x 103 195. 188 Re 1 x 105 1 x 102 196. 185 Os 1 x 106 1 x 101 197. 191 Os 1 x 107 1 x 102 198. 191 mOs 1 x 107 1 x 103 199. 193 Os 1 x 106 1 x 107 200. 190 Ir 1 x 106 1 x 101	183.		1 x 10 ⁷	1×10^4
186. 171Tm 1 x 108 1 x 104 187. 175Yb 1 x 107 1 x 103 188. 177Lu 1 x 107 1 x 103 189. 181Hf 1 x 106 1 x 101 190. 182Ta 1 x 104 1 x 101 191. 181W 1 x 107 1 x 103 192. 185W 1 x 107 1 x 104 193. 187W 1 x 106 1 x 102 194. 186Re 1 x 106 1 x 103 195. 188Re 1 x 105 1 x 102 196. 185Os 1 x 106 1 x 101 197. 191Os 1 x 107 1 x 102 198. 191mOs 1 x 107 1 x 103 199. 193Os 1 x 106 1 x 101 200. 190Ir 1 x 106 1 x 101	184.		1×10^6	1×10^2
187. 175Yb 1 x 107 1 x 103 188. 177Lu 1 x 107 1 x 103 189. 181Hf 1 x 106 1 x 101 190. 182Ta 1 x 104 1 x 101 191. 181W 1 x 107 1 x 103 192. 185W 1 x 107 1 x 104 193. 187W 1 x 106 1 x 102 194. 186Re 1 x 106 1 x 103 195. 188Re 1 x 105 1 x 102 196. 185Os 1 x 106 1 x 101 197. 191Os 1 x 107 1 x 102 198. 191mOs 1 x 107 1 x 103 199. 193Os 1 x 106 1 x 101 200. 190Ir 1 x 106 1 x 101	185.	¹⁷⁰ Tm		1×10^3
188. 177Lu 1 x 107 1 x 103 189. 181Hf 1 x 106 1 x 101 190. 182Ta 1 x 104 1 x 101 191. 181W 1 x 107 1 x 103 192. 185W 1 x 107 1 x 104 193. 187W 1 x 106 1 x 102 194. 186Re 1 x 106 1 x 103 195. 188Re 1 x 105 1 x 102 196. 185Os 1 x 106 1 x 101 197. 191Os 1 x 107 1 x 102 198. 191mOs 1 x 107 1 x 103 199. 193Os 1 x 106 1 x 102 200. 190Ir 1 x 106 1 x 101	186.		1 x 10 ⁸	1×10^4
189. 181Hf 1 x 10 ⁶ 1 x 10 ¹ 190. 182Ta 1 x 10 ⁴ 1 x 10 ¹ 191. 181W 1 x 10 ⁷ 1 x 10 ³ 192. 185W 1 x 10 ⁷ 1 x 10 ⁴ 193. 187W 1 x 10 ⁶ 1 x 10 ² 194. 186Re 1 x 10 ⁶ 1 x 10 ³ 195. 188Re 1 x 10 ⁵ 1 x 10 ² 196. 185Os 1 x 10 ⁶ 1 x 10 ¹ 197. 191Os 1 x 10 ⁷ 1 x 10 ² 198. 191mOs 1 x 10 ⁷ 1 x 10 ³ 199. 193Os 1 x 10 ⁶ 1 x 10 ² 200. 190Ir 1 x 10 ⁶ 1 x 10 ¹	187.		1 x 10 ⁷	1×10^3
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	188.	¹⁷⁷ Lu	1 x 10 ⁷	1×10^3
191. 181 W 1×10^7 1×10^3 192. 185 W 1×10^7 1×10^4 193. 187 W 1×10^6 1×10^2 194. 186 Re 1×10^6 1×10^3 195. 188 Re 1×10^5 1×10^2 196. 185 Os 1×10^6 1×10^1 197. 191 Os 1×10^7 1×10^2 198. 191 mOs 1×10^7 1×10^3 199. 193 Os 1×10^6 1×10^2 200. 190 Ir 1×10^6 1×10^1	189.		1 x 10 ⁶	1×10^{1}
192. 185W 1 x 107 1 x 104 193. 187W 1 x 106 1 x 102 194. 186Re 1 x 106 1 x 103 195. 188Re 1 x 105 1 x 102 196. 185Os 1 x 106 1 x 101 197. 191Os 1 x 107 1 x 102 198. 191mOs 1 x 107 1 x 103 199. 193Os 1 x 106 1 x 102 200. 190Ir 1 x 106 1 x 101	190.	¹⁸² Ta	1×10^4	1×10^{1}
193. 187W 1 x 106 1 x 102 194. 186Re 1 x 106 1 x 103 195. 188Re 1 x 105 1 x 102 196. 185Os 1 x 106 1 x 101 197. 191Os 1 x 107 1 x 102 198. 191mOs 1 x 107 1 x 103 199. 193Os 1 x 106 1 x 102 200. 190Ir 1 x 106 1 x 101	191.			1 x 10 ³
194. 186Re 1 x 106 1 x 103 195. 188Re 1 x 105 1 x 102 196. 185Os 1 x 106 1 x 101 197. 191Os 1 x 107 1 x 102 198. 191mOs 1 x 107 1 x 103 199. 193Os 1 x 106 1 x 102 200. 190Ir 1 x 106 1 x 101	192.	¹⁸⁵ W	1×10^{7}	1 x 10 ⁴
195. 188Re 1 x 105 1 x 102 196. 185Os 1 x 106 1 x 101 197. 191Os 1 x 107 1 x 102 198. 191mOs 1 x 107 1 x 103 199. 193Os 1 x 106 1 x 102 200. 190Ir 1 x 106 1 x 101	193.	¹⁸⁷ W	1 x 10 ⁶	
196. 185 Os 1×10^6 1×10^1 197. 191 Os 1×10^7 1×10^2 198. 191m Os 1×10^7 1×10^3 199. 193 Os 1×10^6 1×10^2 200. 190 Ir 1×10^6 1×10^1	194.	¹⁸⁶ Re	1×10^6	1×10^3
197. 191Os 1 x 107 1 x 102 198. 191mOs 1 x 107 1 x 103 199. 193Os 1 x 106 1 x 102 200. 190Ir 1 x 106 1 x 101	195.			
198. 191mOs 1 x 10 ⁷ 1 x 10 ³ 199. 193Os 1 x 10 ⁶ 1 x 10 ² 200. 190Ir 1 x 10 ⁶ 1 x 10 ¹	196.			1 x 10 ¹
199. 193 Os 1 x 106 1 x 102 200. 190 Ir 1 x 106 1 x 101	197.		1 x 10 ⁷	1 x 10 ²
200. 190 Ir 1 x 10 ⁶ 1 x 10 ¹	198.			1×10^3
	199.			
201. 192 Ir 1×10^4 1×10^1	200.	¹⁹⁰ Ir	1 x 10 ⁶	
	201.	¹⁹² Ir	1 x 10 ⁴	1 x 10 ¹

202.	¹⁹⁴ Ir	1 x 10 ⁵	1×10^2
203.	¹⁹¹ Pt	1×10^6	1×10^2
204.	^{193m} Pt	1 x 10 ⁷	1×10^3
205.	¹⁹⁷ Pt	1 x 10 ⁶	1 x 10 ³
206.	^{197m} Pt	1 x 10 ⁶	1×10^2
207.	¹⁹⁸ Au	1 x 10 ⁶	1×10^2
208.	¹⁹⁹ Au	1 x 10 ⁶	1×10^2
209.	¹⁹⁷ Hg	1 x 10 ⁷	1×10^2
210.	^{197m} Hg	1 x 10 ⁶	1 x 10 ²
211.	²⁰³ Hg	1 x 10 ⁵	1 x 10 ²
212.	²⁰⁰ Tl	1×10^6	1×10^{1}
213.	²⁰¹ Tl	1×10^6	1×10^2
214.	²⁰² Tl	1×10^6	1×10^2
215.	²⁰⁴ Tl	1×10^4	1×10^4
216.	²⁰³ Pb	1×10^6	1×10^2
217.	²¹⁰ Pb+	1×10^4	1 x 10 ¹
218.	²¹² Pb+	1×10^5	1 x 10 ¹
219.	²⁰⁶ Bi	1×10^5	1 x 10 ¹
220.	²⁰⁷ Bi	1×10^6	1 x 10 ¹
221.	²¹⁰ Bi	1×10^6	1×10^3
222.	²¹² Bi+	1×10^5	1 x 10 ¹
223.	²⁰³ Po	1×10^6	1 x 10 ¹
224.	²⁰⁵ Po	1×10^6	1 x 10 ¹
225.	²⁰⁷ Po	1×10^6	1 x 10 ¹
226.	²¹⁰ Po	1 x 10 ⁴	1 x 10 ¹
227.	²¹¹ At	1 x 10 ⁷	1 x 10 ³
228.	²²⁰ Rn+	1 x 10 ⁷	1 x 10 ⁴
229.	²²² Rn+	1 x 10 ⁸	1 x 10 ¹
230.	²²³ Ra+	1 x 10 ⁵	1 x 10 ²
231.	²²⁴ Ra+	1 x 10 ⁵	1 x 10 ¹
232.	²²⁵ Ra	1 x 10 ⁵	1×10^2
233.	²²⁶ Ra+	1 x 10 ⁴	1 x 10 ¹
234.	²²⁷ Ra	1 x 10 ⁶	1 x 10 ²
235.	²²⁸ Ra+	1 x 10 ⁵	1 x 10 ¹
236.	²²⁸ Ac	1 x 10 ⁶	1 x 10 ¹
237.	²²⁶ Th+	1 x 10 ⁷	1×10^3
238.	²²⁷ Th	1 x 10 ⁴	1 x 10 ¹
239.	²²⁸ Th+	1 x 10 ⁴	1 x 10 ⁰
240.	²²⁹ Th+	1×10^3	1 x 10 ⁰
241.	²³⁰ Th	1 x 10 ⁴	1×10^{0}
242.	²³¹ Th	1×10^7	1×10^3
243.	nat. th (232Th)	1×10^3	1×10^{0}

244.	²³⁴ Th+	1 x 10 ⁵	1×10^3
245.	²³⁰ Pa	1 x 10 ⁶	1 x 10 ¹
246.	²³¹ Pa	1×10^3	1×10^{0}
247.	²³³ Pa	1 x 10 ⁷	1×10^2
248.	²³⁰ U+	1 x 10 ⁵	1 x 10 ¹
249.	²³¹ U	1 x 10 ⁷	1 x 10 ²
250.	²³² U+	1×10^3	1 x 10 ⁰
251.	²³³ U	1 x 10 ⁴	1 x 10 ¹
252.	²³⁴ U	1 x 10 ⁴	1 x 10 ¹
253.	²³⁵ U+	1 x 10 ⁴	1 x 10 ¹
254.	²³⁶ U	1 x 10 ⁴	1 x 10 ¹
255.	^{237}U	1 x 10 ⁶	1×10^2
256.	$^{238}U+$	1 x 10 ⁴	1×10^{1}
257.	nat.U	1×10^3	1×10^{0}
258.	²³⁹ U	1 x 10 ⁶	1×10^2
259.	$^{240}{ m U}$	1 x 10 ⁷	1×10^3
260.	²⁴⁰ U+	1×10^6	1 x 10 ¹
261.	²³⁷ Np+	1×10^3	1 x 10 ⁰
262.	²³⁹ Np	1 x 10 ⁷	1 x 10 ²
263.	²⁴⁰ Np	1 x 10 ⁶	1 x 10 ¹
264.	²³⁴ Pu	1 x 10 ⁷	1×10^2
265.	²³⁵ Pu	1 x 10 ⁷	1×10^2
266.	²³⁶ Pu	1 x 10 ⁴	1 x 10 ¹
267.	²³⁷ Pu	1 x 10 ⁷	1×10^3
268.	²³⁸ Pu	1 x 10 ⁴	1 x 10 ⁰
269.	²³⁹ Pu	1 x 10 ⁴	1 x 10 ⁰
270.	²⁴⁰ Pu	1 x 10 ³	1×10^{0}
271.	²⁴¹ Pu	1 x 10 ⁵	1×10^2
272.	²⁴² Pu	1 x 10 ⁴	1 x 10 ⁰
273.	²⁴³ Pu	1 x 10 ⁷	1×10^3
274.	²⁴⁴ Pu	1 x 10 ⁴	1 x 10 ⁰
275.	²⁴¹ Am	1 x 10 ⁴	1×10^{0}
276.	²⁴² Am	1×10^6	1×10^3
277.	^{242m} Am+	1×10^4	$\frac{1 \times 10^0}{1 \times 10^0}$
278.	²⁴³ Am+	1×10^3	$\frac{1 \times 10^0}{1 \times 10^2}$
279.	²⁴² Cm	1 x 10 ⁵	$\frac{1 \times 10^2}{1 \times 10^0}$
280.	²⁴³ Cm	1×10^4	$\frac{1 \times 10^0}{1 \times 10^1}$
281.	²⁴⁴ Cm	1×10^4	$\frac{1 \times 10^{1}}{1 - 10^{0}}$
282.	²⁴⁵ Cm	1×10^3	$\frac{1 \times 10^0}{1 \times 10^0}$
283.	²⁴⁶ Cm	1×10^3	$\frac{1 \times 10^0}{1 \times 10^0}$
284.	²⁴⁷ Cm	1×10^4	$\frac{1 \times 10^0}{1 - 10^0}$
285.	²⁴⁸ Cm	1×10^3	1×10^{0}

286.	²⁴⁹ Bk	1 x 10 ⁶	1×10^3
287.	²⁴⁶ Cf	1 x 10 ⁶	1×10^3
288.	²⁴⁸ Cf	1 x 10 ⁴	1×10^{1}
289.	²⁴⁹ Cf	1×10^3	1 x 10 ⁰
290.	²⁵⁰ Cf	1 x 10 ⁴	1 x 10 ¹
291.	²⁵¹ Cf	1×10^3	1 x 10 ⁰
292.	²⁵² Cf	1 x 10 ⁴	1 x 10 ¹
293.	²⁵³ Cf	1 x 10 ⁵	1×10^2
294.	²⁵⁴ Cf	1×10^3	1 x 10 ⁰
295.	²⁵³ Es	1 x 10 ⁵	1×10^2
296.	²⁵⁴ Es	1 x 10 ⁴	1×10^{1}
297.	^{254m} Es	1 x 10 ⁶	1×10^2
298.	²⁵⁴ Fm	1 x 10 ⁷	1 x 10 ⁴
299.	²⁵⁵ Fm	1 x 10 ⁶	1 x 10 ³

Note. ¹ The symbol "+" or "nat." designates a parent nuclide in balance with the relevant daughter nuclides which are indicated in Annex 2 to Cabinet Regulation No. 752 of 22 December 2015, Procedures for Licensing and Registering Activities with Sources of Ionising Radiation.

Acting for the Minister for Environmental Protection and Regional Development – Minister for Justice

Dzintars Rasnačs

List of Nuclides in Continuous Balance

No.	Parent nuclide	Daughter nuclides
1.	⁹⁰ Sr+	⁹⁰ Y
2.	⁹³ Zr+	^{93m} Nb
3.	⁹⁷ Zr+	⁹⁷ Nb
4.	¹⁰⁶ Ru+	¹⁰⁶ Rh
5.	^{108m} Ag+	108 Ag
6.	¹³⁷ Cs+	^{137m} Ba
7.	¹³⁴ Ce+	¹³⁴ La
8.	¹⁴⁴ Ce+	¹⁴⁴ Pr
9.	¹⁴⁰ Ba+	¹⁴⁰ La
10.	²¹² Bi+	²⁰⁸ Tl (0,36), ²¹² Po (0,64)
11.	²¹⁰ Pb+	²¹⁰ Bi, ²¹⁰ Po
12.	²¹² Pb+	²¹² Bi, ²⁰⁸ Tl (0,36), ²¹² Po (0,64)
13.	²²⁰ Rn+	²¹⁶ Po
14.	²²² Rn+	²¹⁸ Po, ²¹⁴ Pb, ²¹⁴ Bi, ²¹⁴ Po
15.	²²³ Ra+	²¹⁹ Rn, ²¹⁵ Po, ²¹¹ Pb, ²¹¹ Bi, ²⁰⁷ Tl
16.	²²⁴ Ra+	²²⁰ Rn, ²¹⁶ Po, ²¹² Pb, ²¹² Bi, ²⁰⁸ Tl (0,36), ²¹² Po (0,64)
17.	²²⁶ Ra+	²²² Rn, ²¹⁸ Po, ²¹⁴ Pb, ²¹⁴ Bi, ²¹⁴ Po, ²¹⁰ Pb, ²¹⁰ Bi, ²¹⁰ Po
18.	²²⁸ Ra+	²²⁸ Ac
19.	²²⁶ Th+	²²² Ra, ²¹⁸ Rn, ²¹⁴ Po
20.	²²⁸ Th+	²²⁴ Ra, ²²⁰ Rn, ²¹⁶ Po, ²¹² Pb, ²¹² Bi, ²⁰⁸ Tl (0,36), ²¹² Po (0,64)
21.	²²⁹ Th+	²²⁵ Ra, ²²⁵ Ac, ²²¹ Fr, ²¹⁷ At, ²¹³ Bi, ²¹³ Po, ²⁰⁹ Pb
22.	nat.Th	²²⁸ Ra, ²²⁸ Ac, ²²⁸ Th, ²²⁴ Ra, ²²⁰ Rn, ²¹⁶ Po, ²¹² Pb, ²¹² Bi, ²⁰⁸ Tl (0,36), ²¹² Po
		(0,64)
23.	²³⁴ Th+	^{234m} Pa
24.	²³⁰ U+	²²⁶ Th, ²²² Ra, ²¹⁸ Rn, ²¹⁴ Po
25.	²³² U+	²²⁸ Th, ²²⁴ Ra, ²²⁰ Rn, ²¹⁶ Po, ²¹² Pb, ²¹² Bi, ²⁰⁸ Tl (0,36), ²¹² Po (0,64)
26.	²³⁵ U+	²³¹ Th
27.	²³⁸ U+	²³⁴ Th, ^{234m} Pa
28.	nat.U	²³⁴ Th, ^{234m} Pa, ²³⁴ U, ²³⁰ Th, ²²⁶ Ra, ²²² Rn, ²¹⁸ Po, ²¹⁴ Pb, ²¹⁴ Bi, ²¹⁴ Po, ²¹⁰ Pb, ²¹⁰ Bi, ²¹⁰ Po
29.	²⁴⁰ U+	240 Np
30.	²³⁷ Np+	²³³ Pa
31.	^{242m} Am+	²⁴² Am

32.	²⁴³ Am+	²³⁹ Np

Acting for the Minister for Environmental Protection and Regional Development – Minister for Justice

Dzintars Rasnačs

Application for the Registration of Activities with Sources of Ionising Radiation and Receipt of the Licence for Activities with Sources of Ionising Radiation

I. Application for the Registration of Activities with Sources of Ionising Radiation¹

To the Radiation	n Safety Centre of the State Environmental Service
Registration date of	
the application ²	
Registration number	
of the application ²	
1. Information about the re	equester of registration:
1.1. legal person/institution (underline as appropriate)	of direct administration or derived public person/natural person
1.1.1. firm name/name ar legal address or given nam surname and address of the declared place of residence the natural person	e, ne
1.1.2. unified registration number/personal idention number	
1.1.3. telephone number	
1.1.4. fax number	
1.1.5. e-mail address	
1.2. \square contact person or \square	work manager (mark as appropriate with an x)
1.2.1. given name, surname	
1.2.2. position	
1.2.3. telephone number	
1.2.4. fax number	
1.2.5. e-mail address	
2. I request (mark as approp	priate with an x):
\square 2.1. to issue a registration ionising radiation:	a certificate in relation to the following activity with a source of
□2.1.1. purchase and storage (for sources of ionising radiation containing radioactive substance)	

\[\begin{aligned} \Pi & 1 & 2 & \display & \dinfty & \din & \display & \display & \display & \display & \disp		
\square 2.1.2. use (includes also storage of the source)		
\square 2.1.3. storage		
\square 2.1.4. sale		
□2.1.5. export		
\square 2.1.6. import		
\square 2.1.7. transportation		
\square 2.1.8. dismantling		
(dismantling of a source of		
ionising radiation used in my		
activity)		
\Box 2.1.9. liquidation		
(liquidation of a source of		
ionising radiation used in my		
activity)		
□2.1.10. leasing		
\square 2.1.11. transit (if at least one		
of the countries to which the		
source of ionising radiation is brought or from which it is		
brought is not a European		
Union Member State)		
\square 2.1.12. other activities		
(indicate the necessary		
activities)		
\square 2.2. to make changes in r	registration No of 20	for
activities with a source of ioni	sing radiation in relation to:	
\square 2.2.1. changes in informatio	n about the operator (indicate the necessary changes):	
2.2.1.1. for natural		
persons – change of the		
given name or surname,		
change of the declared		
address of the place of residence		
2.2.1.2. ☐ for legal persons – change of the firm name		
or name, change of the		
legal address		
$2.2.1.3. \square$ for an institution		
of direct administration or a		
derived public person –		
change of the name, legal		
address		
☐2.2.2. the source of ionising	radiation (indicate the necessary changes):	
$2.2.2.1.$ \square to include a new \square		
source of ionising radiation		

2.2.2.2. \square to include an	
altered source of ionising	
radiation	
2.2.2.3. \square to exclude a	
source of ionising radiation	
\square 2.2.3. for activities with s	ources of ionising radiation (indicate the necessary changes):
2.2.3.1. \square to include a new	
activity	
2.2.3.2. \square to exclude an	
activity	
\square 2.2.4. change of the	
address or place of	
performing activities (for	
example, department,	
block, room) in which	
performance of activities	
with sources of ionising	
radiation is permitted	
(indicate the necessary	
changes)	
\square 2.3. to issue the registration	on certificate in the form of a printed document (mark with an x)
3. Planned place for performance of the second seco	rming the activities
\square 3.1. address and postal	
code, time	
\square 3.2. country from which	
the source of ionising	
radiation is imported (for	
import)	
\square 3.3. country to which the	
source of ionising radiation	
is exported (for export)	
\square 3.4. countries between	
which transit is taking place	
(for transit)	
4. Information about each	source of ionising radiation (fill in the appropriate boxes):
4.1. name of the source of	
ionising radiation ³	
4.2. manufacturer of the	
source of ionising radiation	
(firm name of the	
merchant, country of	
manufacture)	
4.3. source of ionising	
radiation not containing a	
radioactive substance:	
4.3.1. model, type, number	
and year of manufacture	
<u> </u>	

4.3.2. maximum voltage (kV) and maximum power	
(kW)	
4.3.3. model, type, and	
number of the x-ray tube	
(radiator)	
4.3.4. model, type, and	
number of the high-voltage	
generator	
4.3.5. dose rate of ionising	
radiation in a beam of	
direct radiation in the	
distance of one metre	
$(\mu Sv/h)$	
4.3.6. information about	
the dose rate on each	
external surface or in a	
specific distance from it	
(indicate the distance) ⁴	
4.4. source of ionising	
radiation containing a	
radioactive substance:	
4.4.1. model and number of	
the source	
4.4.2. type and number of	
the container	
4.4.3. date of manufacture	
4.4.4. term of validity	
specified by the	
manufacturer	
4.4.5. radionuclide, its	
physical and chemical form	
4.4.6. total radioactivity	
and the date of determining	
it	
4.4.7. specific radioactivity	
and the date of determining	
it	
4.4.8. dose rate of ionising radiation in the distance of	
one metre from the source	
of ionising radiation (μSv/h)	
,	
4.5. place of performing the	
activities (for example,	
department, block, room)	
4.6. if necessary, additional	
information about the	

source	of ionising	
radiation		
5.	Documents appended to the application (mark with an x):	Number of pages
5.1.	Source of ionising radiation	
□3.1.1.	technical documentation ^{6, 16} : a) for a source of ionising radiation not containing a radioactive substance – principal information about the name of the source group, manufacturer, model, type, year of manufacture, maximum voltage and power of the sources of ionising radiation, the model, type, and number of the x-ray tube, the model, type, and number of the generator; in medicine also technical information on the imaging system; b) for a source of ionising radiation containing a radioactive	
	substance – principal information about the name, manufacturer, model, number, date of manufacture of the source of ionising radiation, the term of validity specified by the manufacturer, the radionuclide, its physical and chemical form, the total radioactivity, the specific radioactivity, and the type and number of the container	
□5.1.2.	copies of the report on the results of last inspections (for example, testing and evaluation of conformity of the functions (evaluation of technical parameters), electrical safety inspection, calibration)	
□5.1.3.	information about the contracts which have been entered into for activities which will not be performed by the requester itself, indicating the contracting parties, the term of validity, and the subject-matter of the contract ⁷	
□5.1.4.	information about the grounds for the purchase, giving as a gift or acquisition of other ownership rights or rights of use of the source of ionising radiation, indicating the name, issuing body, and date of issue or signing of the document certifying the ownership	
5.2.	Place of performing the activities	
□5.2.1.	copy of the results of the last inspection of the workplace monitoring	
□5.2.2.	a plan of premises (plan of assembly) ⁸ coordinated with a radiation safety, nuclear safety or medical physics expert certified in the relevant field which includes information on the provided protection against ionising radiation ⁹	
□5.2.3.	an opinion of a radiation safety, nuclear safety or medical physics expert certified in the relevant field that the operating circumstances of the rooms, buildings or territories provided for activities with sources of ionising radiation conform to the conditions of the manufacturer and the planned activities with the source of ionising radiation do not cause direct threats to workers, inhabitants and the environment ¹⁰	
□5.2.4.	information about physical protection measures of the source of ionising radiation (a copy of a contract entered into with a security guard firm appended or information indicated about the contracting parties, the time period of operation, and the subject-matter of the contract), also the date when the physical protection	

	plan was harmonised with the Security Police (if the laws and regulations regarding physical protection of sources of ionising	
	radiation provide for such a requirement) shall be indicated	
\square 5.2.5.	copy of the radiation safety quality assurance programme	
□5.2.6.	copy of the radiation safety instructions	
□5.2.7.	copy of the results of the last inspection of individual protective equipment or a document certifying the purchase, if the purchase was made within the last two years	
□5.2.8.	list of measuring instruments to be used for radiation safety control, copy of the reports on the last calibration of measuring instruments, document certifying the purchase, and technical documentation, if a new installation has been purchased	
5.3.	Work manager and workers	
□5.3.1.	information about the work manager, also order on the appointment of the work manager and copies of education documents shall be appended ^{11,12}	
	a) given name, surname	
	b) personal identity number	
	c) education, including training in radiation safety	
	d) experience in work with sources of ionising radiation	
	e) training courses in radiation safety	
	f) last health examination, if the work manager performs activities with a source of ionising radiation	
	g) classification of workers in category A or B, if the work manager performs activities with a source of ionising radiation	
□5.3.2.	information about each worker who performs activities with a source of ionising radiation or is in the field of exposure to ionising radiation 12, 13, 14	
	a) given name, surname	
	b) personal identity number	
	c) education, including training in radiation safety	
	d) training courses in radiation safety	
	e) last health examination	
	f) source or sources of ionising radiation with which the worker is appointed to work	
	g) classification of worker in category A or B ¹⁵	
5.4.	Management of radioactive substances and waste if activities with a source of ionising radiation containing a radioactive substance are performed	
□5.4.1.	a description of the intended activities with radioactive waste prior to their transfer into storage	
□5.4.2.	a contract (copy) on the transfer of radioactive waste for storage (if after the planned activities with sources of ionising radiation radioactive waste will occur) or a contract (copy) on the guarantees from the manufacturer or supplier that it will be possible to return	

	the sealed sources of radiation to the relevant country after their use 16	
□5.4.3.	an action plan after termination of the activity with sources of ionising radiation in which the necessary restrictions and planned measures for releasing from State supervision are indicated	
□5.4.4.	a certification of the payment of the natural resources tax for the bringing in of radioactive substances ¹⁶	
□5.4.5.	an evaluation of the planned discharges into the environment and a description of the relevant monitoring programmes, as well as schemes of ventilation and sewage systems	
5.5.	Other documents	
□5.5.1.	information about the payment of the State fee for the issuance of a registration certificate or making of changes in the registration certificate	
□5.5.2.	15.5.2. a document by which the requester authorises a person to submit this application to the Radiation Safety Centre of the State Environmental Service and/or to receive the registration certificate issued by the Radiation Safety Centre of the State Environmental Service	
□5.5.3.	the licence (copy) received in another country for activities with sources of ionising radiation	
\Box 5.5.4.	additional information (if the requester wishes to submit it)	
	ication is on pages and has annexes on pages whis application	nich are an integral
previous	quested to make changes in registration, the annexes which have been been ly submitted application (if there are no changes therein) shall be in the been be re-submitted	

Explanations.

- ¹ If any of the requirement referred to in the application does not apply to the particular activity with a source of ionising radiation or also the relevant data have already been submitted to the Radiation Safety Centre of the State Environmental Service and need not be updated, the requester shall not submit this information. The annexes submitted previously shall be indicated at the end of the application.
- ² To be filled in by the Radiation Safety Centre of the State Environmental Service. The details "date" and "number" shall not be completed if the application has been prepared in accordance with the laws and regulations regarding drawing up of electronic documents.
- ³ Indicate the name of the group of the source of ionising radiation. For example, an x-ray installation used in dental practice; for installations used in medicine fixed, for operating room, portable, mammography, angiography, computer tomography, etc.; for installations not used in medicine defectoscopy, x-ray diffractometry, x-ray spectroscopy, etc.
- ⁴ To be filled in, if activities with a source generating radiation are requested the x-ray tube, generator, and object to be examined of which is located in a shielded block and the external openings of the block can be sealed, and opening of openings blocks generation of radiation.
- ⁵ If the operator performs activities with several sources, the planned activity with each source shall be indicated.
- ⁶ If, upon submitting the application, there is no technical documentation of the source of ionising radiation, the applicant may submit a written document (certification) in which technical data of the source of ionising radiation are indicated.

- ⁷ Information shall be provided about such activities as conformity testing and evaluation of functions of the source of ionising radiation (evaluation of technical parameters), inspection of electrical safety, calibration, workplace monitoring, calibration of measuring equipment, inspection of protective equipment, technical maintenance, individual dosimetry.
- ⁸ A plan and description of the room, building, or territory need not be submitted, if activities with the source of ionising radiation are to be performed outside buildings and the territory of the undertaking. In other cases the relevant plan shall be submitted in the following scale:
- 1) plan of the room (plan of assembly) in the scale M 1:50 or a lesser scale, indicating the location of the source of ionising radiation in the room, windows, doors, as well as the purpose of use of such rooms which are located below the room, above the room, and next to the room in which the source of ionising radiation is located;
- 2) plan of the building or its part in the scale M 1:100 or a lesser scale, indicating the location of the source of ionising radiation or indicating premises in which sources of ionising radiation are located with an assembly plan in the scale M 1:50;
- 3) plan of the territory in the scale M 1:1000 or a lesser scale, indicating the location of the source of ionising radiation.
- ⁹ Include information about the thickness, materials of barriers, additional protection, existence of the control room, planned dose or dose rate at the working place, and planned workload of the source of ionising radiation.
- ¹⁰ Include also calculations or analysis of provision of protection against ionising radiation.
- ¹¹ If during registration activity the operator appoints another person as the work manager, the operator shall, within 10 working days, notify the Radiation Safety Centre of the State Environmental Service thereof in writing.
- ¹² Information shall be submitted in the form of an A4 sheet table.
- ¹³ If any activities with sources of ionising radiation are to be performed by workers of another operator, the operator of such workers and the activities to be performed by such workers shall be indicated individually.
- ¹⁴ Prior to submitting the application it is necessary to receive an individual dose passbook of ionising radiation of the worker and to enter into a contract on the performance of individual dose measuring.
- ¹⁵ It shall be indicated whether the worker has been classified in category A or B in accordance with the laws and regulations regarding protection against ionising radiation. The justification for the classification of the worker in category A or B must be available at the operator.
- ¹⁶ If the relevant information or document is not available prior to submitting the application, the operator shall submit such information or document to the Radiation Safety Centre of the State Environmental Service within 30 days after receipt (purchase) of the source of ionising radiation.

Requester or its authorised person		
	(given name, surname)	(signature*)
(date*)		

Note. * The details of the document "signature" and "date" shall not be completed if the electronic document has been prepared in accordance with the laws and regulations regarding drawing up of electronic documents.

II. Application for the Receipt of the Licence for Activities with Sources of Ionising Radiation¹

	To the Radiation Safety Centre of the State Environmental Service	
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Registration date of the application ²		
Registration number of the application ²		
1. Information about the req	uester of the licence:	
		or derived public person/natural person
1.1.1. firm name/name and legaddress or given name, surnar and address of the declared pla of residence of the natural personant personant and address of the natural personant	ne ace	
1.1.2. single registrati number/personal identity number		
1.1.3. telephone number		
1.1.4. fax number		
1.1.5. e-mail address		
1.2. □contact person or □wor	k manager (mark as ap	ppropriate with an x)
1.2.1. given name, surname		· · · · · · · · · · · · · · · · · · ·
1.2.2. position		
1.2.3. telephone number		
1.2.4. fax number		
1.2.5. e-mail address		
2. I request (mark as appropri	ate with an x):	
2.1. to issue a licence in relation	n to the following act	ivity with a source of ionising radiation:
\square 2.1.1. purchase and storage (
radiation containing radioactiv		
\square 2.1.2. use (includes also stor	age of the source)	
\square 2.1.3. storage		
□2.1.4. leasing		
\square 2.1.5. sale (trade)		
\square 2.1.6. export		
\square 2.1.7. import		
□2.1.8. bringing in from a Eur State (for sources of ionising radioactive substance)	opean Union Member radiation containing a	
2.1.9. bringing out from Member State (for sources containing a radioactive substa	of ionising radiation	
\square 2.1.10. installation		
\square 2.1.11. servicing (technical r	naintenance)	
\square 2.1.12. inspections of technic	cal parameters	
\square 2.1.13. performance of work	place monitoring	
□2.1.14. repair		
\square 2.1.15. dismantling		

□2.1.16. liquidation		
\square 2.1.17. manufacture		
□2.1.18. transit		
\square 2.1.19. transportation		
\square 2.1.20. other activities (indicate the necessary acti	vities)	
\square 2.2. to make amendments to the licence No		
activities with a source of ionising radiation		
□2.3. change of the special permit (licence)/licence If until the moment of coming into force of this Reg (licence) has been received, but registration or licenthis Regulation, then the operator shall indicate where	ulation (1 January 2016) a special permit ce would be required in accordance with ther it wishes:	
2.3.1. to retain the special permit (licence), making amendments to the special authorisation (licence) No of		
20 for activities with a source of ionising radiation		
2.3.2. □ to receive a licence		
2.3.3. ☐ to perform registration of activities		
\square 2.4. change of the licence/registration.		
If the operator has a licence which includes the activities that require a licence or registration, and only activities to be registered remain for the operator after changes, then the operator shall indicate whether it wishes:		
$2.4.1.$ \square to retain the licence, making amendments to		
the licence No of		
20 for activities with a source of ionising radiation		
2.4.2. \square to perform registration of activities		
2.5. to make amendments in relation to:	<u> </u>	
\square 2.5.1. changes in information about the operator (i	ndicate the necessary changes):	
2.5.1.1. \square for natural persons – change of the given	1	
name or surname, change of the address of the declared place of residence		
2.5.1.2. ☐ for legal persons – change of the firm		
name or name, change of the legal address		
2.5.1.3. \square for an institution of direct administration		
or a derived public person - change of the name,		
legal address		
\square 2.5.2. the source of ionising radiation (indicate the	necessary changes):	
2.5.2.1. \square to include a new		
source of ionising radiation		
2.5.2.2. to include an altered		
source of ionising radiation		
2.5.2.3. ☐ to exclude a source of ionising radiation		
	on (indicate the necessary changes).	
☐2.5.3. for activities with sources of ionising radiation 2.5.3.1. ☐ to include a new	on (mulcate the necessary changes):	
activity		

I	
2.5.3.2. to exclude an activity	
\square 2.5.4. change of the address	
or place of performing activities	
(for example, department,	
block, room) in which	
performance of activities with	
sources of ionising radiation is	
permitted (indicate the	
necessary changes)	
\square 2.6. to issue the licence (registration ce	rtificate) in the form of a printed document (mark
with an x)	
3. Planned place for performing the activities	
□3.1. address and postal code, time	
\square 3.2. country from which the source of	
ionising radiation is imported (for import)	
\square 3.3. country to which the source of ionising radiation is exported (for export)	
\square 3.4. countries between which transit is taking place (for transit)	
4. Information about each source of ion	ising radiation:
4.1. name of the source of ionising radiation ³	
4.2. manufacturer of the source of ionising	
radiation (firm name of the merchant,	
country of manufacture)	
4.3. source of ionising radiation not	
containing a radioactive substance:	
4.3.1. model, type, number and year of manufacture	
4.3.2. maximum voltage (kV) and	
maximum power (kW)	
4.3.3. model, type, and number of the x-ray tube (radiator)	
4.3.4. model, type, and number of the	
high-voltage generator	
4.3.5. dose rate of ionising radiation in a	
beam of direct radiation in the distance of	
one metre (µSv/h)	
4.3.6. information about the dose rate on	
each external surface or in a specific	
distance from it (indicate the distance) ⁴	
4.4. source of ionising radiation containing	
a radioactive substance:	
4.4.1. model and number of the source	
4.4.2. type and number of the container	
4.4.3. date of manufacture	

4.4.4. te manufac	rm of validity specified by the turer	
4.4.5. r	radionuclide, its physical and I form	
4.4.6. to determin	tal radioactivity and the date of ing it	
4.4.7. sp determin	ecific radioactivity and the date of ing it	
distance	se rate of ionising radiation in the of one metre from the source of radiation (µSv/h)	
-	e of performing the activities (for , department, block, room)	
	e source of ionising radiation ⁵	
5.	Documents appended to the application (mark with an x):	Number of pages
5.1.	Source of ionising radiation	
	technical documentation ^{6, 17} : a) for a source of ionising radiation not containing a radioactive substance – principal information about the name of the source group, manufacturer, model, type, year of manufacture, maximum voltage and power of the sources of ionising radiation, the model, type, and number of the x-ray tube, the model, type, and number of the generator; in medicine also technical information on the imaging system; b) for a source of ionising radiation containing a radioactive substance – principal information about the name, manufacturer, model, number, date of manufacture of the source of ionising radiation, the term of validity specified by the manufacturer, the radionuclide, its physical and chemical form, the total radioactivity, the specific radioactivity, and the type and number of the container copies of the report on the results of the last inspection (for example, testing and evaluation of conformity of the functions (evaluation of technical parameters), inspection of electrical safety, calibration, inspection of control devices and signal	
□5.1.3.	devices) information about the contracts which have been entered into for activities which will not be performed by the requester itself, indicating the contracting parties, the time period of	
	operation, and the subject-matter of the contract ⁷	
□5.1.4.	copy of the policy of civil liability insurance of the operator ⁸	
	information about the grounds for the purchase, giving as a gift or acquisition of other ownership rights or rights of use of the source of ionising radiation, indicating the name, issuing body, and date of issue or signing of the document certifying the ownership	
5.2.	Place of performing the activities	

□5 2 1	convert the regults of the last inspection of the working place	
□3.2.1.	copy of the results of the last inspection of the working place monitoring	
\square 5.2.2.	a plan of premises (plan of assembly) ⁹ harmonised with a	
	radiation safety, nuclear safety or medical physics expert certified in the relevant field which includes information about	
	the provision of protection against ionising radiation ¹⁰	
□5.2.3.	an opinion of a radiation safety, nuclear safety or medical	
	physics expert certified in the relevant field that the operating	
	circumstances of the rooms, buildings or territories provided	
	for activities with sources of ionising radiation conform to the conditions of the manufacturer and the planned activities with	
	the source of ionising radiation do not cause direct threats to	
	workers, inhabitants and the environment ¹¹	
\square 5.2.4.	information about the physical protection measures of the	
	source of ionising radiation (a copy of a contract entered into	
	with a security guard firm appended or information about the contracting parties, the time period of operation, and the	
	subject-matter of the contract indicated), also the date when the	
	physical protection plan was harmonised with the Security	
	Police (if the laws and regulations regarding physical	
	protection of sources of ionising radiation provide for such a requirement) shall be indicated	
□5.2.5.	copy of the radiation safety quality assurance programme	
	copy of the radiation safety instructions	
	copy of the results of the last inspection of individual protective	
	equipment or a document certifying the purchase, if the	
	purchase was made within the last two years	
□5.2.8.	list of measuring instruments to be used for radiation safety	
	control, copy of the reports on the last calibration of measuring instruments, document certifying the purchase, and technical	
	documentation, if a new installation has been purchased	
\square 5.2.9.	plan harmonised with the local government and the State Fire	
	and Rescue Service on the readiness for radiation accidents and	
	action in situations of a radiation accidents (if the laws and regulations provide for such requirement)	
5.3.	Work manager and workers	
\Box 5.3.1	information about the work manager, also order on the	
	appointment of the work manager and copies of education	
	documents shall be appended ^{12,13}	
	a) given name, surname	
	b) personal identity number a) education, including training in radiation safety.	
	c) education, including training in radiation safetyd) experience in work with sources of ionising radiation	
	e) training courses in radiation safety	
	f) last health examination, if the work manager performs	
	activities with a source of ionising radiation	
	g) classification of workers in category A or B, if the work	
	manager performs activities with a source of ionising radiation	

□5 3 2	information about each worker who performs activities with a	
□3.3.2.	source of ionising radiation or is in the field of exposure to	
	ionising radiation ^{13, 14, 15}	
	a) given name, surname	
	b) personal identity number	
	c) education, including training in radiation safety	
	d) training courses in radiation safety	
	e) last health examination	
	f) source or sources of ionising radiation with which the worker	
	is appointed to work	
	g) classification of worker in category A or B ¹⁶	
5.4.	Management of radioactive substances and waste if	
	activities with a source of ionising radiation containing a	
	radioactive substance are performed	
	a description of the intended activities with radioactive waste prior to their transfer into storage	
\square 5.4.2.	a contract (copy) on the transfer of radioactive waste for storage	
	(if after the planned activities with sources of ionising radiation radioactive waste will occur) or a contract (copy) on the	
	guarantees from the manufacturer or supplier that it will be	
	possible to return the sealed sources of radiation to the relevant	
	country after their use ¹⁷	
\Box 5.4.3.	an action plan after termination of the activity with sources of	
	ionising radiation in which the necessary restrictions and	
	planned measures for releasing from State supervision are indicated	
	a certification of the payment of the natural resources tax for	
	bringing in of radioactive substances ¹⁷	
□5.4.5.	an evaluation of the planned discharges into the environment	
	and a description of the relevant monitoring programmes, as	
	well as schemes of ventilation and sewage systems	
□5.4.6.	a long-term safety evaluation of the storage facility of	
	radioactive waste, a plan of liquidation and dismantling of an object containing radioactive substances, a building design of	
	the structure related to radiation safety and other documents the	
	necessity of which is determined by the laws and regulations	
	governing the activity for radioactive waste management	
	objects or nuclear facilities	
∐5.4.7.	information about the vehicle and its conformity with the laws and regulations regarding transportation of a source of ionising	
	radiation containing a radioactive substance	
5.5.	Other documents	
	information about the payment of the State fee for the issuance	
	of a licence or making amendments to the licence	
□5.5.2.	a document by which the requester authorises a person to	
	submit this application to the Radiation Safety Centre of the	
	State Environmental Service and/or to receive the licence	

	issued by the Radiation Safety Centre of the State Environmental Service	
□5.5.3.	the licence (copy) received in another country for activities with sources of ionising radiation	
\square 5.5.4.	additional information (if the requester wishes to submit it)	
	ication is on pages and has Annexes on part of this application	_ pages which are an
which ha	quested to make an amendment to the licence or to re-issue a new ave been appended to the previously submitted application (if shall be indicated and they need not be re-submitted	•

Explanations.

- ¹ If any of the requirements referred to in the application do not apply to the particular activity with a source of ionising radiation or also the relevant data have already been submitted to the Radiation Safety Centre of the State Environmental Service and need not be updated, the requester shall not submit this information. The Annexes submitted previously shall be indicated at the end of the application.
- ² To be filled in by the Radiation Safety Centre of the State Environmental Service. The details "date" and "number" shall not be completed if the application has been prepared in accordance with the laws and regulations regarding drawing up of electronic documents.
- ³ Indicate the name of the group of the source of ionising radiation. For example, an x-ray installation used in dental practice; for installations used in medicine fixed, operating rooms, portable, mammography, angiography, computed tomography, etc.; for installations not used in medicine defectoscopy, x-ray diffractometry, x-ray spectroscopy, etc.
- ⁴ To be filled in, if such activities with a source generating radiation are requested the x-ray tube, generator, and subject-matter to be examined of which is located in a shielded block and the external openings of the block can be closed, and opening of openings blocks generation of radiation.
- ⁵ If the operator performs activities with several sources, the planned activity with each source shall be indicated.
- ⁶ If, upon submitting the application, there is no technical documentation of the source of ionising radiation, the applicant may submit a written document (certification) in which technical data of the source of ionising radiation are indicated.
- ⁷ Information shall be provided about such activities as conformity testing and evaluation of functions of the source of ionising radiation (evaluation of technical parameters), inspection of electrical safety, calibration, monitoring of the working place, calibration of measuring equipment, inspection of protective equipment, technical maintenance, individual dosimetry.
- ⁸ A copy of the policy of civil liability insurance of the operator need not be mandatorily submitted together with the application. The operator shall submit the relevant copy to the Radiation Safety Centre of the State Environmental Service after the licence has been received, ⁹ A plan and description of the room, building, or territory need not be submitted, if activities with the source of ionising radiation are to be performed outside buildings and the territory of the undertaking. In other cases the relevant plan shall be submitted in the following scale:
- 1) plan of the room (plan of assembly) in the scale M 1:50 or a lesser scale, indicating the location of the source of ionising radiation in the room, windows, doors, as well as the purpose of use of such rooms which are located below the room, above the room, and next to the room in which the source of ionising radiation is located;
- 2) plan of the building or its part in the scale M 1:100 or a lesser scale, indicating the location of the source of ionising radiation or indicating premises in which sources of ionising radiation are located with an assembly plan in the scale M 1:50;

- 3) plan of the territory in the scale M 1:1000 or a lesser scale, indicating the location of the source of ionising radiation.
- ¹⁰ Include information about the thickness, materials of barriers, additional protection, existence of the control room, planned dose or dose rate at the working place, and planned workload of the source of ionising radiation.
- ¹¹ Include also calculations or analysis of provision of protection against ionising radiation.
- ¹² If during the registration activity the operator appoints another person as the work manager, the operator shall, within 10 working days, notify the Radiation Safety Centre of the State Environmental Service thereof in writing.
- ¹³ Information shall be submitted in the form of an A4 size table.
- ¹⁴ If any activities with sources of ionising radiation are to be performed by workers of another operator, the operator of such workers and the activities to be performed by such workers shall be indicated separately.
- ¹⁵ Prior to submitting the application it is necessary to receive an individual dose passbook of ionising radiation of the worker and to enter into a contract for the performance of individual dose measuring.
- ¹⁶ It shall be indicated whether the worker has been classified in category A or B in accordance with the laws and regulations regarding protection against ionising radiation. The justification of the classification of the worker in category A or B must be available at the operator.
- ¹⁷ If the relevant information or document is not available prior to submitting the application, the operator shall submit such information or document to the Radiation Safety Centre of the State Environmental Service within 30 days after receipt (purchase) of the source of ionising radiation.

Requester or its authorised person		
	(given name, surname)	(signature*)
(date*)		
Note. * The details of the document electronic document has been prepared drawing up of electronic documents.	<u> </u>	*
Acting for the Minister for Environment	ntal Protection and	

Regional Development – Minister for Justice

Rates of the State Fee for the Issuance of the Licence for Activities with Sources of Ionising Radiation or Registration of Activities with Sources of Ionising Radiation

- 1. The State fee shall be paid in the following amount:
 - 1.1. to register activities with sources of ionising radiation EUR 97;
- 1.2. for the issuance of the licence for activities with sources of ionising radiation EUR 170;
- 1.3. to make changes in the registration of activities with sources of ionising radiation (in the registration certificate) EUR 54;
- 1.4. for making amendments to the licence for activities with sources of ionising radiation EUR 84.
- 2. The State fee in the amount of EUR 10 shall be paid, if amendments to the licence (also to the special permit (licence)) or changes in registration are made:
 - 2.1. upon alienating the source of ionising radiation;
 - 2.2. upon changing the name or legal address of the operator;
- 2.3. when the operator only changes the type of the merchant (for example, from a natural person to a limited liability company), upon receipt of a new licence or registration and cancelling the previous licence (also special permit (licence)) or registration;
 - 2.4. upon changing the type of activity from use to storage;
- 2.5. upon changing the place of performing the activities (for example, department, block, room).
- 3. If the operator has a licence which includes activities that require a licence or registration, and only the activities to be registered remain for the operator after the changes, then the State fee shall be paid in the following amount:
- 3.1. if the operator chooses to retain the licence and make amendments to the licence EUR 84 (except for the cases referred to in Paragraph 2 of this Annex);
 - 3.2. if the operator chooses to register the activities EUR 54.
- 4. If until the moment of coming into force of this Regulation:
- 4.1. a special permit (licence) has been received, but a registration or licence is required in accordance with this Regulation, then upon an application of the operator:
 - 4.1.1. amendments shall be made to the special permit (licence), and the operator shall pay the State fee in the amount of EUR 54 for changes in registration or EUR 84 for amendments to the licence (except for the cases referred to in Paragraph 2 of this Annex);
 - 4.1.2. the special permit (licence) shall be cancelled, and a licence or registration certificate for an activity with a source of ionising radiation shall be issued and the operator shall pay the State fee in the amount of EUR 170 for the receipt of the licence or EUR 97 for the receipt of the registration certificate;
- 4.2. a permit for the purchase (acquisition into ownership) and storage of a source of ionising radiation not containing a radioactive substance has been received, then not later than until the end of the term of validity, upon an application of the operator:

- 4.2.1. the licence or registration certificate for activities with a source of ionising radiation shall be issued, and the operator shall pay the State fee in the amount of EUR 170 for the receipt of the licence or EUR 97 for the receipt of the registration certificate;
- 4.2.2. amendments to the existing special permit (licence) shall be made, including the source of ionising radiation in the special permit (licence), and the operator shall pay the State fee in the amount of EUR 54 for changes in registration or EUR 84 for amendments to the licence:
- 4.2.3. changes in registration or amendments to the licence for activities with a source of ionising radiation shall be made, and the operator shall pay the State fee in the amount of EUR 54 for changes in registration or EUR 84 for amendments to the licence.
- 5. If the operator has performed registration of activities and in addition included activities which require licensing, however, chooses to receive a licence for all activities with sources of ionising radiation, the operator shall submit a relevant application to the Centre with updated information about all activities to be performed and shall pay the State fee for the receipt of the licence EUR 170.
- 6. The State fee need not be paid, if amendments to the licence (also to the special permit (licence)) or changes in registration are made when:
- 6.1. the name of the street or the number of the address changes (the source of ionising radiation is not moved);
 - 6.2. the operator leases the source of ionising radiation.

Acting for the Minister for Environmental Protection and Regional Development – Minister for Justice

Minimum Sum of Civil Liability Insurance

No.	Activities with a source of ionising radiation	Minimum sum of civil liability insurance per year (euros)
1.	Activities with nuclear equipment	
1.1.	if thermal output does not exceed 30 MW _{th}	5 691 490
1.2.	if thermal output exceeds $30MW_{th}$, but is less than $150MW_{th}$, or electrical output exceeds $10MW_e$, but is less than $50MW_e$	113 829 750
1.3.	if thermal output exceeds 150 MW_{th} or electrical output exceeds 50 MW_{e}	327 260 520
2.	Activities with other ionising radiation objects of national significance (including nuclear facilities which are not being operated and which do not hold nuclear fuel)	1 138 300
3.	Activities with radioactive substances the total radioactivity of which is from 10.6 (not inclusive) up to 10.9 (inclusive) times more than the limits for high power sources of ionising radiation referred to in Chapter II of Cabinet Regulation No. 752 of 22 December 2015, Procedures for the Licensing and Registering Activities with Sources of Ionising Radiation	569 150
4.	Activities with radioactive substances the total radioactivity of which is from 10.3 (not inclusive) up to 10.6 (inclusive) times more than the limits for medium power sources of ionising radiation referred to in Chapter II of Cabinet Regulation No. 752 of 22 December 2015, Procedures for the Licensing and Registering Activities with Sources of Ionising Radiation	113 830

Acting for the Minister for Environmental Protection and Regional Development – Minister for Justice

Report on Activities with Sources of Ionising Radiation and Procedures for the Filling in Thereof

I. Report on Activities with Sources of Ionising Radiation not Containing a Radioactive Substance 1,2,3

1. Information about the operator

	Operator (for a natural person – the given name, surname; for a legal person – the firm name or name; for an institution of direct administration or a derived public person – the name)	
	Registration number in the relevant register (if applicable), legal address; for a natural person – personal identity number	
	Address, place, or territory in which the performance of activities with sources of ionising radiation is permitted	
1.4.	Fixed phone	
1.5.	Mobile phone	
1.6.	Fax	
1.7.	E-mail address	
	Phone and e-mail address of the work manager	

2. Information about the sources of ionising radiation not containing a radioactive substance (hereinafter – the installation) in the ownership (possession or holding) of the operator

No.	Name, model, type, number, and year of manufacture of the installation ⁴	the x-ray tube, model, type, number of	Status of the installation (storage, use, or other), room of location	s of the installatio	technical parameter	installation (performer,	Workplace monitoring (performer, date, report No.)
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to be used in medicine – the imaging system ⁵)			

- 3. Information about the work manager and workers who perform activities with sources of ionising radiation
- 3.1. Information about the work manager

Given name, surname Personal identity number Position Position Field, speciality)	certificate (issuing body, number, term of validity)	Experience in work with sources of ionising radiation (years)	Training courses in radiation safety (organiser or courses, name, date, certificate No.)
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3.2. Information about the workers who perform activities with sources of ionising radiation or are in the field of exposure to ionising radiation⁸

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4. Information about the measuring equipment (measuring instruments) of ionising radiation at the disposal of the operator¹⁰

No.	Type of the measuring equipment ¹¹	Model	Number of manufacturer	Date, performer of the last calibration, and certificate No.

5. Notes or additional information	(if necessary)	
Place of preparation (address)		
Official of the operator with the right to sign		
	(given name, surname)	(signature)
20	_	

Notes.

- ¹ To be filled in by the operators who have sources of ionising radiation not containing a radioactive substance (installations) in their ownership (possession or holding) (for example, x-ray installations, computed tomographs, electron accelerators).
- ² All the provided boxes shall be filled in. If the information requested in any of the fields of tables:
 - 1) does not apply to the particular operator, "not applicable" shall be indicated;
- 2) has not changed in the reporting period, "not changed" shall be indicated. It shall not apply to information about the particular source of ionising radiation (installation) and information about the work manager and workers.
- ³ If there is not enough space for all information in the table, the table shall be expanded to the necessary size.
- ⁴ Also the name of the group of the installation shall be indicated. For example, in medicine it shall be indicated fixed, for operating rooms, portable, mammography, angiography, computed tomography, etc. For fixed x-ray installations to be used in medicine it shall be indicated installation for imagery (x-ray check), x-ray examinations or x-ray examination and imagery. For installations which are not used in medicine it shall be indicated defectoscopy, x-ray diffractometry, x-ray spectroscopy, etc.
- ⁵ For installations to be used in medicine the type of acquiring an image shall be indicated on a film/phosphor plate/image amplifier with digital transformation of the image/on a flat panel (full-sized) detector (indicate the corresponding type for each installation).
- ⁶ Information shall be provided about the radiological installations which are used in medical exposure.
- ⁷ To be indicated whether conforms/does not conform to the requirements.
- ⁸ To be filled in also about the work manager, if the work manager performs activities with the source of ionising radiation.
- ⁹ It shall be indicated whether the worker has been classified in category A or B in accordance with the laws and regulations regarding protection against ionising radiation.
- ¹⁰ The table shall be filled in, if the operator has in its ownership (possession or holding) a measuring equipment (measuring instrument) of ionising radiation (dose area product meter), except for the individual thermoluminescent dosimeter of the worker.
- ¹¹ The type of use and the type of identifiable ionising radiation (alpha, beta, gamma, neutron) shall be indicated.

II. Report on Activities with Sources of Ionising Radiation Containing a Radioactive Substance^{1, 2, 3}

1. Information about the operator

1.1.	Operator (for a natural person – the given name, surname; for a legal person – the firm name or name; for an institution of direct administration or a derived public person – the name)	
1.2.	Registration number in the relevant register (if applicable), legal address; for a natural person – personal identity number	
1.3.	Address, place, or territory in which the performance of activities with sources of ionising radiation is permitted	
1.4.	Fixed phone	
1.5.	Mobile phone	

1.6.	Fax	
1.7.	E-mail address	
	Information about the policy of civil liability insurance of the operator (issuing body of the policy, number, term of validity, insurance limit of the policy)	
1.9.	Phone and e-mail address of the work manager	

- 2. Information about the sources of ionising radiation not containing a radioactive substance in the ownership (possession or holding) of the operator
- 2.1. Information about the unsealed sources of radiation (radioactive substances) in the ownership (possession or holding) of the operator

No.	Radionuclide	Physico- chemical form	Initial radioactivity (Bq), date of determination	•	Type of packaging

2.2. Information about the sealed sources of radiation in the ownership (possession or holding) of the operator

		Mod el	Seri es	Manufact		Initial radioacti vity		Status of	Recommen
N o.	Radionucl ide	(typ	No.	urer of the	Date of manufact ure	accordin	Radioactivit y as of 1 January 20 (Bq)	source4fr	ded
1	2	3	4	5	6	7	8	9	10

No ·	Radionuclid e ⁵	o- chemic al form	source to	Last technical inspectio n of the source (performe r, date, report No.)	requirement s of the	transportati on packaging, type and number of		Location of the source and installati on (room)
1	11	12	13	14	15	16	17	18

- 3. Information about the sources of ionising radiation containing a radioactive substance transferred to the operator of the radioactive waste management object or another operator and radioactive substances discharged into the environment in 20____. Per year
- 3.1. Unsealed sources of radiation (radioactive substances)

transfer act (No., date) ity (Bq) dispersed (act No., date) ity (Bq) dispersed (act No., date) ity (Bq) for activities with sources of ionising ity (Bq)			rred for osal	Discharged environn		Transferred	to anothe	r operator
Tadiation)	No.	the operator, transfer act	ity (Ba)	nt where dispersed (act No.,	ctivity	the source (name, address, licence No. for activities with sources	act (No.,	I K adioacti

3.2. Sealed sources of radiation

No.	Radionuclide	cealed cource	Series No. of	the data of	Recipient of the source (name, address, licence No. for activities with sources of ionising radiation)	Transfer (sales) act (No., date)
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4. Information about physical protection

Means of physical protection (physical security guards, security guard merchant, or other)	Security guard merchant (name, term of operation of the contract)	Date of harmonisation of the physical protection plan with the Security Police

- 5. Information about the work manager and workers who perform activities with sources of ionising radiation
- 5.1. Information about the work manager

Given name, surname	Personal identity number	Position	Education (level, field, speciality)	Professional	with sources of	Training courses in radiation safety (organiser or courses, name, date, certificate No.)
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5.2. Information about the workers who perform activities with sources of ionising radiation containing a radioactive substance⁸

No.	Given name, surname	Classification into category A or B ⁹	date certificate	last mandatory health	Date of the next mandatory health examination

6. Information about the measuring equipment (measuring instruments) of ionising radiation at the disposal of the operator ¹⁰

No.	Type of the measuring equipment ¹¹	Model	Number of manufacturer	Date, performer of the last calibration, and certificate No.
7. Not	es or additional inform	nation (if necessary)		
Place	of preparation (addres	s)		
Official right to	al of the operator with o sign	the		
		(given name	e, surname)	(signature)

Notes.

- 1) does not apply to the particular operator, "not applicable" shall be indicated;
- 2) has not changed in the reporting period, "not changed" shall be indicated. It shall not apply to information about the particular source of ionising radiation (installation) and information about the work manager and workers.

- 1) household waste or repeated use;
- 2) site of discharge, dilution was/was not used.

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Discharge of radioactive substances shall be linked to the inventory quantity of radioactive substances in the listing of the operator.

¹ To be filled in by the operators who have sources of ionising radiation containing a radioactive substance (unsealed sources of radiation and sealed sources of radiation) in their ownership (possession or holding).

² All the provided boxes shall be filled in. If the information requested in any of the fields of tables:

³ If there is not enough space for all information in the table, the table shall be expanded to the necessary size.

⁴ Status – storage, use, or other.

⁵ The radionuclide shall be presented repeatedly in the continuation of parameter listing of the source.

⁶ To be indicated whether conforms/does not conform to the requirements.

⁷ A copy of the discharge act and an evaluation or calculation of discharged radioactivity shall be appended to the report. The performer, the conditions, assumptions, and programmes used for calculation shall be indicated in relation to dispersion (discharge) of radioactive substances. The following information shall be provided about the discharge process:

III. Trade in, Servicing, Liquidation of Sources of Ionising Radiation Containing and not Containing a Radioactive Substance^{1, 2, 3}

1. Information about the operator

1.1.	Operator (for a natural person – the given name, surname; for a legal person – the firm name or name; for an institution of direct administration or a derived public person – the name)	
1.2.	Registration number in the relevant register (if applicable), legal address; for a natural person – personal identity number	
1.3.	Address, place, or territory in which the performance of activities with sources of ionising radiation is permitted	
1.4.	Fixed phone	
1.5.	Mobile phone	
1.6.	Fax	
1.7.	E-mail address	
1.8.	Information about the policy of civil liability insurance of the operator (issuing body of the policy, number, term of validity, insurance limit of the policy)	
1.9.	Phone and e-mail address of the work manager	

- 2. Information about the activities performed in 20___ with sources of ionising radiation
- 2.1. Information about unsealed radioactive substances brought in (imported) and brought out (exported) in 20___

	Brought in (imported) or brought out (exported)							
No.	Firm name or name and registration No. of the recipient or No. of the registration certificate for activities with sources of ionising radiation	Delivery address	Manufacturer, radionuclide	Physico- chemical form	Radioactivity indicated in the delivery document (Bq)			

⁸ To be filled in also about the work manager, if the work manager performs activities with the source of ionising radiation.

⁹ It shall be indicated whether the worker has been classified in category A or B in accordance with the laws and regulations regarding protection against ionising radiation.

¹⁰ The table shall be filled in, if the operator has in its ownership (possession or holding) a measuring equipment (measuring instrument) of ionising radiation (dose area product meter), except for the individual thermoluminescent dosimeter of the worker.

¹¹ The type of use and the type of identifiable ionising radiation (alpha, beta, gamma, neutron) shall be indicated.

2.2. Information about the sealed sources of radiation containing a radioactive substance brought in (imported) and brought out (exported) in 20____

No.	Firm name or name and registration No. of the recipient or No. of the registration certificate for activities with sources of ionising radiation		Manufacturer of the source (name, country), radionuclide	Model			Initial radioactivity according to the data of the passport (Bq)
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2.3. Information about the sources of ionising radiation not containing a radioactive substance brought in (imported), brought out (exported), installed, dismantled, and liquidated in 20____

		2.3.1. Brought	in (imported)		
No.	Firm name or name, country and registration No. of the recipient or No. of the licence or registration certificate for activities with sources of ionising radiation	Delivery address	Model (type) or accessory component of the installation ⁴	Series No. of the installation	Manufacturer, country, year of manufacture of the installation
		2.3.2. Brought	out (exported)		
No.	Firm name or name, country and registration No. of the recipient or No. of the licence or registration certificate for activities with sources of ionising radiation	Delivery address	Model (type) or accessory component of the installation ⁴	Series No. of the installation	Manufacturer, country, year of manufacture of the installation
		2.3.3. In	etallad		
Firm name or name and registration No. of the owner (lessee, possessor) and No. of the licence or registration certificate for activities with sources of ionising radiation		Model, type, and number of the installation	Model, type, and number of the x-ray tube, model, type, and number of the high voltage line generator	Manufacturer, country, year of manufacture of the installation	
		2.3.4. Dis	mantled		

No.	Firm name or name and registration No. of the owner (lessee, possessor) and No. of the licence or registration certificate for activities with sources of ionising radiation	Address, territory, room	Model, type, and number of the installation	Model, type, and number of the x-ray tube, model, type, and number of the high voltage line generator	Manufacturer, country, year of manufacture of the installation
		2.3.5. Lic	l midated		
No.	Firm name or name and registration No. of the owner (lessee, possessor) and No. of the licence or registration certificate for activities with sources of ionising radiation	Address, territory, room	Model, type, and number of the installation	Model, type, and number of the x-ray tube, model, type, and number of the high- voltage generator	Manufacturer, country, year of manufacture of the installation

No.	manufacture	installation (model type	(storage,	Maximum	Maximum	Location of the installation, address (room)
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- 3. Information about the work manager and workers who perform activities with sources of ionising radiation
- 3.1. Information about the work manager

Given name, surname	Personal identity number	Level, field, speciality of education	term of	work with sources of	Training courses in radiation safety (organiser or courses, name, date, certificate No.)
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3.2. Information about workers⁶

	Given	Personal	Classification		Training courses in radiation	Date of the	Date of the
No.	name,	identity	into	Position	in radiation	last	next
5	surname	number			safety (organiser	mandatory	mandatory

	category A or B ⁷	or courses, name, date, certificate No.)	health examination	health examination

4. Information about the measuring equipment (measuring instruments) of ionising radiation at the disposal of the operator⁸

No.	Type of the measuring equipment ⁹	Model	Manufacturer's number	Performer and date of the last calibration, certificate No.				
			•					
5. N	otes or additional infor	mation						
Place of preparation (address)								
	cial of the operator vight to sign	vith 		_				
		(given	name, surname)	(signature)				

Notes.

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- 1) does not apply to the particular operator, "not applicable" shall be indicated;
- 2) has not changed in the reporting period, "not changed" shall be indicated. It shall not apply to information about the particular source of ionising radiation (installation) and information about the work manager and workers.
- ³ If there is not enough space for all information in the table, the table shall be expanded to the necessary size.
- ⁴ Upon bringing in accessory components of the installation (x-ray tube, generator), the model, type, and series number of each individual component shall be indicated.
- ⁵ The table shall be filled in only for such installations and sources which are (or have been taken over) in the ownership (possession or holding) from other operators.
- ⁶ To be filled in also for the work manager, if the work manager performs activities with the source of ionising radiation.
- ⁷ It shall be indicated whether the worker has been classified in category A or B in accordance with the laws and regulations regarding protection against ionising radiation.
- ⁸ The table shall be filled in, if the operator has in its ownership (possession or holding) a measuring equipment (measuring instrument) of ionising radiation, except for the individual thermoluminescent dosimeter of the worker.
- ⁹ The type of use and the type of identifiable ionising radiation (alpha, beta, gamma, neutron) shall be indicated.

Acting for the Minister for Environmental Protection and

¹ To be filled in by operators who perform the bringing in, bringing out, import, export, sale (trade in), servicing, installation, dismantling, and liquidation of radioactive substances, sealed sources of radiation containing a radioactive substance, and sources of ionising radiation not containing a radioactive substance.

² All the provided boxes shall be filled in. If the information requested in any of the fields of tables: