

DECREE
No. 377
of 7th November 2016

on the requirements for the safe management of radioactive waste and on the decommissioning of nuclear installations or category III or IV workplaces

The State Office for Nuclear Safety sets, according to § 236 of Act No. 263/2016 Coll., the Atomic Act, to implement § 24(7), § 55(2) and § 75(5)(b) to (c), § 111(3)(a) to (c), and § 112(2):

PART ONE
GENERAL PROVISIONS

§ 1

Subject matter

This decree stipulates

- a) technical requirements for equipment for radioactive waste management workplace;
- b) the procedure for the collection, segregation, treatment, conditioning, storage, and disposal of radioactive waste;
- c) the manner in which a radioactive waste disposal facility is closed;
- d) requirements regarding the contents of authorisation for the management of radioactive waste and the individual stages of decommissioning of nuclear installations or category III or category IV workplaces,
- e) the scope of radioactive waste records and the radioactive waste accompanying document, and how they are kept;
- f) the scope of and method for decommissioning and completing the decommissioning of a nuclear installation;
- g) the scope of and method for decommissioning a category III or category IV workplace; and
- h) the scope of and method for completing the decommissioning of a category III or category IV workplace.

PART TWO
PREDISPOSAL MANAGEMENT OF RADIOACTIVE WASTE

§ 2

Technical requirements for equipment for predisposal radioactive waste management workplace

(1) Licensee for the management of radioactive waste shall on installation for predisposal radioactive waste management workplace, for the entire duration of its

operation under normal operating conditions and during radiation emergency, depending on the properties of the radioactive waste,

- a) control criticality, already during the design phase if there is a risk of critical state;
- b) limit irradiation of radiation workers and the population;
- c) ensure removal of waste heat;
- d) prevent radiation leaks; and
- e) ensure that radioactive waste can be handled.

(2) Licensee for the management of radioactive waste shall on installation for predisposal radioactive waste management workplace also ensure that it will

- a) be accessible for maintenance and repairs and be easy to decontaminate;
- b) permit inspection of radioactive waste;
- c) ensure minimum creation of subsequent radioactive waste, and that it can be managed;
- d) permit easy removal of any sediment or deposits;
- e) permit identification, collection, and return of any leaks of radioactive waste or radioactive waste that cannot be safely managed;
- f) permit monitoring or measurement of quantities and properties of radioactive waste that prove that equipment is working to design specifications; and
- g) be resistant to the possible effects of explosion or fire; substances that have an effect on explosiveness or combustibility shall be tracked.

(3) A predisposal radioactive waste management workplace shall have a maintenance, test and inspection plan, especially for

- a) equipment preventing leakage of radioactive waste, including waste tanks and packaging;
- b) equipment for managing radioactive waste, including pumps and fittings;
- c) heating or cooling systems;
- d) calibration devices;
- e) ventilation system;
- f) normal and backup electrical systems;
- g) water, gas, or compressed air supply systems;
- h) shielding; and
- i) fire protection systems.

(4) The results of maintenance, testing, and inspections pursuant to (3) shall be assessed, recorded, and archived for the period pursuant to the documentation of management system. The maintenance, testing and inspection plan shall be updated at regular intervals.

(5) If mobile equipment is used to manage radioactive waste prior to its disposal,

- a) the relationship between the predisposal radioactive waste management workplace and the mobile equipment shall be taken into account;
- b) the ability to install, remove, and decontaminate mobile equipment shall be taken into account; and
- c) prior to the start of mobile equipment use, its safety shall be assessed, also taking into account the properties of the resulting form of the radioactive waste and further management of newly created radioactive waste.

§ 3

Collection and segregation radioactive waste

(1) Radioactive waste or mixtures thereof with other substances shall be collected and segregated according to physical and chemical properties and according to its expected processing and treatment.

(2) Collection packaging containing radioactive waste shall be labelled so that it is obvious what waste is being collected and how it is sorted.

(3) The segregation method for radioactive waste shall be documented and separated waste shall be recorded.

(4) Radioactive waste is categorised as gaseous, liquid and solid. Solid radioactive waste is further classified, especially according to its disposal, as

- a) temporary radioactive waste, which after storage for at most 5 years exceeds radioactivity lower than clearance levels;
- b) very low-level waste with radioactivity higher than that of temporary radioactive waste, but which does not require any special measures during disposal;
- c) low-level waste with radioactivity higher than that of temporary radioactive waste, but which at the same time contains a limited amounts of long-lived radionuclides;
- d) intermediate-level waste that contains a significant amount of long-lived radionuclides, and so requires a higher degree of isolation from the surrounding environment than low-level waste; and
- e) high-level waste where during its storage and disposal, heat generated by the decay of the radionuclides it contains must be taken into account; after this waste is processed and treated, if it meets waste acceptance criteria and must be disposed in deep geological repositories several hundred metres underground.

§ 4

Treatment of radioactive waste

(1) During the treatment of radioactive waste, usable substances shall be separated to the greatest degree possible from radioactive waste and returned for reuse to reduce the amount of remaining waste and radioactive waste to a minimum.

(2) Prior to treatment radioactive waste, it is necessary to take into account the impact of materials that are being treated and created on the reliability of the facility in which the treatment is taking place, and the effect on technologically related systems, in order to avoid a negative effect on nuclear safety conditions, radiation protection, and conditions for the management of radiation emergencies and radiation situation monitoring.

(3) If during the treatment of radioactive waste ion exchangers, filters, or similar separation materials with limited life are used, their efficiency shall be monitored regularly and limit values shall be set for their renewal or replacement.

§ 5

Conditioning of radioactive waste

(1) Conditioning of radioactive waste through a change in its physical or chemical properties or the use of packaging shall take place so as to ensure its safe transport, storage, and disposal under relevant waste acceptance criteria. Radioactive waste is usually conditioned by solidifying and placing waste into packaging.

(2) Prior to the conditioning of radioactive waste, a technical procedure shall be stipulated for every conditioning method used. This procedure shall include conditions for effective and safe conditioning of radioactive waste, for example mixing ratio or specific consumption of bracing, and conditions for solidification, restriction, or rejection of some types of waste or permitted substitution of individual waste components for the given treatment method. Acceptance conditions for hardeners and the way these conditions are checked to ensure their required quality shall also be stipulated.

(3) If packaging is being filled with conditioned radioactive waste, care shall be taken to ensure it is not overfilled.

(4) If packaging is part of the radioactive waste conditioning process, the packaging shall be chosen so that

- a) it can be handled,
- b) it is not damaged during handling and transport, and
- c) it can be handled safely.

(5) In doing so it is especially important to take into account the effect of radioactive waste caused by the presence of corrosive substances, its expansion, off-gassing, heat release, and external effects.

§ 6

Storage of radioactive waste

(1) Radioactive waste must not be stored with other waste or material.

(2) Radioactive waste shall be stored so that

- a) in the case of conditioned radioactive waste, there is no risk of changes to its properties that could make its disposal impossible; and
- b) the largest stored quantity and the highest activity of the radioactive waste based on the safety analysis report is followed.

(3) A radioactive waste storage facility shall be equipped appropriately according to the type, form, activity, and amount of radioactive waste being stored. The storage facility's condition and equipment are checked regularly.

(4) During the storage of radioactive waste,

- a) sufficient reserve storage capacity shall be created for relocation, repackaging, inspection, maintenance, and retrieval of radioactive waste for the entire duration of the storage facility's operation;

- b) detailed records of stored waste shall be kept, and clear marking of every package with radioactive waste or stored piece of radioactive waste shall be ensured for easy identification for the entire duration of storage;
- c) the capacity and condition of the storage facility shall be monitored and assessed regularly, namely the tightness of relevant barriers and internal storage conditions shall be checked, and surface contamination and radiation level at defined distances from the surface of packaging shall be monitored for purposes of proving compliance with limits and conditions pursuant to § 9(3);
- d) important procedures and regulation conditions under which radioactive waste is stored and the condition of packaging containing radioactive waste or the condition of pieces of radioactive waste shall be taken into account;
- e) a procedure shall be drawn up for managing radioactive waste that
 - 1. fails to meet waste acceptance criteria for storage,
 - 2. cannot be retrieved from the storage facility in a regular manner, or
 - 3. that exhibits signs of damage;
- f) solidified radioactive waste prepared for disposal and meeting waste acceptance criteria for disposal in an operated radioactive waste disposal facility shall be handed over to the Radioactive Waste Repository Authority (hereinafter the 'Authority') for disposal without any delay, however not later than two years after the beginning of its storage.

(5) For the storage of liquid radioactive waste

- a) tanks shall be
 - 1. impermeable,
 - 2. protected from corrosion,
 - 3. protected from overfilling,
 - 4. their filling must be monitored;
 - 5. located in protective pits that will accept the volume of the tank with sufficient margin
- b) protective pits shall be
 - 1. impermeable,
 - 2. equipped with a signalling system to indicate a leak of radioactive waste from the tank, and
 - 3. equipped with pumping equipment;
- c) vapours from tanks and pits shall be drawn away and processed as radioactive waste;
- d) it shall be possible to homogenise and pump out the contents of storage and collection tanks;
- e) every system of storage or collection tanks, except for collection tanks intended for the collection of liquid waste than could be contaminated with radionuclides, shall have an empty tank as an emergency backup with a volume corresponding to the largest tank in the system; and
- f) in the case of storage in containers, the floor and walls of the storage facility shall be impermeable to such a height, which in the case of a leak of the maximum amount of stored liquid radioactive waste would prevent its escape into the environment; the floor shall be sloping down to a waterproof collection pit without an outlet.

(6) A radioactive waste storage facility that is part of a different nuclear installation or different workplace where radiation activity takes place is subject to requirements pursuant to (1) to (5), applied in a scaled manner.

PART THREE

DISPOSAL OF RADIOACTIVE WASTE

§ 7

Technical requirements for equipment for disposal radioactive waste management facility

The safety of a radioactive waste disposal facility shall not be negatively affected by technical requirements for

- a) the area of security of nuclear installation or non-proliferation of nuclear weapons,
- b) ensuring that radioactive waste can be handled,
- c) construction, operation, decommissioning, and closing phases of a radioactive waste disposal facility, if they take place in parallel.

§ 8

Disposal of radioactive waste

(1) Radioactive waste shall not be disposed with other waste or material that is not a part of the disposal facility.

(2) Only solid or solidified radioactive waste that meets waste acceptance criteria for disposal may be disposed.

(3) During disposal of radioactive waste

- a) records pursuant to § 10 of disposed radioactive waste must be kept, and it must be ensured that every packaging with radioactive waste or piece of radioactive waste that has been disposed is clearly marked for easy identification;
- b) in accordance with a requirements for the management system, prior to the disposal of radioactive waste a procedure must be drawn up to verify that the properties of the radioactive waste comply with waste acceptance criteria for disposal or management of radioactive waste in case it does not meet waste acceptance criteria of radioactive waste for disposal; radioactive waste that fails to meet waste acceptance criteria for disposal can be accepted for disposal only after a separate safety assessment for its management; and
- c) the radioactive waste disposal facility shall be inspected during its entire life cycle in order to
 - 1. confirm and more closely specify the expected evolution of the disposal facility and its geological environment;
 - 2. ascertain and more closely specify models and data needed for safety analyses; and
 - 3. ensure that it is possible, based on obtained data, to propose an oversight programme for closure of the disposal facility including a time line for gradually ending institutional control of the closed disposal facility.

(4) Equipment that will not be used to close the disposal facility shall be decommissioned prior to the closure of the disposal facility.

PART FOUR
**REQUIREMENTS FOR RADIOACTIVE WASTE MANAGEMENT
DOCUMENTATION**

§ 9

**Requirements for the content of documentation for radioactive waste
management facility**

(1) The safety report or safety analysis that is part of documentation pursuant to Part 1(a)(2), (b)(4), (e)(4), (f)(4) and pursuant to Part 3(a)(5) and (b)(1) of Annex 1 to the Atomic Act, shall take into account both the operating period and in the case of radioactive waste disposal facility also the period after the closure of the disposal facility. A safety assessment of the disposal facility after it has been closed shall be based on an analysis of scenarios defined, based on properties, events, and processes that could affect the safety of the disposal facility.

(2) In the safety report that applies to a workplace managing radioactive waste and to the radioactive waste being managed,

- a) the scope of the safety report, the assessment interval, and the set of initial parameters shall be designed and justified;
- b) only calculation programs that have provably undergone verification and validation processes may be used; and
- c) sensitivity analyses and uncertainty analyses shall be performed for radioactive waste disposal facility; if there is a risk of critical state, the assessment of the criticality safety shall take into account the uncertainty of safety analyses.

(3) Limits and conditions for radioactive waste management contain the following, according to the characteristics of the radioactive waste:

- a) waste acceptance criteria, which contain:
 - 1. safety, technical, and administrative conditions and limits for characteristic properties of radioactive waste that is accepted for disposal; and
 - 2. the way of ensuring that the properties of the radioactive waste or packaging containing radioactive waste comply with these conditions and limits;
- b) the location of the radioactive waste or packaging and how they are handled;
- c) the scope, methods, and deadlines for measuring and evaluating limited parameters;
- d) operability requirements for selected equipment for radioactive waste management;
- e) configuration requirements for the protective system of a workplace for radioactive waste management;
- f) limits for conditional parameters;
- g) requirements for personnel activity and for organisational measures leading to the fulfilment of all defined conditions for design operating conditions;
- h) requirements for fulfilling nuclear safety, radiation protection, and radiation situation monitoring requirements after a radioactive waste disposal facility has been closed, in the case of disposal of radioactive waste in a radioactive waste disposal facility; and
- i) a draft measure for managing radioactive waste that fails to meet waste acceptance criteria stipulated in limits and conditions.

- (4) Waste acceptance criteria pursuant to (3)(a) further contain:
- a) for radioactive waste prior to its disposal:
 - 1. the dimensions, mass, form, and labelling of radioactive waste or packaging;
 - 2. the content and maximum amount of radionuclides in waste, packaging, and in the entire radioactive waste management facility;
 - 3. a description of the way the occurrence of a critical state will be prevented;
 - 4. a description of the way thermal and radiation effects of radioactive waste will be limited; and
 - 5. the radiation level at defined distances from the surface of radioactive waste or packaging;
 - b) for radioactive waste disposed in a disposal facility:
 - 1. the dimensions, mass, form, and labelling of radioactive waste or packaging;
 - 2. the content and maximum amount of radionuclides in waste, packaging, and in the entire disposal facility;
 - 3. a description of the way the critical state will be prevented;
 - 4. a description of the physical and chemical stability of the radioactive waste or packaging for the duration expected in the safety report and its compatibility with the disposal facility's design solution;
 - 5. information on the leachability of the radioactive waste;
 - 6. a description of the thermal and radiation effects of the radioactive waste;
 - 7. information on possible gas formation;
 - 8. information on possible microbial decomposition of the radioactive waste;
 - 9. information on the content of corrosive, explosive, and self-igniting substances and flammable materials in the radioactive waste;
 - 10. information on the content of free liquids in packagings;
 - 11. information on the content of complex-forming agents;
 - 12. information on the corrosion resistance and surface contamination of packagings;
 - 13. the radiation level at defined distances from the surface of packagings; and
 - 14. a description and justification of the waste acceptance criterion, if the characteristic property of the radioactive waste being disposed is not limited.

(5) An assessment of the fulfilment of limits and conditions for safe management of radioactive waste is sent to the Office on a regular basis, at least annually.

(6) Safety reports pursuant to Part 1(a)2., b)4., e)4., f)4. , and h)5. and Part 3)b)1. of Annex 1 to the Atomic Act include a characterisation of the site, which consists of verifying the condition of the geological environment and disposal areas, and which includes:

- a) the results of a baseline survey of the site;
- b) a description of the disposal facility's normal development; and
- c) identification of features, events, and processes that could interfere with the disposal facility's normal development and could affect its safety.

§ 10

Requirements for the scope of radioactive waste records and the radioactive waste accompanying document, and how they are kept

(1) Operating records regarding management of radioactive waste shall be kept and archived for the period specified in documentation of management system. These operating records are as follows:

- a) accompanying documents for created or accepted radioactive waste pursuant to (6) and (7);
- b) information on the manner of radioactive waste management, and for stored or disposed radioactive waste, also information on the place and time when the radioactive waste was placed in the storage or disposal facility;
- c) the results of analyses of the radioactive waste and its packaging;
- d) information on the operation of equipment for a workplace where radioactive waste is managed, including information on the time the facility has been used, or about its shutdown, on maintenance performed on the facility, and on operating defects and accidents and how they were eliminated; and
- e) the names and surnames of personnel responsible for operation of the radioactive waste management facility.

(2) In the case of acceptance of radioactive waste, it shall be handed over along with its records to the extent specified in (1)(a).

(3) The Authority shall arrange the operation of an electronic database system for radioactive waste from its delivery to storage and disposal, and updates and archives radioactive waste records. Other licensees for radioactive waste management or originators of radioactive waste shall archive radioactive waste records pursuant to (2) for at least 10 years from the transfer or disposal of this radioactive waste.

(4) Within the scope of the management system pursuant to § 29 of the Atomic Act, a programme to characterise radioactive waste shall be drawn up, and a procedure for acceptance or handover of radioactive waste shall be implemented, including requirements for an accompanying document for radioactive waste. Radioactive waste acceptance shall also include a procedure for verifying compliance of the waste being accepted with waste acceptance criteria pursuant to a stipulated procedure.

(5) The accompanying document for radioactive waste shall accompany the radioactive waste during each physical transfer. The accompanying document for radioactive waste is issued by the transferor and shall be signed by an authorised individual of both the transferor and the transferee. An accompanying document is issued for each packaging containing radioactive waste that is a standalone handling unit.

(6) The accompanying document for radioactive waste contains:

- a) marking of the physical and chemical form and properties of the radioactive waste or the code of the radioactive waste;
- b) for solidified waste, its category pursuant to § 3(4);
- c) a description of the packaging type and an external mark making it possible to identify the packaging (an ID number);
- d) the number of pieces and activity of radionuclide sources and their record or ID numbers;

- e) the mass or volume activity and the activity of individual radionuclides whose content is limited by waste acceptance criteria, including their method of certification;
- f) the mass or volume activity and the activity of those radionuclides that are present in an amount greater than 1 % of total activity, including their method of certification;
- g) the value of the leachability coefficient of radioactive waste treated for disposal, its compressive strength, content of hazardous substances, and other parameters if they are limited by waste acceptance criteria;
- h) the radiation level on the surface of the packaging;
- i) information on the surface contamination of the packaging by radionuclides;
- j) the weight of the radioactive waste;
- k) the weight of the packaging with radioactive waste;
- l) the date or period the packaging was filled;
- m) the date the accompanying document was issued;
- n) the business name and ID number, if assigned, of the subject handing over the radioactive waste, and the name, surname, position, and signature of an authorised representative of this subject; and
- o) the business name and ID number, if assigned, of the subject accepting over the radioactive waste, and the name, surname, position, and signature of an authorised representative of this subject.

(7) The following shall be attached to the accompanying document for radioactive waste:

- a) the original or copy of the accompanying document of the radioactive waste or radionuclide emitter, or the certificate of the sealed radionuclide emitter contained in the packaging with the radioactive waste;
- b) other data providing information on the properties of the radioactive waste and its management; and
- c) a written declaration from the originator of treated radioactive waste that it was treated in accordance with approved limits and conditions for its treatment, and that it meets waste acceptance criteria for the relevant disposal facility or storage facility, especially that it does not contain free liquids, pyrophoric substances, toxic substances, dangerous biological substances or explosives.

(8) The information on the accompanying document shall correspond to information from the logbook of the originator or the administrator of the storage facility or disposal facility. The accompanying document is made out in three copies, where the original and the copies shall be kept in different fire compartments.²⁾

²⁾ Decree No 23/2008 on technical requirements for fire protection of buildings, as amended by Decree No 268/2011.

PART FIVE

DECOMMISSIONING OF A NUCLEAR INSTALLATION OR A CATEGORY III OR IV WORKPLACE

§ 11

The scope and method of decommissioning of a nuclear installation or a category III or IV workplace

(1) Aside from gradual decommissioning, a nuclear installation or a category III or IV workplace can also be decommissioned immediately, in a continuous, uninterrupted way from beginning to end.

(2) In the case of gradual decommissioning of a nuclear installation or a category III or IV workplace, the licensee for decommissioning shall also have in place an inspection and maintenance programme for systems, structures, and components for this period so that other phases of the decommissioning are not negatively affected.

(3) Individual phases of decommissioning shall be ended by ensuring not yet decommissioned systems, structures, and components of the nuclear installation or a category III or IV workplace have protective barriers against the release of radionuclides into the environment.

(4) During decontamination work prior to the commencement of decommissioning and during its course, workplace radiation situation monitoring records shall be analysed, the radiation situation in the workplace shall be surveyed, the stock of radioactive or otherwise hazardous substances shall be measured, and their locations shall be stipulated. The results of analyses, surveys, and measurements shall be incorporated and documented, for example in a 3D model of the nuclear installation or a category III or IV workplace.

(5) For a category III workplace, the following radiation protection requirements shall be met during decommissioning:

- a) stipulation of technical and organisational measures making it possible to perform the decommissioning;
- b) stipulation of a schedule for individual decommissioning strategies;
- c) stipulation of requirements for the final condition of the workplace after all decommissioning activities have been completed;
- d) stipulation of the amount of material that will be used during the decommissioning;
- e) stipulation of ways in which contamination due to infiltration and leakage shall be limited;
- f) stipulation of requirements for technical and organisational measures for decontamination of systems, structures, and components;
- g) restricting the use of hazardous substances to a reasonably achievable minimum;
- h) ensuring easy access to contaminated areas;
- i) taking into account relationships to different workplaces and sources of ionising radiation located in the same area; and
- j) stipulation of measures for archiving documentation and collection of data from workplace operation for decommissioning purposes.

§ 12

The scope of and method for completing the decommissioning of a nuclear installation or a category III or category IV workplace

(1) If the area in which a nuclear installation or a category III or IV workplace is placed and systems, structures, or components of these facilities cannot be made available for use without restriction, the licensee for decommissioning shall assess their long-term safety and the licensee shall then implement appropriate measures to secure them. Financing costs for these measures are included in decommissioning costs pursuant to Part 1(e)12,(f)16 and Part 2(b)11 of Annex 1 to the Atomic Act..

(2) If decommissioning takes place under radiation emergency conditions, the initial decommissioning plan shall be re-evaluated and the way in which funding for decommissioning is generated shall be reassessed with regards to this fact.

§ 11

Requirements for the content of documentation for authorised activities

(1) A concept for decommissioning a nuclear installation or a category IV workplace shall be aligned with the Concept for radioactive waste and spent fuel management, and contains the following:

- a) decommissioning strategies, where immediate dismantling is always one of these strategies, and a justification of the proposed decommissioning strategy;
- b) the decommissioning time frame;
- c) a description of the final condition of the site and systems, structures, and components once decommissioning has been completed;
- d) the manner of limiting the number of components and volume of building material that will be disposed of;
- e) the manner of limiting the possibility of release of radioactive substances due to infiltration and leaks,
 1. by restricting the number of built-in pipe conduits in floors and walls;
 2. by restricting the use of underground tanks, pits, and drainage channels for radioactive substances;
 3. by separating technical systems working with radioactive and non-radioactive substances;
 4. preferring straight pipes to prevent deposit formation; and
 5. when possible, by avoiding the use of right-angle pipe bends and T-joints if straight pipes cannot be used;
- f) in the case of a nuclear installation with a nuclear reactor,
 1. by choosing suitable materials for structural parts of the reactor and the primary circuit that are exposed to direct neutron flux or are in contact with reactor coolant and are sources of induced activity, and
 2. the application of suitable chemistries that lead to the stabilisation of corrosion layers of cooling circuit materials in order to restrict induced activity;
- g) in the case of a nuclear installation without a nuclear reactor, by choosing suitable materials for structural parts that are directly exposed to neutron flux and are a source of induced activity;

- h) a description of the manner of preventing contamination of concrete with radioactive substances in the case of a leak, and preventing degradation mechanisms at metal/concrete interfaces;
- i) a description of the manner of restricting the use of hazardous substances;
- j) a description of the manner of surface treatment allowing for easy decontamination and contaminant infiltration prevention;
- k) a description of easy access to contaminated equipment and its easy dismantling;
- l) a description of the way decontamination will be made possible via remote manipulation; and
- m) a system for archiving documentation and collecting operational data for purposes of decommissioning.

(2) A concept for the safe permanent shutdown of the installation or workplace to be licensed contains

- a) specification and classification of systems, structures, and components into safety classes that will also be used during decommissioning, and taking into account requirements for new, but as far as possible tested systems, structures, and components intended exclusively for decommissioning activity;
- b) adjustments for the existence of and relationships with other nuclear installations or workplaces located in its vicinity;
- c) a description of the physical condition of the nuclear installation or category IV workplace by individual decommissioning phases, including expected stability of buildings, technological systems, structures, and components, and its expected contamination with radioactive substances;
- d) a decommissioning schedule and the expected usage of the nuclear installation or workplace once it has ceased operation, in accordance with land use planning documentation;
- e) a description of systems, structures, and components that are expected to be used during decommissioning, including decontamination, disassembly, and demolition, as well as the ability to perform technical operations via remote manipulation;
- f) a description of new systems, structures, and components needed for decommissioning and for managing radioactive waste;
- g) a description of organisational preparations and staffing for decommissioning;
- h) the way spent nuclear fuel and radioactive waste will be managed, its location, composition, and amount, a description of its transport, processing, treatment, storage, and disposal, including the way the creation of radioactive waste through decommissioning activity will be minimised;
- i) the way decommissioned materials, systems, and components will be reused and recycled;
- j) decommissioning safety analyses;
- k) a preliminary estimate of the costs of decommissioning and the availability of funds;
- l) the scope, measurement method, and assessment of irradiation of employees and individuals, and contamination of the workplace and its vicinity with radionuclides and ionising radiation; and
- m) the way final radiation monitoring will take place at the nuclear installation or workplace location after decommissioning has ended.

(3) The decommissioning plan for a nuclear installation or category III or IV workplace shall comply with the concept for the safe permanent shutdown of the installation or workplace to be licensed, and contains:

- a) the initial and final condition of the installation or workplace;
- b) the operating history of the installation or workplace;
- c) a description of available or expected technologies capable of ensuring the safe performance of decommissioning activities;
- d) decommissioning safety analyses;
- e) a description of the nuclear installation or workplace, including technical and structural parts;
- f) the expected decommissioning start date, justification of the decommissioning strategy and scope, and a decommissioning schedule;
- g) the expected radionuclide composition of substances present in the nuclear installation or at the workplace the moment before operation ceases, and an assessment of their physical and chemical form, activity, toxicity, volume, and mass;
- h) a draft plan for organisational preparations and staffing during the decommissioning period;
- i) a draft plan for ensuring physical protection during the decommissioning period;
- j) a draft monitoring programme during the decommissioning period;
- k) a scheme for changes to the emergency planning zone, if one was stipulated, and a scheme for preparedness to respond to a radiation emergency;
- l) a description of safe management of radioactive waste and spent fuel, including its funding, if radioactive waste or spent fuel will be created during activity;
- m) a description of the use of the site and systems, structures, and components, or if complete decommissioning is impossible, a programme for maintenance, tests, inspections of systems, structures, and components taking into account their changes during decommissioning;
- n) initial documentation for estimating decommissioning costs; and
- o) a draft plan for ensuring radiation protection during the decommissioning period.

(4) The decommissioning plan is updated along with the decommissioning cost estimate at least once every 5 years.

(5) The safety report that is part of the documentation for authorisation of individual phases of decommissioning a nuclear installation or category III or IV workplace which is connected with the decommissioning plan, must contain the following:

- a) a description of changes to the nuclear installation or category III or IV workplace during its decommissioning, including a list of systems, structures, or components not yet decommissioned,
- b) an update of its classification into safety classes,
- c) changes in the planned decommissioning strategy and their justification;
- d) a description and justification of the need for installation and operation of new systems, structures, and components, and its effect on ensuring radiation protection, monitoring of the radiation situation, and handling radiation emergencies; and
- e) an assessment of the influence of in parallel performed decommissioning activities on radiation protection, radiation situation monitoring and management of radiation emergency.

PART SIX
FINAL PROVISIONS

§ 12

This Decree was notified in accordance with Directive (EU) 2015/1535 of the European Parliament and of the Council of 9 September 2015 laying down a procedure for the provision of information in the field of technical regulations and of rules on Information Society services.

§ 15

Enter into force

This decree shall come into force on 1 January 2017.

Chairperson:
Ing. Dana Drábová, Ph.D., v. r.