

## **REGULATION OF THE COUNCIL OF MINISTERS**

of 11 February 2013

### **on nuclear safety and radiological protection requirements for the stage of decommissioning of nuclear facilities and the content of a report on decommissioning of a nuclear facility<sup>1)</sup>**

Pursuant to Article 38c Section 3 of the Act of Parliament of 29 November 2000 on the Atomic Law (Journal of Laws of 2012, Item 264 and 908) it is hereby ordered as follows:

#### **Chapter 1 General Provisions**

§1. The terms and expressions used under this Regulation shall have the following meaning:

- 1) nuclear power unit – an assembly comprising in particular: nuclear power reactor, reactor cooling circuit, working medium circuit, one or more turbine generators which, together with the auxiliary systems, create a coordinated system of conversion of nuclear fuel thermal energy into electricity;
- 2) reactor containment:
  - a) in the case of a nuclear power plant – jointly a primary and secondary reactor containment,
  - b) in the case of a research reactor – primary reactor containment;
- 3) Agency's President – President of the National Atomic Energy Agency [in Polish: PAA]
- 4) safe shutdown state – the state of the nuclear facility following the anticipated operational occurrence or accident conditions, where fundamental safety functions are performed and

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<sup>1)</sup> This regulation is the implementation into the Polish laws of the Council Directive 2009/71/Euratom of 25 June 2009 establishing community framework of nuclear safety for nuclear facilities (O. J. EU L 172 of 02.07.2009, p. 18 and O.J. EU L 260 of 03.10.2009, p. 40)

stably maintained for a long period of time, and in the case of a nuclear power plant and research reactor, the reactor is additionally in a sub-critical state;

- 5) safety system – a nuclear facility system intended to prevent the occurrence or to limit the consequences of anticipated operational occurrences and accident conditions, and in the case of a nuclear power plant or research reactor, also to attain a safe shutdown state;
- 6) the Act – the Atomic Law Act of 29 November 2000;

## Chapter 2

### **Initial Activities in Decommissioning of a Nuclear Facility**

§ 2. 1. Decommissioning of a nuclear facility shall be planned and performed as:

- 1) the immediate decommissioning in which promptly after the termination of operation of a nuclear facility, the systems and structures and components of the nuclear facility are dismantled and radioactive waste and spent nuclear fuel is removed from the nuclear facility's premises, or
  - 2) the deferred and extended in time decommissioning, in which the systems and structures and components of the nuclear facility are dismantled and radioactive waste and spent nuclear fuel is removed from the nuclear facility's premises in a few subsequent stages limited in time and as to the extent of works performed in time intervals
- depending on a decommissioning strategy adopted in the nuclear facility decommissioning program, after taking into account such factors in particular as: nuclear safety and radiological protection aspects, interdependencies between civil structures, buildings and installations on the nuclear facility's site, possible burdens for future generations, or possible loss of knowledge and competence, due to the lapse of time, regarding the nuclear facility's state and its decommissioning.

2. In the case of selecting decommissioning strategy deferred and extended in time, it shall be demonstrated that a nuclear facility until the commencement of decommissioning and throughout the period of decommissioning, will be maintained in a safe state and that it will be decommissioned in the future in the appropriate manner without any unreasonable burden for future generations.

3. For nuclear facilities situated on the premises shared by several nuclear facilities, the selection of a decommissioning strategy shall take into account interdependencies between particular nuclear facilities.

§ 3. Regardless of a selected strategy for decommissioning of a nuclear facility, decommissioning works of a nuclear facility shall be planned and performed in steps including the preparation of decommissioning of a nuclear facility and the performance of nuclear facility decommissioning.

§ 4. While preparing decommissioning of a nuclear facility, the following shall be particularly taken into account:

- 1) technical condition of a nuclear facility, including the stability of systems and structures and components of the nuclear facility, taking into consideration their possible technical degradation with the lapse of time as well as the technical condition of other buildings, civil structures and installations situated on the nuclear facility's site;
- 2) ensuring nuclear safety, radiological protection, physical protection and preparedness in the case of a radiological emergency;
- 3) decrease of the activity of radioactive waste with the lapse of time;
- 4) decrease of hazards due to a removal of nuclear fuel from the nuclear facility;
- 5) methods for radioactive waste and spent nuclear fuel management which take into account their composition and amounts and minimize the volume of radioactive waste generated as the result of decommissioning works;
- 6) preparation of workers and availability of technologies envisaged for application during decommissioning works, including: decontamination and dismantling and, if necessary, demolition, including remotely controlled devices;
- 7) acceptability and possibility of the re-use of materials and components of the nuclear facility acquired during decommissioning;
- 8) planned method for the use of the nuclear facility's site after completion of decommissioning of a nuclear facility;
- 9) impact of planned decommissioning works on the environment and public health;
- 10) estimated costs of the nuclear facility decommissioning and the amount of available financial resources collected in a decommissioning fund.

## Chapter 3

### **Nuclear Facility Decommissioning Management**

§ 5. 1. In an organizational entity which possesses a license for decommissioning of a nuclear facility [licensee], the preparation and performance of decommissioning of this facility shall be managed taking into account:

- 1) responsibility for safe performance of decommissioning works;
  - 2) organizational hierarchy and decision making powers established in a way that this will not lead to disputes between different organizational units what could adversely affect nuclear safety or radiological protection.
2. Decommissioning of a nuclear facility shall be managed on the basis a decommissioning management program constituting a part of an integrated management system.
3. Nuclear facility decommissioning management program shall be adjusted to the size and complexity of undertaking and potential hazards arising in connection with the decommissioning.
4. Nuclear facility decommissioning management program shall in particular:
- 1) specify skills necessary to manage and perform activities relating to the decommissioning of a nuclear facility;
  - 2) determine the minimum qualification requirements for workers employed in particular positions connected with decommissioning of a nuclear facility;
  - 3) provide for solutions ensuring that individuals responsible for the performance of activities in decommissioning process possess necessary skills, experience and have completed suitable trainings in order to carry out their tasks safely;
  - 4) provide for solutions obliging all the individuals who participate in decommissioning works to report to the head of organizational entity, which possesses a license for decommissioning of a nuclear facility [licensee], any problems or potential risks to nuclear safety, radiological protection or conditions of occupational safety and work hygiene;
  - 5) specify suitable decision-making powers necessary to stop decommissioning works.

## Chapter 4

### **Performance of Nuclear Facility Decommissioning**

§ 6. 1. The performance of decommissioning of a nuclear facility may be divided into several stages of which the first one includes a removal of nuclear fuel from the nuclear facility and a partial dismantling of the nuclear facility allowing to attain the safe state in which:

- 1) the occurrence of reactivity accidents shall not be possible;
- 2) in the case of a nuclear power plant and research reactor, the decay heat removal shall not be necessary;
- 3) physical protection of nuclear material no longer shall be required.

2. If between particular stages of the performance of decommissioning of a nuclear facility there are intervals lasting at least 5 years, the commencement of the next stage of the performance of decommissioning of a nuclear facility shall require the notification to the Agency's President. An updated nuclear facility decommissioning program shall be enclosed to the aforementioned notification.

3. In the case as referred to in Section 2, the notification shall be submitted at least 6 months prior to the planned date for the commencement of a given stage of decommissioning of a nuclear facility.

4. In order to prevent the leakage of radioactive substance to the environment, particular stages of the performance of decommissioning of a nuclear facility shall end with the use of barriers protecting the systems and structures and components of the nuclear facility which have not been dismantled yet.

§ 7. In the case of decommissioning of a nuclear facility which is deferred and extended in time, it shall be ensured that:

- 1) a nuclear facility is placed into the safe state and is maintained in the safe state until the commencement of decommissioning and throughout the period of nuclear facility decommissioning so that the stages of nuclear facility decommissioning spread over time are carried out in the safe manner;
- 2) systems and structures and components of the nuclear facility are maintained and supervised in the period prior to the commencement of the first stage of nuclear facility decommissioning in accordance with the nuclear facility decommissioning program.

§ 8. In order to ensure a proper level of nuclear safety and radiological protection only verified technical methods for the performance of works shall be used in the organizational entity possessing a license for decommissioning of a nuclear facility [licensee].

§ 9. Decommissioning works shall be performed in accordance with decommissioning procedures taking into account requirements on nuclear safety and radiological protection, fire

protection and occupational safety and work hygiene, and these works shall be documented in the relevant documentation of decommissioning works.

§ 10. 1. Methods for decontamination and dismantling of the systems and structures and components of the nuclear facility shall be selected in such a way that, when applying the optimization of exposure of workers and members of the public, as referred to in Article 9 of the Atomic Law Act [ALARA], and the optimization of the impact on the environment, the amount of radioactive waste generated in the nuclear facility decommissioning process is minimized.

2. In relation to decommissioning activities such as decontamination, cutting and movement of large elements of structures and components, the progressive dismantling or removal of safety systems which may create hazards, their impact on nuclear safety and radiological protection shall be assessed and these activities shall be performed in such a way so as to limit associated hazards and keep them within the acceptable limits. This shall refer in particular to preserving the reactor containment system function – in the case of a nuclear power plant or research reactor – in preventing the uncontrolled leakage of radioactive substances to the environment during the performance of dismantling works.

3. It shall be ensured that decommissioning procedures are updated as the changes in a nuclear facility take place during decommissioning process. No decommissioning work shall be undertaken in the course of decommissioning process that have not been specified in the decommissioning procedures.

4. Prior to the application of any new or unproven methods of performance of decommissioning works, it shall be demonstrated that their application is justified and these methods shall be taken into account in the optimization analysis which is enclosed to the nuclear facility decommissioning program.

§ 11. 1. If, after taking a nuclear facility out of service, on its site still remains spent nuclear fuel or radioactive waste which have been generated during operation, these materials shall be removed and transferred to a radioactive waste repository unless the nuclear facility decommissioning program provides for other method for radioactive waste and spent nuclear fuel management, in particular its reprocessing or recycling.

2. All radioactive waste generated during decommissioning of a nuclear facility shall be managed in accordance with the nuclear facility decommissioning program.

3. If for particular radioactive waste types a final decision regarding their removal from the nuclear facility site still has not been made, it shall be ensured that these wastes are safely stored until their transfer to a radioactive waste repository.

§ 12. 1. After the completion of dismantling activities and decontamination, comprehensive measurements of the radiological condition of a nuclear facility and its site shall be performed, including the identification of residual radionuclides remaining after decommissioning, in order to confirm that radiological protection criteria, set out in the license for decommissioning of a nuclear facility and in the provisions of the Act, have been fulfilled and that the objectives of decommissioning of a nuclear facility have been achieved.

2. Data from dosimetric measurements carried out after the completion of dismantling activities and decontamination shall be recorded in the form of a final report on dosimetric inspection which shall include:

- 1) specification of radiological protection criteria applied;
- 2) description of methods and procedures to be applied in order to fulfil radiological protection criteria;
- 3) measurement data with its statistical analysis and a description of systematic approach in performing dosimetric measurements.

§ 13. Until the completion of decommissioning of a nuclear facility, periodic safety reviews shall be conducted with the frequency specified in the license for decommissioning of a nuclear facility, however not less than once in every 10 years. The scope of these reviews shall include at least:

- 1) determination of an actual technical condition of systems and structures and components of the nuclear facility through analyzing data obtained from monitoring and measurements and operating experience;
- 2) updating of data on the amount and activity of radioactive substances present in the nuclear facility;
- 3) updated safety analyses;
- 4) organizational issues;
- 5) radiological protection issues;
- 6) fulfilment of nuclear safety and radiological protection requirements and the assessment of the effectiveness of management aimed at ensuring safety and quality;
- 7) staffing of employees and their qualifications;
- 8) emergency preparedness;
- 9) radiological impact on the public and the environment;
- 10) radioactive waste storage conditions;
- 11) aging of systems and structures and components of the nuclear facility important for ensuring nuclear safety and radiological protection;

- 12) scientific and technological progress in relation to methods for decommissioning of nuclear facilities;
- 13) modifications in the surroundings of a nuclear facility taking into account natural and human-induced hazards;
- 14) changes in nuclear safety and radiological protection requirements included in regulations in force;
- 15) lessons drawn from experience from decommissioning works that were carried out in a given facility or similar facilities.

§ 14. Documentation on decommissioning of a nuclear facility shall be kept in accordance with:

- 1) requirements for archiving documents as specified within the framework of integrated management system;
- 2) requirements set out in the license for decommissioning of a nuclear facility;
- 3) provisions on national archival resources and archives.

§ 15. 1. In the course of performance of decommissioning of a nuclear facility, the nuclear facility decommissioning program shall be subject to a periodic review and, if necessary, updating with the frequency specified in the license for decommissioning of a nuclear facility.

2. The review and updating shall take into account in particular possible changes in the decommissioning strategy, progress of decommissioning works, deviations from the schedule, changes in the nuclear facility or in nuclear safety and radiological protection requirements since the preparation of the nuclear facility decommissioning program, technological progress and the necessity to conduct further decommissioning works.

3. An update of the nuclear facility decommissioning program in the course of performance of decommissioning of this facility shall require the approval of the Agency's President.

## Chapter 5

### **End of Decommissioning of a Nuclear Facility And the Content of a Report on Decommissioning of a Nuclear Facility**

§ 16. After the completion of decommissioning works, the head of organizational entity possessing a license for decommissioning of a nuclear facility [licensee]:

- 1) shall promptly notify the Agency's President about the completion of decommissioning works;



- 2) shall, within the time period specified in the license for decommissioning of a nuclear facility, submit for approval to the Agency's President a report on decommissioning of a nuclear facility.

§ 17. Report on decommissioning of a nuclear facility shall include:

- 1) description of a nuclear facility;
- 2) radiological criteria constituting the basis for the exemption from regulatory inspection of systems, structures or components of the nuclear facility or nuclear facility site;
- 3) description of decommissioning works executed;
- 4) description of any remaining systems, structures or components of the nuclear facility which have not been dismantled or have been partially dismantled;
- 5) final report on dosimetric measurements of the nuclear facility site;
- 6) data on the amounts and types of radioactive waste which was generated during decommissioning of a nuclear facility and data on its storing place or places where it was transferred;
- 7) collective description of any events and incidents important from the viewpoint of nuclear safety and radiological protection which occurred during decommissioning of a nuclear facility;
- 8) collective specification of radioactive doses received by workers and the public during decommissioning of a nuclear facility;
- 9) results of periodic safety reviews;
- 10) analysis of the attainment of decommissioning objectives;
- 11) description of experience gained during decommissioning of a nuclear facility.

## Chapter 6

### Final Provisions

§ 18. This regulation shall enter into force after 14 days from its publication.