Decree of the Nuclear Regulatory Authority of the Slovak Republic No. 51/2006 Coll. Laying Down Details of Requirements for Provisions of Physical Protection (consolidated version)

The Nuclear Regulatory Authority of the Slovak Republic (hereinafter referred to as "Authority"), pursuant to Section 26 (9) of Act No. 541/2004 Coll. on the Peaceful Use of Nuclear Energy (Atomic Act) and on the Amendment and Supplementation to Certain Acts (herein referred to as "Act") lays down as follows:

Section 1

Scope

(1) This Decree lays down details of requirements for the provision of physical protection, including classification of nuclear installations or nuclear materials in categories of physical protection provision.

(2) The requirements pursuant to this Decree must be satisfied for the nuclear installations pursuant to Section 2, item f):
   a) First paragraph of the Act, six months before beginning the startup,
   b) Second paragraph of the Act, two months before beginning the startup,
   c) Third and fourth paragraphs of the Act, six months before beginning the startup, unless the Authority specifies a shorter period in the building authorisation pursuant to Section 18 of the Act.

Section 2

Definitions of notions

For the purposes of this Decree:
   a) A physical barrier is a fence, a wall or a similar obstacle serving the purposes of preventing trespassing and entry control,
   b) A guarded area is an area whose circumference is outlined using physical barriers and, if so provided by the preliminary physical protection plan, with an electronic security system as well,
   c) A protected area is an area within a guarded area whose circumference is outlined using physical barriers equipped with an electronic security system,
   d) An inner area is an area within a building or within a room located within the protected area, whose walls consist of physical barriers and which is equipped with an electronic security system,
   e) A trespasser is any person entering a guarded, protected or inner area without authorisation as well as a person performing an activity pursuant to Section 26 (1) and (2) of the Act.

Section 3

Purpose of physical protection

(1) The purpose of the physical protection system is to ensure:

a) Access to guarded areas, protected areas and inner areas only for persons or vehicles with the area entry authorisation,
b) That persons entering a guarded area, protected area or inner area do not misuse this authorisation for an unauthorised activity,
c) Early detection of trespassers through a combination of an electronic security system and physical barriers and slowing down their progress, thus enabling the response force to stop the trespasser's progress before any unauthorised activity.

(2) The authorisation holder, pursuant to Section 5(3) of the Act, provides physical protection:

a) Through its own protection, provided that it is a holder of the authorisation pursuant to a special legislation[1]), and through a respose force established on a contractual basis pursuant to Section 26 (8) of the Act (hereinafter referred to as "response force"), or
b) Through a private security service[2]) and through a response force.

(3) Persons indicated in Paragraph 2, items a) and b), constitute members of the protection team.

Section 4

Categorisation

(1) The categorisation of nuclear materials and radioactive waste for the purposes of physical protection is given in Appendix 1.
(2) The categorisation of building structures and technological installations of nuclear installations for the purposes of physical protection is given in Appendix 2.
(3) If the category of a building structure or technological installation of a nuclear installation is determined according to the category of nuclear material or radioactive waste classified pursuant to paragraph 1 placed therein, the category of the building structure or technological installation shall be determined according to the nuclear material or radioactive waste of the highest category.
(4) Building structures and technological installations of nuclear installations, nuclear materials or radioactive waste classified in:
   a) Category I are placed in the inner area,
   b) Category II are placed in the protected area,
   c) Category III are placed in the guarded area.

Section 5

(1) Barriers of guarded areas, protected areas and inner areas are constructed so that they cannot be breached without authorisation during a time shorter than the amount necessary for reliable detection of the trespasser by CCTV or by members of the protection team.
(2) The barriers of the guarded area, protected area and inner area are illuminated so that the assigned members of the protection team can, directly or through the CCTV, reliably detect attempts to breach them.
(3) The authorisation holder shall ensure that, within an area of up to 200 m perpendicularly from the barrier of the guarded area on its outer side, there are no activities conducted that

[1]) Section 3(c) of Act No. 379/1997 Coll. on Operation of Private Security Services and Similar Activities, on Amendment to Act No. 455/1991 Coll. on Small Businesses (Small Business Act) as amended and on Amendment of Act No. 65/1965 Coll. – Labour Code – as amended (Act on Private Security Services) as amended by Act No. 440/2001 Coll.
[2]) Section 3 (a) of Act No. 379/1997 Coll. as amended.

may damage physical protection equipment, cause unjustified activation of the electronic security system or injury to the members of the protection team and service animals; the authorisation holder shall visibly mark such an area.

(4) The barrier of the guarded area in which nuclear materials, radioactive waste or nuclear installations classified in category I are placed consists of a pair of physical barriers (hereinafter referred to as "isolation zone"):
   a) At least 2.5 m tall,
   b) Separated by at least 6 m,
   c) Equipped with at least two independent types of electronic security system functioning on different physical principles, of which at least one is the volume detection type,
   d) Monitored by CCTV so that presence of persons or vehicles in this area can be reliably supervised.

(5) The construction of the isolation zone provides
   a) Probability of detection of at least 0.95,
   b) Halting a wheeled vehicle with a weight of up to 10,000 kg moving at a speed of 40 km/h^{-1}.

(6) The building that is part of the isolation zone shall be secured by an electronic security system and by CCTV on the outer side of the barrier.

(7) The barrier of the guarded area in which nuclear materials, radioactive waste or nuclear installations classified in category II are placed consists of a fence at least 2.5 m tall equipped with an electronic security system, CCTV and mechanical delaying means on the crown of the fence.

(8) The barrier of the guarded area in which nuclear materials, radioactive waste or nuclear installations classified in category III are placed consists of a fence at least 2.5 m tall equipped with mechanical delaying means on the crown of the fence.

(9) The barrier of the protected area consists of a fence at least 2.5 m tall equipped with an electronic security system and mechanical delaying means on the crown of the fence.

(10) The barriers of any inner area consist of walls of buildings or rooms equipped with an electronic security system.

(11) Doors, gates, windows and other facilities designated for passage through the barrier of a guarded area, protected area and inner area may be opened only provided that they are under uninterrupted and direct supervision by members of the protection team.

(12) Emergency exits are constructed so that they enable free escape of persons from the threatened area. The use of an emergency exit shall be signalled in the control alarm station.

(13) The free landscape around the barriers extends to the distance of
   a) 6 m on both sides of the isolation zone,
   b) 3 m on both sides of the guarded area and protected area barriers,
   c) 3 m on the outer side of the inner area.

(14) The purpose of the electronic security system equipping the barriers of guarded areas, protected areas and inner areas is:
   a) To enable the reliable detection of unauthorised passage through the barriers,
   b) To reliably signal failures or attempted damage to or violation of this equipment's activity,
   c) To reliably, continuously and clearly indicate to the control alarm station, by sound and visual signals, any attempt at unauthorised passage through the barriers; this signalling may be turned off by the control alarm station personnel only,
   d) To enable the reliable determination of the location of unauthorised passage through the barrier.

(15) The isolation zones and the physical barriers of the protected area and of the inner area may only be equipped with electronic security system elements assessed pursuant to special legislation.[3])

(16) In the event of merging individual areas, the efficiency of the physical barriers and of the electronic security system must be enhanced.

(17) Among all services and workplaces participating in physical protection, a reliable communication connection shall be established that does not allow leaks of classified information,[4]) this being applicable under any conditions envisaged in physical protection plans.

(18) The authorisation holder shall prepare programmes of tests, maintenance, regular checks and innovation of the physical protection technical means to ensure their reliability and efficiency pursuant to physical protection plans and throughout the entire envisaged useful life.

Section 6

(1) Unauthorised passage through barriers of the guarded area, protected area or inner area equipped with an electronic security system shall be signalled in the control alarm station.

(2) The control alarm station shall be placed within the guarded area in a building whose walls, doors and windows, if any, are bullet proof.

(3) The control alarm station shall be placed so that the activity of the personnel within the control alarm station cannot be observed from the outside of the guarded area.

(4) The control alarm station equipment shall be staffed continuously.

(5) Entry to the control alarm station is allowed only for the persons authorised to enter such premises, this being only for the purposes of working or inspection activity.

(6) The basic functions of the physical protection control alarm station of nuclear installations, nuclear materials and category I radioactive waste shall be backed up in a backup control alarm station.

Section 7

(1) The guarded areas, protected areas and inner areas may be entered only by persons and vehicles to whom or which the authorisation holder has issued the entry authorisation.

(2) Persons and means of transport are checked under conditions laid down by a special legislation[5]) to ensure that:

a) Objects unrelated to performance of job activities are not carried in on entry to the guarded area,

b) Nuclear materials or radioactive waste is not carried out without authorisation on exit from the guarded area.

(3) The authorisation holder shall instruct persons entering a guarded area, protected area or inner area on the regime measures.

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[3]) For example, Act No. 264/1999 Coll. on Technical Requirements for Products and on Assessing Conformity and on Amendment to Certain Acts as amended, Act No. 215/2004 on the Protection of Classified Information and on Amendment to Certain Acts, STN EN 50 131, STN EN 50 132, STN EN 50 133.

[4]) Act No. 215/2004 Coll.

[5]) Section 64 of Act No. 379/1997 Coll. as amended.

(4) Provided that an emergency is imminent[6]) or provided that an emergency has occurred, the authorisation holder may authorise persons organising or performing rescue services to enter the area in which nuclear installations or nuclear materials are placed. In such cases, legal entities employing persons that organise or perform rescue actions, shall additionally, without unnecessary delay, and no later than within 24 hours following the end of rescue actions, provide the authorisation holder with lists of the persons that organised or performed the rescue actions.

(5) The authorisation holder shall maintain records of entry authorisations issued; it shall keep expired authorisations for five years.

Section 8

(1) The preliminary physical protection plan includes:

a) A set of data characterising possible threats to nuclear installations, nuclear materials or radioactive wastes at the time of preparation of the physical protection design taking into consideration the possible deterioration of the security situation during the envisaged period of the nuclear installation's operation, i.e., the number of adversaries, their equipment, training, means of transport used and motivation,

b) Assessment of construction sitting and local conditions from the viewpoint of physical protection,

c) Preliminary risk assessment of unauthorised activities,

d) Analysis of possible unauthorised activities and evaluation of their consequences,

e) Classification of the nuclear installation and nuclear materials in individual categories,

f) Quality assurance documentation[7]) for design and implementation of physical protection,

g) Analysis of physical protection function during construction, startup, operation and decommissioning of the nuclear installation and for operational events, if any,

h) A description of physical protection measures in the course of construction of the nuclear installation,

(2) The physical protection plan includes:

a) Modifications of the original construction solution contained in the preliminary physical protection plan demonstrating that they do not reduce the level of physical protection,

b) Evaluation of physical protection test results,

c) Regime measures,

d) The manner of protection and checks of persons and vehicles upon entry,

e) Descriptions of maintenance and operational checks,

f) Measures concerning limitation of the nuclear installation's operation upon an unauthorised activity attempt or upon violation of physical protection,

g) The limits and conditions of the physical protection system.

Section 9

[6]) Section 3 (2) of Act of the National Council of the Slovak Republic No. 42/1994 Coll. on Civil Protection of the Population as amended by Act No. 117/1998 Coll.

[7]) Decree of the Nuclear Regulatory Authority of the Slovak Republic No. 56/2006 Coll. Lying Down Details on Requirements for Quality System Documentation of Authorisation Holders as well as Details on Requirements for Nuclear Facility Quality, Details on Requirements for Selected Facilities' Quality, and Details on the Scope of their Approval.

This Decree has been adopted in accordance with a legally binding act of the European Union in the area of technical standards and technical regulations.[8])

Section 10

Entry into force

This decree shall enter into force 1 March 2006.

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[8]) Directive 98/34/EC of the European Parliament and of the Council of 22 June 1998 laying down a procedure for the provision of information in the field of technical standards and regulations (OJ L 204, 21.7.1998, p. 37–48) as amended.

Appendix 1 to Decree No. 51/2006 Coll.

CATEGORISATION OF NUCLEAR MATERIALS AND RADIOACTIVE WASTE

A. Nuclear materials not irradiated in a reactor or materials irradiated in a reactor, for which the dose rate at a distance of 1 m without shielding is 1 Gy/h^{-1} or less:

1. Plutonium, except for plutonium with an isotopic concentration of Pu-238 higher than 80%:

2 kg or more	Category I,
More than 0.5 kg, but less than 2 kg	Category II,
0.5 kg and less, but more than 15 g	Category III.

2. Uranium enriched with U-235 to 20% and more:

5 kg or more	Category I,
More than 1 kg, but less than 5 kg	Category II,
1 kg and less, but more than 15 g	Category III.

3. Uranium enriched with U-235 to more than 10%, but less than to 20%:

10 kg or more	Category II,
More than 1 kg, but less than 10 kg	Category III.

4. Uranium enriched with U-235 to more than natural uranium, but less than to 10%:

10 kg or more	Category III.

5. Natural uranium except for uranium ores and materials in their processing:

1,000 kg or more	Category III.

6. Depleted uranium:

2,000 kg or more	Category III.

7. U-233:

2 kg or more	Category I,
More than 0.5 kg, but less than 2 kg	Category II,
0.5 kg and less, but more than 15 g	Category III.

8. Thorium, except for thorium ores and materials in their processing:

1,000 kg or more	Category III.

B. Irradiated nuclear materials

Classified in categories based on the initial content of the fissile isotope. For nuclear materials that were classified in category I or II before irradiation, the category may be reduced by one level provided that the dose rate from such material at a distance of 1 m without shielding is higher than 1 Gy/h^{-1}.
Spent nuclear fuel during off-site transportation is deemed to constitute a category I nuclear material.

C. Radioactive waste

Classified in category I, II or III as other nuclear materials. Classification into categories reflects the activity of radioactive waste, its amount, the possibility of unauthorised handling and other properties that may lead to endangering the environment, health and life of the population.

Appendix 2 to Decree No. 51/2006 Coll.

CATEGORISATION OF BUILDING STRUCTURES AND TECHNOLOGICAL INSTALLATIONS OF NUCLEAR INSTALLATIONS FOR THE PURPOSES OF PHYSICAL PROTECTION

(1) Category I includes building structures and technological installations of nuclear installations:

a) Whose damage may have very serious consequences from the viewpoint of nuclear safety; these include, in particular, building structures and technological installations of nuclear installations containing sources of releasable radioactive substances and selected safety systems whose activity is necessary to prevent release of radioactive substances,

b) That house nuclear materials or radioactive wastes classified as category I.

(2) Category II includes building structures and technological installations of nuclear installations:

a) Whose damage does not lead to direct dispersion of radioactive substances, but may have very serious consequences at a concurrent failure or damage to one or several nuclear installations included in category I,

b) That house nuclear materials or radioactive wastes classified as category II.

(3) Category III includes building structures and technological installations of nuclear installations:

a) Whose damage does not lead to direct dispersion of radioactive substances, but may increase the threat of a concurrent failure or damage to one or several nuclear installations included in a higher category,

b) That house nuclear materials or radioactive wastes classified as category III.