

Radiation and Nuclear Safety Authority Regulation on Security in the Use of Nuclear Energy

Adopted in Helsinki on 22 December 2015

By virtue of Section 7 q of the Nuclear Energy Act (990/1987),
as it is in Act 676/2015, the Radiation and Nuclear Safety Authority has issued the following:

Chapter 1 **Scope of application and definitions**

Section 1 Scope

1. This regulation applies to security arrangements in the use of nuclear energy. The regulation applies to the security arrangements implemented at nuclear facilities during the different stages of their life cycles in order to ensure that the requirements set for the different stages can be met.
2. The Radiation and Nuclear Safety Authority will make a separate decision concerning the application of this regulation to other use of nuclear energy. Security arrangements include physical protection and information security.

Section 2 Definitions

1. For the purposes of this regulation:
 - 1) *unlawful action* shall refer to an activity or measure that is aimed at directly or indirectly endangering the nuclear safety or radiation safety of a nuclear facility, nuclear material or nuclear waste. Deliberate or negligent activity that is punishable by law towards a nuclear facility, nuclear material or nuclear waste, or towards the persons working at a nuclear facility is considered unlawful action;
 - 2) *risk analysis* shall refer to examinations, performed using systematic measures, in order to identify threats, problems and vulnerabilities, surveying the causes and consequences thereof, and assessing the related risks;
 - 3) *design basis threat* shall refer to a threat of unlawful action used as the basis for the planning and assessment of the nuclear security arrangements for which the licensee is responsible;

- 4) *security zone* shall refer to the areas defined for the implementation of security arrangements at the nuclear facility;
- 5) *threat* shall refer to a situation in which unlawful action against a nuclear facility, nuclear material, or nuclear waste is ascertained, or reason to suspect such is found;
- 6) *dangerous object* shall refer to such an object, copy of an object or substance that may endanger or can be used to endanger the safety of a nuclear facility or persons within the nuclear facility, or the safety of persons participating in the treatment and transport of nuclear material or nuclear waste;
- 7) *common-cause failure* shall refer to the failure of several systems, components or structures of a nuclear facility, simultaneously or within a short period of time, as a consequence of an individual event or cause.

Chapter 2 Basis of security

Section 3 Design basis

1. The design of security shall be based on risk analyses of the activity to be secured, and protection requirements assessed on the basis thereof.
2. Security shall be consistent with the operation, fire safety and emergency response arrangements of nuclear energy.
3. Furthermore, security shall be consistent with the rescue service, emergency and special situational plans drawn up by the authorities.
4. The Nuclear Energy Decree (161/1988) contains provisions regarding the definition of the design basis threat and the threat from unlawful activity towards the use of nuclear energy .

Section 4 General planning of a nuclear facility

1. Structures, systems and components important to the safety of a nuclear facility as well as the locations of nuclear material and nuclear waste shall be designed to facilitate the effective implementation of security, taking into account the requirements for nuclear and radiation safety.
2. Security shall be based on the utilisation of several security zones placed within each other so that systems and components important to safety, and nuclear material and nuclear waste, are afforded particular protection and access control and the control of goods traffic can be arranged.
3. The security zones shall support effective and purposeful security arrangements against unlawful action. The security arrangement zones shall have in place arrangements for detecting unlawful action.
4. Advanced, appropriate information security principles shall be utilised in the planning and maintenance of the nuclear facility and its information, communication and automation systems. Effective methods shall be in place for detecting and preventing unlawful action targeted towards systems that are important to safety as well as effective methods limiting their detrimental consequences.

5. The nuclear facility shall prepare for managing abnormal situations arising from information security threats.

Section 5 Personal security

1. Appropriate security clearances according to the Act on Security Clearances (726/2014) shall be carried out in order to ensure the personnel vetting of persons working at the nuclear facility and participating in the treatment and transportation of nuclear material and nuclear waste. Access rights and rights of use pertaining to information related to each task shall be defined. Measures for preventing threats related to persons shall be implemented systematically and extended to the subcontractors utilised by the licensee, and persons in the employ thereof.

2. Passage rights of persons working at the nuclear facility shall be defined for the area of the nuclear facility. The identification card that grants access rights must be kept visible in the area of the nuclear facility.

Section 6 Implementation of security and security maintenance

1. Security shall be implemented in compliance with design bases, security standing order, security plan and other approved documents. All documents concerning security shall be kept up to date.

2. The effectiveness of security may not be significantly reduced by any failure of a single security system, structure or component. Security shall be implemented so that the level thereof does not significantly decrease in the event of any common-cause failures, disturbances or accidents at the nuclear facility, such as an electric power failure or fire.

3. Annual exercises shall be organised to practice procedures in compliance with the security plan and security standing order in a threatening situation. Regular exercises shall also be arranged with the authorities concerned.

4. Nuclear facility personnel shall be familiarised with security arrangements and procedures contributing to the implementation of these at the workplace.

Chapter 3 Security control

Section 7 Transaction of business at the nuclear facility

1. For the purpose of transacting business at the nuclear facility, measures for preventing threats related to the transaction of business shall be planned. The transaction of business also comprises visits to the nuclear facility. Therefore, the planning of visits and programmes thereof shall take account of security perspectives.

2. The identity of persons transacting business with the nuclear facility shall be ascertained. Security control related to transacting business shall utilise the appropriate control equipment and up-to-date technology suitable for the purpose.

3. Movement in the area of the nuclear facility shall be restricted in compliance with the purpose of the transactions, and controlled.

Section 8 Control of passenger and goods traffic

1. Vehicles, persons and the objects and materials carried by them as well as goods transport equipment shall be checked in order to ensure that no dangerous objects are brought onto the nuclear facility site without permission. Movement at the nuclear facility shall be restricted and controlled so that the security and safety aspects can be taken into consideration effectively.
2. Passage and goods traffic control shall be arranged in the necessary way, even in connection with nuclear material or nuclear waste transports and any related storage.
3. The nuclear facility shall have in place appropriate methods for the detection and prevention of unauthorised removal of nuclear materials, nuclear waste, radioactive substances and confidential information.

Chapter 4

Security personnel and preparation for threats

Section 9 Qualification requirements for security personnel

1. Security personnel, as referred to in section 71 of the Nuclear Energy Act (990/1987), shall have completed basic guard training in compliance with section 24 of the Private Security Services Act (282/2002), or other sufficient security sector training. In addition, security personnel shall comply with the general qualifications as laid down in Section 24.
2. Moreover, any member of the security organisation of a nuclear facility shall demonstrate that he/she possesses the knowledge required for the task, concerning:
 - 1) the security standing order and principles and instructions concerning the operations of the security organisation;
 - 2) the leading principles of operations and the functions to be secured within the facility;
 - 3) rescue, emergency and special situation plans for operations; and
 - 4) any other required operating instructions enabling the security person to perform his/her duties correctly and safely.

Section 10 Special requirements regarding the use of forcible means and forcible means equipment

1. The security standing order of the nuclear facility sets forth the requirements concerning the basic training and specialist training for members of the security staff that carry forcible means equipment or whose duties require being prepared to use such means or equipment in the face of a threat. The security standing order of a nuclear facility includes provisions on the levels of educator and user training for forcible means and equipment mentioned above, as well as on demonstrating evidence of the required skills and monitoring thereof.
2. The security organisation of a nuclear facility may only use forcible means equipment complying with the security standing orders, possessed by the licensee or security services supplier.
3. Section 70 of the Nuclear Energy Act (990/1987) contains provisions concerning the right of security personnel to use forcible means.

Section 11 Alarm centre

1. A nuclear facility shall have a central alarm centre for the purposes of security, and a stand-by alarm centre. Both centres shall be capable of maintaining redundant and secure communication with the police and the nuclear facility's control room. The stand-by centre shall be separated from the central alarm centre by means of distance and structural solutions, preventing the simultaneous loss of both centres due to the same external or internal reason. The central alarm centre or stand-by centre shall always be manned by at least one person responsible for alerting functions.
2. In connection with the transport or storage of nuclear material or nuclear waste, alerting communications and arrangements shall be implemented in the manner required for the protection of transport or storage.

Section 12 Command centre and leadership

1. The nuclear facility shall have a person permanently in charge of leading the security organisation as well as a command centre and a stand-by centre equipped for threat scenarios. Both centres shall be capable of maintaining redundant and secure communication with the police and the nuclear facility's control room. The stand-by command centre shall be separated from the command centre by means of distance and structural solutions, preventing the simultaneous loss of both centres due to the same external or internal reason.
2. A nuclear facility shall designate an appropriately equipped room for the use of the police in commanding operations for the prevention of unlawful action being taken against the nuclear facility.
3. In a nuclear facility, excluding a research reactor, the same person cannot simultaneously act as the person in charge of commanding the security organisation and responsible for the alerting functions.

Chapter 5 Threats

Section 13 Actions to be taken when under threat

1. Immediate action commensurate with the situation shall be taken during a threat.
2. Whenever a threat has been detected, the alarm shall be raised with the police immediately. Information on the threat and its progress shall be submitted to the police as far as possible before they arrive at the scene.
3. When a threat has been detected, the person in charge of the security organisation will take control of measures preventing the threat. The Nuclear Energy Decree contains provisions concerning the transfer of leadership responsibility concerning security to the police.
4. The licensee shall appoint a sufficient number of persons with expertise in nuclear safety and radiation safety to assist the police. The licensee arranges the matters related to nuclear safety and radiation safety at the nuclear facility.

Section 14 Notification of the Radiation and Nuclear Safety Authority (STUK)

1. The Radiation and Nuclear Safety Authority (STUK) shall be notified without delay when a threat arises. The licensee shall ensure that the Radiation and Nuclear Safety Authority (STUK) is kept informed of the threat and its progress, even in cases where the security organisation command is committed to activities aimed at preventing the realisation of the threat.

Chapter 6 Miscellaneous provisions

Section 15 Drafting of plans

1. Plans on security, and measures to prepare for threats, shall be prepared in cooperation with the appropriate police authorities.

Section 16 Obligation to observe confidentiality and secrecy

1. Provisions on the obligation to observe confidentiality and secrecy are laid down in section 78 of the Nuclear Energy Act and sections 14 and 41 of the Private Security Services Act.

Chapter 7 Entry into force and transitional provisions

Section 17 Entry into force

1. This regulation enters into force on 1 January 2016.
2. Upon the entry into force, this regulation shall be applied to any pending matters.

Helsinki, 22 December 2015

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Availability of the regulation, guidance and advice

This regulation has been published as part of the regulations issued by the Radiation and Nuclear Safety Authority (STUK) and it is available from the Radiation and Nuclear Safety Authority.

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