APPROVED BY
Order No. 22.3-37
of the Head of State Nuclear Power Inspectorate
of 4 April 2012

NUCLEAR SAFETY REQUIREMENTS BSR-1.6.1-2012 PHYSICAL SECURITY OF NUCLEAR FACILITIES, NUCLEAR MATERIAL AND NUCLEAR FUEL CYCLE MATERIAL

I. GENERAL PROVISIONS

1. Nuclear Safety Requirements BSR-1.6.1-2012 "Physical Security of Nuclear Facilities, Nuclear Material and Nuclear Fuel Cycle Material" ("Requirements") shall establish how and with what measures the applicants who seek to receive licences indicated in Article 22 (1) of the Law on Nuclear Safety of the Republic of Lithuania (Official Gazette, 2011, No. 91-4316) ("Applicant") or holders of such licences ("Licence") must ensure the physical security of nuclear facilities, physical security while purchasing, owning, using and transporting nuclear materials in the amounts established in Appendix 1 of the Law on Nuclear Safety of the Republic of Lithuania ("Nuclear material") and physical security of nuclear fuel cycle material during its transport. These requirements shall be compulsory to natural persons, state and municipality institutions and bodies and other legal persons ensuring and/or participating in the assurance of the physical security of nuclear facilities, nuclear material and/or nuclear fuel cycle material.

2. Upon agreeing that with State Nuclear Power Safety Inspectorate (VATESI), Articles 16.2, 16.3, 18.3 and 21 of these Requirements may not apply to a nuclear facility that does not use nuclear energy for the production of electricity and heat and that does not have vital equipment. Submitting an application to exempt from Articles 16.2, 16.3, 18.3 and 21 of these Requirements, an Applicant or a licence holder must justify that physical security objectives will be achieved with the present and planned organisational and technical measures of the physical security. A decision on the exemption from the above-indicated articles shall be made by the Head of VATESI following the terms established in Article 34 of the Law on Nuclear Safety of the Republic of Lithuania.

II. REFERENCES

3. The Requirements contain references to the following legal acts:

3.1. The Law on Nuclear Safety of the Republic of Lithuania;

3.2. The Law on Nuclear Energy of the Republic of Lithuania (Official Gazette, 1996, No. 119-2771; 2012, No. 91-4314);

3.3. The Law on Radiation Protection of the Republic of Lithuania (Official Gazette, 1999, No. 11-239);

3.4. The Law on Radioactive Waste Management of the Republic of Lithuania (Official Gazette, 1999, No. 50-1600; 2011, No. 91-4318);

3.5. The Law on Civil Protection of the Republic of Lithuania (Official Gazette, 1998, No. 115-3230; 2009, No. 159-7207);

3.6. The Law on State and Official Secrets of the Republic of Lithuania (Official Gazette, 1999, No. 105-3019; 2004, No. 4-29);

3.7. Nuclear Safety Requirements BSR-1.1.1-2011 “Rules of Procedure for Drafting of Nuclear Safety Requirements and Nuclear Safety Rules”, approved by Order No. 22.3-58 of the Head of VATESI of15 June 2009 (Official Gazette, 2009, No. 74-3052; 2011, No. 107-5082);

3.8. Nuclear Safety Requirements BSR-1.4.1-2010 “Management System Requirements”, approved by Order No. 22.3-56 of the Head of VATESI of 21 June 2010 (Official Gazette, 2010, No. 75-3852);

3.9. Nuclear Safety Requirements BSR-2.1.2-2010 “Common Requirements for Safety Assurance of Nuclear Power Plants with RBMK-1500 Type Reactors” approved by Order No. 22.3-16 of the Head of VATESI of 5 February 2010 (Official Gazette, 2010, No. 20-961);

3.10. Nuclear Safety Requirements BSR-1.8.1-2010 “Requirements for Provision of Information on Extraordinary Events in Nuclear Power Plants” approved by Order No. 22.3-60 of the Head of VATESI of 2010 July 30 (Official Gazette, 2010, No. 94-4975);

3.11. Procedure description on Exchange of Information on Extraordinary Situation or Extraordinary Event, approved by Oder No. 1V-114 of the Minister of Interior of the Republic of Lithuania of 30 March 2007 (Official Gazette, 2007, No. 40-1515; 2010, No. 94-4963);

3.12. Requirements for Analysis of Explosion and Plane Crash Effect on Nuclear Facilities, P-2005-02, approved by Order No. 22.3-72 of the Head of VATESI of 30 December 2005 (Official Gazette, 2006, No. 18-654).

III. DEFINITIONS

4. The following definitions shall apply in these Requirements:

Alarm station means a room or premises with specialised workplaces and telecommunications infrastructure for assurance of physical security where alarm signals shall be registered, controlled and evaluated, two way communication maintained with response forces and, if necessary, other personnel of the physical security system.

Physical security system means a whole of organisational and technical measures intended for protection of a nuclear facility, nuclear material and/or nuclear fuel cycle material against unauthorised activities.

Worker of physical security system means a person whose main responsibility is to ensure the physical security of the nuclear facility, nuclear material and/or nuclear fuel cycle material.

Physical barrier means a mesh or a blind fence, building walls, ceiling or floor made from stone, bricks, slag-concrete blocks, concrete, steel, or other similar materials or walls of similar structure (that are not parts of the building), or any other physical fencing constructed in such a way and from such materials that adversaries would be maximally delayed.

Armed security escort means an armed person or a group of armed persons who are properly prepared and whose main task is to ensure protection of nuclear material and/or nuclear fuel cycle material cargo transported via the territory of the Republic of Lithuania.

Isolating area means an area fenced with physical barriers inwards from the perimeter of the protected zone with installed video surveillance and alarm systems to detect persons or other subjects that accessed the area. The isolating area is a part of the protected zone.

Vital zone shall be defined as a nuclear facility protection zone where vital equipment is installed.

Vital equipment means the structures, systems and components important to safety of a nuclear facility that, if involved in an unauthorised activity in a nuclear facility, could directly cause a nuclear or radiological accident during which the possible annual effective dose to citizens would exceed 10

milisieverts (mSv) and the possible annual effective dose to the workers would exceed 100 milisieverts (mSv).

Checkpoint means an area where accessing and exiting persons and vehicles as well as transported items and nuclear material and/or nuclear fuel cycle material cargos are checked.

Visitors means all persons who legally access a nuclear facility or premises and area of a person who performs activities related to nuclear material and/or nuclear fuel cycle material or a conveyance that transports a nuclear material and/or nuclear fuel cycle material cargo, except workers of a licence holder, contractor (subcontractor), supplier (subsupplier), workers of a physical security system, workers of emergency services, personnel of state regulation and supervision institutions, and specialists and experts from the invoked organisations who perform their official responsibilities.

Unauthorised activity means activities during the performance of which or conscious omission of the performance of which, nuclear material and/or nuclear fuel cycle material or other radioactive material are seized and/or used; a nuclear facility or a conveyance with nuclear material and/or nuclear fuel cycle material are entered without a permission or the said facility or conveyance are seized; structures, systems and components important to safety of the nuclear facility are deliberately damaged or the normal operation of the nuclear facility is disturbed in any other way; the physical security system is deliberately damaged; and an attempt to perform such activities.

Normal operation of a nuclear facility means the operation of a nuclear facility that meets operational limits and conditions set in the design documentation.

Escort of visitors means workers of a licence holder or a physical security system who are appointed to escort visitors.

Perimeter means the external boundary of a protection zone of a nuclear facility.

Contractor means a legal or natural person with whom a contract of service or work purchase has been drawn up.

Response forces means forces in a nuclear facility or in premises, territory or conveyances of a person who performs activities related to nuclear material and/or nuclear fuel cycle material or the forces of interior statutory bodies, other forces or institutions that could be invoked following the manner and cases prescribed by the law in order to prevent unauthorised activities.

Alarm system means a technical measure of telecommunications infrastructure designed to detect unauthorised activities and audibly and/or visually inform about such activities the workers of the physical security system and, if necessary, other workers of the licence holder.

Subcontractor means any other person invoked by the contractor to perform a part of the work or service purchasing contract.

Subsupplier means any other person invoked by the supplier to perform a part of the item purchasing contract.

Important equipment means the structures, systems and components important to safety of a nuclear facility that, in the case of unauthorised activities with them in the nuclear facility, could cause a nuclear incident or a radiological incident during which the possible annual effective dose would exceed 0.2 milisieverts (mSv) to citizens or 50 milisieverst (mSv) to the workers.

Supplier means a legal person with whom a goods purchase contract has been drawn up.

Transport control centre means an action control centre established by a shipper or a receiver of a nuclear material and/or nuclear fuel cycle material cargo that stays connected with armed security escort, constantly supervises movement of the cargo and receives notifications on attacks, unauthorised possession and/or use, passes the said notifications to state regulatory and supervision institutions, and may coordinate actions of response forces.

The inner zone means a nuclear facility protection zone where important equipment is installed.

5. The other definitions used in these Requirements shall be interpreted as defined by the legal acts indicated in Articles 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7 and 3.8 of these Requirements.

IV. OBJECTIVES AND ORGANISATION OF PHYSICAL SECURITY

6. Physical security objectives are established in Article 33 of the Law on Nuclear Safety of the Republic of Lithuania.

7. The essential principles of physical security are the following:

7.1. It shall be compulsory to pay appropriate attention to physical security culture, its development and maintenance as a necessary factor while ensuring effective implementation of physical security objectives;

7.2. Requirements for the physical security are differentiated depending on the design basis threat, categories of nuclear material and possible consequences in case of unauthorized possession or use of nuclear material and/or nuclear fuel cycle material and in case of unauthorised activities in respect of a nuclear facility, nuclear material and/or nuclear fuel cycle material;

7.3. When organising and ensuring the physical security of a nuclear facility, nuclear material and/or nuclear fuel cycle material, the defence in depth principle must be followed, i.e. several levels of physical security must be developed.

8. Physical security system:

8.1. An applicant or a licence holder shall be reliable for development, installation and appropriate operation of the physical security system;

8.2. A physical security system shall consist of organisational and technical measures designed to achieve the goals set for physical security;

8.3. A designed and installed physical security system must prevent from adversaries and their intentions foreseen in the design basis threat document;

8.4. An applicant or a licence holder must ensure that the physical security system would meet the requirements of nuclear, technical, and work safety, radiation protection, fire safety and civil safety approved by state regulation and supervision institutions;

8.5. In case of emergencies, forces of interior statutory institutions and, if necessary, Lithuanian military units shall be invoked in the manner prescribed by law to ensure the physical security.

9. Division of a nuclear facility into nuclear facility protection zones (“Protection zones”):

9.1. Analysis of the division of the designed nuclear facility into protection zones must be performed prior to designing the physical security system of the nuclear facility;

9.2. During the analysis of the division of the designed nuclear facility into protection zones, considering characteristics of the nuclear facility, planned and performed activities in the nuclear facility, and the design basis threat, the following must be evaluated:

9.2.1. Initial events that could indirectly influence the increase of the annual effective dose to citizens and the workers (e.g. an initial event that occurred due to an unauthorised activity and that may be the cause of the damage made to a structure, system and component important to safety of the nuclear facility (“SSC IS of the NF”) when the said damage will influence the increase of the annual effective dose). For identification and evaluation of such events, deterministic safety analysis and/or probabilistic safety analysis should be applied;

9.2.2. Initial events that may directly influence, i.e. due to the use of an external energy source (e.g. explosive materials or an incendiary device), the increase of the annual effective dose to citizens and

the workers (e.g. damage the core using explosive materials when such damage will directly influence the increase of the annual effective dose);

9.2.3. Which SSCs important to safety of the NF must be indicated as important equipment and which must be indicated as vital equipment. Vital equipment must be used only in a vital zone, and important equipment may be used in an inner zone or a vital zone.

9.3. When evaluating the effect of an external energy source provided for in Article 9.2.2 of these Requirements, an applicant or a licence holder must follow the requirements indicated in Article 3.12 of these Requirements;

9.4. In case a nuclear facility is subject to the requirements indicated in Article 3.9 of these Requirements, Safety Class 1 SSCs important to safety of the NF must be attributed to vital equipment. Safety Class 2 and 3 SSCs important to safety of the NF may be attributed to important equipment;

9.5. In the analysis of the division of the nuclear facility into protection zones, all protection zones must be listed and clearly defined;

9.6. The analysis of the division of the nuclear facility into protection zones must be reviewed periodically at least once in three years after the issuance of the licence and also if the design basis threat has changed;

9.7. The analysis of the division of the nuclear facility into protection zones areas must be approved by VATESI. The approval decision shall be made by the Head of VATESI following the terms indicated in Chapter 34 of the Law on Nuclear Safety of the Republic of Lithuania. An applicant or a licence holder shall be informed on the decision by a letter. In case the decision is not to approve the analysis of the division of the nuclear facility into protection zones, the motifs of such decision shall be named in the said letter. In case the decision is to approve the analysis of the division of the nuclear facility into protection zones, the letter shall indicate that the decision on the approval will be sent as a separate letter after the stamp duty will be paid in the manner prescribed by legal acts;

9.8. Following the approval of the analysis of the division of the nuclear facility into protection zones, the applicant or the licence holder must approve a list of protection zones and premises that contain the protection zones, and provide it to VATESI.

10. Preparation, review, update, and coordination of a physical security assurance plan:

10.1. It is necessary to prepare a physical security assurance plan that would describe organisational and technical measures of physical security assurance. During preparation of the physical security assurance plan, it is obligatory to follow the procedure for preparation of a physical security assurance plan established by the Head of VATESI that establishes the structure and content of the physical security assurance plan;

10.2. The physical security assurance plan must be reviewed and updated following the terms and conditions established in Article 21(8) of the Law on Nuclear Safety of the Republic of Lithuania;

10.3. When the physical security assurance plan is prepared for the first time, or reviewed and updated, it must be approved by VATESI. When the physical security assurance plan is prepared for the first time, or reviewed and updated, it must be submitted to VATESI in three copies; the Head of VATESI shall transfer two of the copies to the Ministry of Interior of the Republic of Lithuania (“Ministry of Interior”) and to the State Security Department of the Republic of Lithuania (“State Security Department”) for conclusions. The Ministry of Interior and the State Security Department shall evaluate, within their competence, the physical security assurance plan and give the conclusion to VATESI no later than one month after the receipt of the physical security assurance plan. In case

the Ministry of Interior and the State Security Department do not provide conclusions, it shall be deemed that the conclusion is positive;

10.4. After positive conclusions are received from the Ministry of Interior and the State Security Department, the Head of VATESI shall make a decision on approval of the physical security assurance plan following the terms set in Article 34 of the Law on Nuclear Safety of the Republic of Lithuania. The licence holder shall be informed on the decision by a letter. In case the decision is not to approve the reviewed and updated physical security assurance plan, the motifs of such decision shall be named in the said letter. In case the decision is to approve the reviewed and updated physical security assurance plan, the letter shall indicate that the decision on the approval will be sent as a separate letter after the stamp duty will be paid in the manner prescribed by legal acts.

11. Organisational measures of a physical security system:

11.1. An applicant or a licence holder must establish a physical security policy, i.e. purpose (objectives), priorities, action lines and key principles officially expressed by the management in the field of the physical security of nuclear facilities, nuclear material and/or nuclear fuel cycle material;

11.2. An applicant or a licence holder must have approved normative documentation ("Normative technical documentation") of the licence holder regulating the assurance of the physical security.

12. Technical measures of a physical security system:

12.1. Alarm system, communication means, physical barriers and other security related systems must be installed;

12.2. Technical measures must be checked and maintained in order for them to operate appropriately. Operation of alarm system, communication means and other security related systems must be checked at least once a month;

12.3. In case of failure or in other cases when alarm system, communication means, physical barriers or other security related systems do not work, compensating measures must be used, including additional technical and/or organisational measures. Compensating measures are considered as temporary measures that compensate the lost functions of faulty alarm system, communication means, physical barriers and other security related systems.

13. Evaluation of the effectiveness of a physical security system of a nuclear facility:

13.1. An applicant who provides an application to obtain the licence indicated in Article 22(1)(2, 4, or 5) of the Law on Nuclear Safety of the Republic of Lithuania or a holder of the licence indicated in Article 22(1)(3) of the Law on Nuclear Safety of the Republic of Lithuania who provides an application to obtain the permission indicated in Article 22(2)(1 or 2) of the Law on Nuclear Safety of the Republic of Lithuania must perform evaluation of the effectiveness of the entire physical security system installed in the nuclear facility following the effectiveness evaluation programme provided theretofore to VATESI in the manner prescribed by legal acts;

13.2. Evaluation of the physical security system effectiveness must be performed considering the design basis threat and must include possible vulnerability of the physical security system and actions of the response forces;

13.3. Periodic evaluation of the effectiveness of the whole physical security system installed in the nuclear facility must be performed at least once in two years and after the design basis threat changes following the effectiveness evaluation programme theretofore approved by VATESI;

13.4. After evaluation of the effectiveness of the physical security system of the nuclear facility, an effectiveness evaluation report shall be prepared, a conclusion shall be made, and a plan for elimination of the assessed vulnerabilities and discrepancies shall be prepared based on the said conclusion. After the periodic evaluation indicated in Article 13.3 of these Requirements, a prepared effectiveness

evaluation report together with a plan for the elimination of the assessed vulnerabilities and discrepancies must be submitted to VATESI not later than after a month from the performance of the evaluation. The Head of VATESI shall take a decision on the approval of the plan for elimination of the assessed vulnerabilities and discrepancies following the terms established in Article 34 of the Law on Nuclear Safety of the Republic of Lithuania.

14. Protection of information and data:

14.1. During organisation and assurance of the physical security of a nuclear facility, nuclear material and/or nuclear fuel cycle material, the need-to-know principle, which is defined in the legal act indicated in Article 3.6 of these Requirements, must be followed. Classified information on a physical security system may be accessible only to persons who have permission to work with or to learn the classified information and it is necessary for their official duties. The said persons must be introduced to the required classified documentation and know how to satisfy the requirements set down therein;

14.2. Capability of physical security computer and information systems of the nuclear facility to remain resistant to accidental events or unauthorised actions that could pose danger to confidentiality, integrity, and accessibility of collected, stored, processed and transferred information or data must be ensured;

14.3. Work with classified information shall be performed following the provisions of the legal act indicated in Article 3.6 of these Requirements and other legal acts implementing the legal act indicated in Article 3.6 of these Requirements.

15. Communication of information on incidents related to the physical security:

15.1. A licence holder must immediately inform VATESI and the State Security Department on the following incidents not later than in one hour:

15.1.1. Unauthorized possession and/or use of nuclear material, nuclear fuel cycle material and other radioactive materials or other loss of materials;

15.1.2. Unsanctioned access of persons into the nuclear facility or the conveyance wherein a nuclear material or/and nuclear fuel cycle material cargo is loaded (“Cargo”);

15.1.3. Deliberate damage of SSCs important to safety of the NF or other deliberate disturbance of normal operation of the nuclear facility;

15.1.4. Deliberate damage of the physical security system or deliberate violation of other requirements of the physical security;

15.1.5. An attempt to perform activities indicated in Articles 15.1.1, 15.1.2, 15.1.3, and 15.1.4 of these Requirements.

15.2. In addition to the requirements indicated in Article 15.1 of these Requirements, additional provisions of the legal act indicated in Article 3.10 of these Requirements and, in the case of extreme accidents and/or extreme situations, provisions of the legal act indicated in Article 3.11 apply to a nuclear power plant;

15.3. Not later than during a month after the end of every quarter of every year, VATESI and the State Security Department shall be submitted with a report on the incidents of the previous quarter related to:

15.3.1. Arrest of persons showing signs of alcohol, drug, psychotropic, or other psychoactive substance use in the nuclear facility, the construction site of the nuclear facility or the conveyance with a nuclear material cargo;

15.3.2. Attempt of persons showing signs of alcohol, drug, psychotropic, or other psychoactive substance use to enter the nuclear facility, the construction site of the nuclear facility or the conveyance with a nuclear material cargo;

15.3.3. Violations of the procedures for issuance and use of the permissions for persons and vehicles;

15.3.4. Violations of the inspection procedure established for persons, vehicles and transported goods and shipments entering and leaving via the checkpoint;

15.3.5. Violations of the procedure established for goods transported via the checkpoint;

15.3.6. Violations of filming and photographing procedure.

15.4. Procedure of communication of information on the physical security to media representatives and the public must be established.

V. REQUIREMENTS FOR PHYSICAL SECURITY OF A NUCLEAR FACILITY

16. Protection zones:

16.1. In order to ensure implementation of the defence-in-depth principle, a nuclear facility must be divided into protection zones:

16.1.1. The restricted access zone;

16.1.2. The protected zone;

16.1.3. The inner zone;

16.1.4. The vital zone.

16.2. Physical barriers of the vital zone, the inner zone, and the protected zone or parts of the said barriers may not coincide;

16.3. Important equipment of the nuclear facility must be at least behind two physical barriers, and vital equipment must be at least behind three physical barriers.

17. The restricted access zone:

17.1. The boundaries of the restricted access zone beside the public traffic roads must be marked using warning signs that would warn about the access to the restricted access zone. The warning signs must be installed and maintained by the licence holder;

17.2. Within the restricted access zone along the perimeter of the protected zone there must be a strip of land without any structures, installations, vegetation or other obstacles that could be used for unauthorised access into the protected zone through the physical barrier or walking around it. The width of the strip of land, in case other legal acts do not establish it, shall be established and justified by the applicant or the licence holder in the analysis of the division of the protection zones of the nuclear facility considering the design basis threat;

17.3. Vehicles of the workers of the licence holder, the contractor (subcontractor), the supplier (subsupplier) and visitors of the nuclear facility may be parked in the restricted access zone, yet in such a distance from the protected zone and behind such physical barriers that it would be impossible to use the vehicles of the persons indicated in this article for unauthorised access into the protected zone, to walk around physical barriers or damage them.

18. The protected zone:

18.1. The physical barrier, which must surround the nuclear facility along the protected zone perimeter, must be such that it would allow assurance of the control over the access to the protected zone and would provide maximum delay to an adversary to allow the response forces to timely prevent the actions of the adversary;

18.2. In the perimeter of the protected zone, including the structures that constitute the perimeter, and in all points through which access to the protected zone is possible, an alarm system must be installed that would at any time allow the following:

18.2.1. Detecting an attempt of unauthorised entering into the protected zone and unauthorised exit from the protected zone;

18.2.2. Detecting illegal attempts to disturb operation of the alarm system itself;

18.2.3. Identifying the alarm place timely and precisely.

18.3. The protected zone shall be subject to patrolling.

19. The inner zone:

19.1. The inner zone must be surrounded by the physical barrier that would allow ensuring control over the access to the inner zone and would provide maximum delay to an adversary to allow the response forces to timely prevent the actions of the adversary;

19.2. In the perimeter of the inner zone, except the walls of the constructions, and in all points through which access to the protected zone is possible, an alarm system must be installed that would at any time allow the following:

19.2.1. Detecting an attempt of unauthorised entering into the inner zone and unauthorised exit from the inner zone;

19.2.2. Detecting illegal attempts to disturb operation of the alarm system itself;

19.2.3. Identifying the alarm place timely and precisely.

20. The vital zone:

20.1. The vital zone must be surrounded by the physical barrier that would allow ensuring control over the access to the vital zone and would provide maximum delay to an adversary to allow the response forces to timely prevent the actions of the adversary;

20.2. In the perimeter of the vital zone, an alarm system must be installed that would at any time allow the following:

20.2.1. Detecting an attempt of unauthorised entering into the vital zone and unauthorised exit from the vital zone;

20.2.2. Detecting unauthorised activities in the vital zone and by the physical barriers of the said zone;

20.2.3. Detecting illegal attempts to disturb operation of the alarm system itself;

20.2.4. Identifying the alarm place timely and precisely.

20.3. Alarm signals of the vital zone must be sent in the formats of audio and video data to the central alarm station and to the backup alarm station that keep watch 24 hours a day.

21. In the nuclear facility, inwards from the perimeter of the protected zone, the isolating area must be installed:

21.1. In the isolating area, at least two alarm systems of independent types must be installed that would operate according to different physical principles, and at least one system of these types must be designed for surveillance of the physical space of the territory. The requirements shall not be imposed on the checkpoint in the isolating area wherein the workers of the physical security system constantly keep watch;

21.2. The isolating area must be well-illuminated, wide and supervised in such a way that persons who have accessed the area and other objects could be easily detected. Any activity shall be prohibited in the isolating area, except for supervision of the area itself and testing and supervision of the technical protection measures installed herein. In the isolating area, there must be no structures, installations or other objects and vegetation that could be used for unauthorised walking around the isolating area and

that could prevent the alarm system measures from functioning and detecting unauthorised persons and objects in this area.

21.3. An attempt of unauthorised access or unauthorised access into the isolating area must be detected timely and effectively so that, after assessment of the situation, immediate actions of the response forces could be ensured.

22. Issuance of permissions to access the nuclear facility:

22.1. A procedure for issuance of permissions to persons and vehicles to enter the protected zone, the inner zone and the vital zone must be established and approved by VATESI. Upon receipt of the procedure for issuance of permissions for the approval, the Head of VATESI shall immediately transfer it to the Ministry of Interior and to the State Security Department for conclusions. The Head of VATESI shall make a decision on the approval of the procedure for issuance of permissions following the terms defined in Article 34 of the Law on Nuclear Safety of the Republic of Lithuania;

22.2. The permission to enter the protected zone and/or the inner zone, and/or the vital zone without escort may be issued to the workers of the licence holder, the workers of the response forces that protect the nuclear facility, the workers of the contractor (subcontractor), supplier (subsupplier) or state regulation and supervision institutions and specialists and experts from the invoked organisations only if the State Security Department provides the conclusion as indicated in Article 36 of the Law on Nuclear Energetics of the Republic of Lithuania;

22.3. Permissions of all types to enter the protected zone and/or the inner zone, and/or the vital zone must be issued only for such period of time and under such conditions that the licence holder considers necessary in order to ensure normal operation of the nuclear facility;

22.4. Timely access to the protected zone, the inner zone and the vital zone must be provided for:

22.4.1. The workers of state regulatory and supervision institutions and specialists and experts of the invoked organisations to perform their duties;

22.4.2. The inspectors of the International Atomic Energy Agency (IAEA) and the European Atomic Energy Community (“Euratom”) in case they have the right and authorisation to visit the nuclear facility.

22.5. A list of workers who may enter any room of the vital zone must be prepared and reviewed at least once a year. The list must include only the persons who work therein permanently and the number of the said persons must be kept to the minimum, yet not lower than it is necessary to ensure the normal operation of the nuclear facility;

22.6. While in the nuclear facility, all persons must wear the badge with their photograph in a clearly visible place. The badge of persons who have no right to enter the protected zone and/or the inner zone, and/or the vital zone without escort (the photograph unnecessary) must clearly indicate hereof;

22.7. The permission for a vehicle to enter the protected zone and/or the inner zone, and/or the vital zone may be cancelled if the licence holder has a reason to suspect that the vehicle, being in the protected zone, the inner zone or the vital zone, poses or may pose danger to normal operation of the nuclear facility. The permission to a worker of the licence holder or to other persons who were issued a permission in the manner prescribed by legal acts to access the protected zone and/or the inner zone, and/or the vital zone also to VATESI officers and officers of other state regulation and supervision institutions shall be cancelled in the cases indicated in Article 36 of the Law on Nuclear Energy of the Republic of Lithuania.

23. Control of the access to the protected zone, the inner zone and the vital zone:

23.1. In order to search persons and vehicles entering and leaving the protected zone, a checkpoint for pedestrians and vehicles must be constructed;

23.2. An inspection procedure of persons and vehicles entering and leaving via the checkpoint as well as of objects and cargos transported via the checkpoint must be established;

23.3. The system controlling the access to the protected zone, the inner zone and the vital zone, including organisational or technical measures, must ensure the following:

23.3.1. Only persons and vehicles with such rights would be allowed to enter and leave the zones;

23.3.2. An attempt of unauthorised access into the protection zones would be detected, and the persons attempting unauthorised access to the zones would be arrested;

23.3.3. An attempt of unauthorised transport of prohibited objects and materials (weapons, explosives, radioactive materials and other tools or materials provided for in the design basis threat) to the site of the nuclear facility would be detected and the said objects and materials would be arrested;

23.3.4. An attempt of unauthorised transport of prohibited objects and materials (nuclear material, nuclear fuel cycle material, and other radioactive materials) from the site of the nuclear facility would be detected and the said objects and materials would be arrested;

23.3.5. The alarm signal would be sent to the alarm station where a violation may be assessed and, if necessary, the response forces would be alerted immediately.

23.4. The doors, gates, windows and other points of the protected zone, the inner zone and the vital zone through which it may be possible to access the protected zone, the inner zone and the vital zone and their opening and closing procedures must ensure that no person or vehicle will illegally enter and leave the protected zone, the inner zone and the vital zone or illegally transport prohibited objects or materials into or from the protected zone, the inner zone and the vital zone through the doors, gates, windows and other points of the protected zone, the inner zone and the vital zone.

23.5. Procedure for opening the doors, gates, and other points in the case of an accident or in the case of a possible accident must be established;

23.6. The control procedures of the vehicles, including inspection in the checkpoint and the escort in the protected zone as well as the system of physical barriers, must be such that a vehicle could not be used for impermissible approach to the inner zone and the vital zone, and that it would be impossible to use the said vehicles for unauthorised possession and/or use of or other unauthorised activities with nuclear material and/or nuclear fuel cycle material or equipment that ensure normal operation of the nuclear facility;

23.7. Only the driver and the person escorting the transported tangible asset, both having permits, can drive into/drive out from the protected zone with the vehicle; all other passengers must pass the checkpoint for pedestrians. An exception may be made to special vehicles and emergency vehicles (cars of nuclear facility security, police, ambulance, response forces, fire and rescue forces, etc.) arriving on-call (the exception procedure must be established by the applicant or the licence holder).

23.8. The IAEA property and asset may be inspected only using technical measures that would not damage and/or break the said property and asset (including packaging and sealing). Irrespective of the location and the persons legally disposing the property and asset, the property and asset shall be exempt from search, requisition, confiscation, expropriation and interference in any other ways. Personal effects (not the IAEA property or asset) of the IAEA inspectors shall be inspected following the general procedure;

23.9. The Euratom asset may be inspected only using technical measures that would not damage and/or break the said asset (including packaging and sealing). Without a permit from the Court of

Justice of the European Communities, the Euratom property and asset shall not be subject to legal measure of constraint. Personal effects (not the Euratom asset) of the Euratom inspectors shall be inspected following the general procedure established by these Requirements.

24. Escort of visitors:

24.1. Visitors must be allowed into the nuclear facility only with the escort;

24.2. The IAEA and Euratom inspectors in the protected zone, the inner zone, or the vital zone as well as the workers of state regulation and supervision institutions and their invoked specialists and experts from other organisations in the inner zone and the vital zone must be escorted unless legal acts indicate otherwise;

24.3. The licence holder may make a separate (written) decision that permanent authorised VATESI public service employees and workers who work under an employment contract, as appointed by the Head of VATESI, and who perform permanent supervision of the nuclear facility in the site of the nuclear facility in the manner prescribed by the Head of VATESI, and who have permission to access protection zones without being escorted are allowed to be present in the inner zone and/or the vital zone without the escort.

25. Visiting the nuclear facility:

25.1. A room beyond the boundaries of the protected zone must be devoted for reception of nuclear facility visitors;

25.2. A procedure for visitor admission to the nuclear facility must be established;

25.3. A procedure for filming and taking photographs in the nuclear facility must be established and approved by VATESI. Upon receipt of the procedure for filming and taking photographs for approval, the Head of VATESI shall immediately transfer it to the Ministry of Interior and the State Security Department for conclusions. A decision on approval of the procedure for filming and taking photographs shall be made by the Head of VATESI following the terms established in Article 34 of the Law on Nuclear Safety of the Republic of Lithuania.

26. Surveillance and prevention:

26.1. In order to prevent unauthorised possession and/or use of and other unauthorised activities with nuclear material and/or nuclear fuel cycle material or installations that ensure normal operation of the nuclear facility, the whole perimeter of the protected zone and gates, turnstiles and doors for access into the protected zone and other places of the nuclear facility must be under the surveillance so that it would be possible to detect precisely the cause of the alarm and notice an unauthorised activity;

26.2. Upon detection of unauthorised persons or vehicles in the protected zone, the inner zone or the vital zone, or persons trying to penetrate into the said zones, or upon identification of their suspicious behaviour in the restricted access zone, the protected zone, the inner zone or the vital zone, workers of the physical security system must arrest such persons or vehicles, perform inspection of such persons or vehicles and take necessary actions to prevent possibly unauthorised activities;

26.3. All alarm signals must be registered in the alarm station. Data on the alarm signal must be collected and stored for at least 10 years;

26.4. All the information recorded by the video surveillance system must be saved into appropriate medium and stored for at least 31 day;

26.5. Upon the shutdown of the nuclear reactor or during maintenance in the nuclear facility, the control over access to the premises of the vital zone must remain the same as it is established in Article 23 of these Requirements. Before the start-up of the nuclear reactor after its shutdown or maintenance in the nuclear facility, the premises of the vital zone must be searched for illegally

installed equipment or explosive materials that could damage or in some other way affect the vital equipment.

27. Workers of the physical security system:

27.1. Before appointing a person to the position that is related to the physical security, it must be made certain that the person will be able to perform the duty of a worker of the physical security system as it is provided for in the regulating legal acts;

27.2. Job descriptions of all workers of the physical security system must be prepared and approved. Rights, duties and responsibilities of the workers must be indicated in the job descriptions. All workers of the physical security system must be introduced to the job descriptions according to their position and must know them;

27.3. Normative technical documentation that provides for rights, duties and responsibilities of the response forces must be approved by joint orders of the applicant or the licence holder and the heads of the response forces.

28. Alarm station:

28.1. The central alarm station that is subject to the requirements established for the vital zone must be installed;

28.2. A backup alarm station must be installed in the nuclear facility containing important equipment and/or vital equipment, and/or storing nuclear materials of Category I and/or II;

28.3. Alarm stations shall be installed in the protected zone unless their functions may be more effectively performed in another location;

28.4. Alarm stations must be reinforced according to the design basis threat is such a way that their functions could be performed continuously;

28.5. Alarm stations must contain such equipment and such number of workers of the physical security system that it would be possible to constantly control the security situation in the nuclear facility;

28.6. At least one person must be always present in the alarm station, who has the right to make decisions relating to security organisation or actions of the response forces in the case of an attempt of unauthorised access into the nuclear facility or in the case of unauthorised access into the nuclear facility, in the case of attempted unauthorized possession and/or use of nuclear material and/or nuclear fuel cycle material or equipment that ensures normal operation of the nuclear facility, also in case of other unauthorised activities, as well as threat to perform such unauthorised activities;

28.7. Alarm stations may be entered only by the workers of the physical security system during their working hours, the workers of state regulating and supervision institutions and their invoked specialist and experts of other organisations who perform their duties, and following the established procedure. The licence holder may grant the right to other persons to enter the alarm stations; however, the number of such persons must be kept to the minimum necessary.

29. Communication:

29.1. During their working hours, the workers of the physical security system of the nuclear facility must be given a possibility to maintain secure, continuous two way communication with the central alarm station and among themselves;

29.2. Continuous two way communication must be ensured between the officer in command of the nuclear facility security and the person responsible for control of the nuclear facility.

29.3. Communication with response forces must be ensured;

29.4. Alternative communication must be planned in case the main communication means would break down or fail due to some reasons. The main and the alternative communications must use different ways of data transmission (e.g. wired and wireless connections).

30. Training in the field of the physical security:

30.1. A plan for training and further training of the workers of the physical security system must be developed. Training and further training must be planned for at least one year. The licence holder must participate in the establishment of the requirements for response forces training and qualification;

30.2. Upon the employment in the nuclear facility, the persons must be introduced with confirmation by signature to unclassified normative technical documentation regulating internal procedure;

30.3. The workers of the licence holders, the contractor (subcontractor), the supplier (subsupplier) whose responsibilities are not directly related to the physical security must be trained in the field of physical security following the procedure established by the licence holder. The workers of the licence holder, the contractor (subcontractor), the supplier (subsupplier) must know how to act in case of an attempt of unauthorised access into the nuclear facility or in case of unauthorised access into the nuclear facility, in case of attempted unauthorised possession and/or use nuclear material and/or nuclear fuel cycle material or equipment that ensure normal operation of the nuclear facility, also in case of other unauthorised activities, as well as threat to perform such unauthorised activities.

VI. REQUIREMENTS FOR PHYSICAL SECURITY OF NUCLEAR MATERIAL DURING PURCHASE, STORAGE AND USE

31. Nuclear material categories for assurance of the physical security ("Nuclear material category"):

31.1. The nuclear material categories are defined according to the table of categorisation of nuclear materials provided in the Appendix of these Requirements;

31.2. Assuring the physical security of nuclear materials it is necessary to consider the category of the nuclear material;

32. The general requirements for the physical security of nuclear material during its purchase, storage and use are the following:

32.1. The licence holder shall be responsible for assurance of the physical security of the nuclear material. The licence holder must prepare the normative technical documentation regulating the physical security;

32.2. The nuclear material must be used and stored only in a room that has controlled access to it;

32.3. The number of entrance and exit points to such rooms must be kept to the minimum;

32.4. Organisational and/or technical means for detection of unauthorised penetration or an attempt to penetrate into the premises must be used and appropriate actions must be taken by the response forces to prevent the adversary's actions;

32.5. Organisational and/or technical means assuring that the nuclear material will not be seized and/or used in an unauthorised manner during emergency evacuation (including training) must be used;

32.6. A record must be kept of all persons who have access permissions upon their entrance and exit into/from the premises with nuclear material;

32.7. The workers must be informed on the significance of the physical securitry measures and must be introduced to the physical security instructions and rules;

32.8. The licence holder as well as the response forces must ensure that immediate measures would be taken to find and regain the nuclear material that was lost or seized in an unauthorised manner.

33. To ensure the physical security of the nuclear material that is not included into the table of nuclear material categorisation, the applied physical security requirements must not be lower than the requirements indicated in Articles 32.1, 32.2 and 32.4 of these Requirements. Application of other requirements of the physical security shall be subject to the applicant or the licence holder;

34. The physical security of Category III nuclear material shall be subject to the general requirements indicated in Article 32 of these Requirements;

35. The Category II nuclear material may be used and stored only in a building that meets the requirements of the physical security of the nuclear facility established in Chapter V of these Requirements. In order to ensure the defence in depth principle, such material must be used and stored at least behind two physical barriers;

36. The Category I nuclear material may be used and stored only in a building that meets the requirements of the physical security of the nuclear facility established in Chapter V of these Requirements. In order to ensure the defence in depth principle, such material must be used and stored at least behind three physical barriers.

VII. REQUIREMENTS FOR PHYSICAL SECURITY OF NUCLEAR MATERIAL AND NUCLEAR FUEL CYCLE MATERIAL DURING TRANSPORT

37. During transport of nuclear material and/or nuclear fuel cycle material, objectives of the physical security shall be reached by:

37.1. Shortening the time during which the nuclear material and/or nuclear fuel cycle material remain in transport;

37.2. Reducing number and duration of nuclear material and/or nuclear fuel cycle material transfers, i.e. transfer from one conveyance to another, transfer from/to a temporary storage while awaiting for the arrival of a conveyance, etc.;

37.3. Protecting nuclear material during transport and in temporary storage considering its categories;

37.4. Avoiding regular transport schedules of nuclear material and/or nuclear fuel cycle material;

37.5. Predetermining trustworthiness of all persons involved during transport of nuclear fuel cycle material;

37.6. Limiting advance knowledge about nuclear material and/or nuclear fuel cycle material transport information to the minimum number of persons necessary;

38. In order to ensure the physical security during transport of nuclear material and/or nuclear fuel material:

38.1. Organisational and technical measures must be used in order to protect information relating to transport operations of nuclear material and/or nuclear fuel cycle material, including detailed information on the schedule and route, conveyance, communication means, armed escort, response forces, and emergency plans;

38.2. Safety of the road must be considered when choosing the route, i.e. the road must bypass districts and/or areas of danger or of possible extreme situation, and consider capabilities of the response forces;

38.3. In case stopping for rest or sleep is inevitable during the cargo transport, it should be foreseen in the physical security assurance plan. During the time of rest or sleep, the conveyance with the nuclear material cargo must be protected considering the category of the nuclear material in transport. The requirements for the physical security of nuclear material during its protection are established in Chapter VI of these Requirements;

38.4. The shipper of the cargo must give the receiver advanced notification on the planned shipment specifying the mode of transport (road/rail/air transport), the estimated time of the shipment arrival and the exact point of handover;

38.5. All the doors of the cargo compartment of the conveyance or of the freight container as well as other points must be locked and sealed;

38.6. In order to prevent unauthorised activities, the shipper must perform a detailed inspection of the conveyance intended for the transport before the loading and dispatch of the shipment;

38.7. Upon receipt of the shipment, the receiver must examine if the locks and the seals are unbroken and accept the shipment immediately;

38.8. The receiver must inform the shipper of the arrival of the shipment immediately or of non-arrival within the agreed period of time after the estimated time of arrival;

38.9. The shipment of nuclear material must be escorted by armed security escort, and, considering the design basis threat, it must be sufficient to prevent the nuclear material from being seized and/or used or for other unauthorised activities;

38.10. The persons providing protection during transport of nuclear material and/or nuclear fuel cycle material must be given written instructions indicating their duties and functions during the transport of the nuclear material and/or nuclear fuel cycle material and understand the said instructions;

38.11. Before commencing an international shipment of nuclear material, the shipper must ensure that the performed actions are in accordance with the physical security requirements of the receiving State and other States which are transited and must follow the provisions of appropriate international agreements;

38.12. The agreements between the shipper and the receiver, in the case of an international shipment of the nuclear material, must clearly indicate the location where the shipper transfers the responsibility for the shipment's physical security to the receiver. Also provisions of appropriate international agreements must be followed.

39. To ensure the physical security of the shipment of nuclear fuel cycle material and/or nuclear material that is not included into the table of nuclear material categorisation indicated in the Annex of these Requirements, the applied physical security requirements for the physical security assurance must not be lower than the requirements indicated in Articles 38.1, 38.2, 38.3, 38.5, 38.7, 38.11, 38.12 of these Requirements. Decision on application of other physical security requirements during transport of nuclear material and/or nuclear fuel cycle material shall be made by the shipper of the nuclear material.

40. The physical securirty of Category III nuclear material shall be subject to the requirements indicated in Article 38 of these Requirements.

41. In addition to the requirements indicated in Article 38 of these Requirements, the following additional requirements apply to the physical security of Category II nuclear material:

41.1. The physical security assurance plan must contain the route including an alternative route, stopping place, shipment arrival route, handover, and identification procedures for the persons authorised to take over the shipment;

41.2. The chosen mode for the shipment transport must be such that the number of transfers during the transport and the transport duration itself would be kept to the minimum;

41.3. Nuclear material must be transported in a closed conveyance, in locked compartments or freight containers; however, a tied down and sealed shipment weighting more than 2 000 kg may be transported in an open vehicle.

42. In addition to the requirements indicated in Articles 38 and 41 of these Requirements, the following additional requirements apply to the physical security of Category I nuclear material:

42.1. The receiver must confirm readiness to accept delivery prior to commencement of the shipment;

42.2. During the shipment by road, rail or sea, there must be a transport control centre for the purpose of keeping track of the current position and security status, alerting response forces in case of an attack and maintaining continuous two way communication with the armed escort and the response forces;

42.2.1. Considering the design basis threat, the transport control centre must be prepared in such a way that it could constantly perform its functions;

42.2.2. While the consignment is in transport, qualified representatives of the shipper and the receiver, the response forces officer commanding the armed escort and the authorised persons of state regulation and supervision institutions whose trustworthiness was predetermined by the State Security Department must be present in the transport control centre;

42.2.3. The armed escort of the shipment must inform the transport control centre via two way communication means about every overnight stopping place, points of shipment hand-over and arrival at the destination.

42.3. Depending on the mode of transport, the following requirements also apply to Category I nuclear material:

42.3.1. Shipment by road:

42.3.1.1. The designated conveyance must be used exclusively for each consignment shipment. Depending on the design basis threat, it must be designed to resist attack;

42.3.1.2. The conveyance must be equipped with a conveyance disabling device that would prevent using the said conveyance in case of unauthorized possession and with equipment that would allow locating the conveyance at any time;

42.3.1.3. Each conveyance with the consignment must be accompanied by an appropriate number of armed escort and vehicles so that, depending on the design basis threat, it would be possible to prevent unauthorized possession and/or use of the nuclear material or other illegal activities;

42.3.1.4. Two way communication must be maintained between the conveyance, the armed escort vehicle(s) and the transport control centre.

42.3.2. Shipment by rail:

42.3.2.1. The consignment must be transported by a freight train in a special purpose wagon;

42.3.2.2. The armed escort of the consignment must be in the closest wagon to the consignment.

42.3.3. Shipment by water:

42.3.3.1. The consignment must be transported only by a cargo vessel intended for such purpose;

42.3.3.2. The consignment must be transported in a protected compartment or a freight container that is locked and sealed.

42.3.4. Shipment by air:

42.3.4.1. The shipment must be by aircraft designated for cargo only and on which the nuclear material is its sole cargo.

43. Transfer of nuclear material in the nuclear facility within the boundaries of the protected zone:

43.1. The licence holder shall be responsible for the physical security assurance of nuclear material while transferring it within the boundaries of the protected zone;

43.2. During the transfer of nuclear material within the boundaries of the protected zone, the applied physical security requirements must not be lower than the requirements indicated in Articles 37.1, 37.2, 37.3, 37.5 and 37.6 of these Requirements;

43.3. Requirements for nuclear material physical security during the transport must be satisfied during the transfer from or between two protected zones.

VIII. FINAL PROVISIONS

44. The licence holder and the response forces shall be responsible for fulfilment of the physical security requirements and, within their powers, shall ensure the physical security of nuclear facilities, nuclear material, and/or nuclear fuel cycle material.

45. Operation of a nuclear facility or performance of activities related to nuclear material and/or nuclear fuel cycle material shall be prohibited in case their physical security is not ensured.

46. Persons who violate these Requirements shall be held liable in accordance with the procedure established by the legal acts.

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