



**Republic of Lithuania**

**CONVENTION ON NUCLEAR SAFETY  
TENTH LITHUANIAN NATIONAL REPORT**

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Tenth Lithuanian National Report

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## Acronyms and abbreviations

ALARA	As Low As Reasonably Achievable
AMC	Accident Management Centre
CP	Contracting Party
CTBTO	Comprehensive Nuclear-Test-Ban Treaty Organization
ECURIE	European Community Urgent Radiological Information Exchange
EML	Environmental Monitoring Laboratory
ENSREG	European Nuclear Safety Regulators Group
ENSRA	European Nuclear Security Regulators Association
EPO	Emergency Preparedness Organization
EPP	Emergency Preparedness Plan
ERC	Emergency Response Centre
ESARDA	European Safeguards Research and Development Association
EU	European Union
EURATOM	European Atomic Energy Community
HERCA	Heads of the European Radiological Protection Competent Authorities
IAEA	International Atomic Energy Agency
IMS	Integrated Management System
INPP	Ignalina Nuclear Power Plant
NF	Nuclear Facility
NR	National Report
PAGD	Fire and Rescue Department
QA	Quality Assurance
RSC	Radiation Protection Centre
SEED	Site and External Events Design Review Service
SE INPP	State Enterprise Ignalina Nuclear Power Plant
SSC	Structures, Systems and Components
SS&QMD	Safety Surveillance and Quality Management Division
TSC	Technical Support Centre
TSO	Technical Support Organization
VATESI	State Nuclear Power Safety Inspectorate
WENRA	Western European Nuclear Regulators' Association

# Introduction

## About This Report

Republic of Lithuania signed the Convention on Nuclear Safety (CNS) on 23 March 1995. The CNS was ratified by Lithuania on 17 October 1995 and entered into force on 24 October 1996.

Lithuanian National Report is issued according to Article 5 of the CNS. The structure and content of this National Report was prepared taking into account recommendations provided in International Atomic Energy Agency (IAEA) Guidelines regarding National Reports under the Convention on Nuclear Safety INFCIRC/572/Rev.8 with particular consideration of the fact that the Ignalina Nuclear Power Plant is under decommissioning and **since the last Review Meeting is no longer considered as a nuclear installation under the CNS.**

This National Report fulfils Lithuania's obligations under Article 5 of the Convention on Nuclear Safety (CNS). It was prepared by the Lithuanian State Nuclear Power Safety Inspectorate (VATESI) with the contributions of:

- Ministry of Energy of the Republic of Lithuania;
- Ministry of Interior Affairs of the Republic of Lithuania;
- National Crisis Management Centre;
- Fire and Rescue Department under the Ministry of the Interior of the Republic of Lithuania;
- Radiation Protection Centre;
- State Enterprise Ignalina Nuclear Power Plant.

All information and data used in this National Report are as of 31 May, 2025 unless explicitly specified otherwise. This National Report as well as previous reports are available on the VATESI website: <https://vatesi.lrv.lt>.

Lithuania is a Category 4 Contracting Party to the CNS. Since there is no installation planned or in operation in Lithuania, only Articles 7, 8 and 16 are applicable. As part of the commitment to the principles of the CNS, this National Report also presents information on activities covered by Article 9, 10 and 15.

## Nuclear Programme in Lithuania

Lithuania is a Category 4 Contracting Party. As such, it has no nuclear installations subject to the CNS.

Lithuania's National Energy Independence Strategy, updated in 2024, foresees provisions for preparation of feasibility study on small modular reactors (SMR) project development.

## Summary

Information presented in this Report demonstrates that Republic of Lithuania fulfils its obligations under the CNS.

Lithuania is a Category 4 Contracting Party and has no nuclear installations in the context of CNS. The only Ignalina NPP, which has ceased being nuclear installation under CNS, is currently under decommissioning. This is the first time when Lithuania is reporting under the Convention as a country without nuclear installations. Maintaining safety during Ignalina NPP decommissioning and radioactive waste management is being further reported under the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management.

Since there is no installation planned or in operation in Lithuania, only Articles 7, 8 and 16 are applicable. As part of the commitment to the principles of the CNS, this National Report also presents information on activities covered by Article 9, 10 and 15.

## Responses to Applicable Challenges

During the Joint 8<sup>th</sup> and 9<sup>th</sup> CNS Review Meeting two challenges were identified for Lithuania:

**Challenge 1: Based on the performed analysis, the former emergency preparedness categories of the nuclear facilities in Lithuania should be reviewed and the emergency planning zones and emergency planning distances should be adjusted, reflecting the diminishing risk of nuclear facilities.**

The State Enterprise Ignalina Nuclear Power Plant has carried out an analysis of the consequences of nuclear and radiological accidents at the Ignalina NPP and other nuclear facilities and, on this basis, has updated the NF emergency preparedness categories and updated emergency preparedness plan of Ignalina NPP accordingly.

The proposals for updating the State plan for protection of population in case of a nuclear or radiological emergency (off-site plan) were submitted by VATESI to Ministry of Interior to update the emergency preparedness categories of nuclear facilities in the Plan and to specify the emergency preparedness zones and emergency planning distances of nuclear facilities managed by the SE Ignalina NPP. These questions will be discussed and considered while drafting National state crises and emergency management plan in accordance with the results of the National Risk Analysis which was performed in 2024. After these discussions State plan for protection of population in case of a nuclear or radiological emergency would be amended accordingly.

*The challenge is planned to be fully addressed by the end of 2026.*

**Challenge 2: All needed additional emergency preparedness measures have to be taken to deal with the potential consequences of a severe accident at nuclear installations situated in Ukraine.**

Lithuanian institutions responsible for emergency preparedness understand the concerns of the Lithuanian population regarding Russia's military actions against Ukrainian nuclear installations and provides explanations about the possible consequences of such military actions. Also, information about situation at Ukrainian nuclear installations is being published regularly. The key message to public is that civilian nuclear facilities are not designed for military operations and, therefore, should not under any circumstances become targets of such operations or be in the zone of such operations.

RSC implements continuous forecasting of possible accidental environmental discharges from neighboring nuclear installation's sites along with subsequent radiological consequences to Lithuania. Daily manual running of simulation using specialized decision support systems (Hysplit, ARGOS, JRODOS) is done for all Ukraine NPP and for Belarusian NPP. Additionally, twice a day automated JRODOS simulation for Zaporizhzhia NPP and Belarusian NPP is implemented. In accordance with national regulations nuclear accident scenarios and source term for running simulations is provided by VATESI. RSC and VATESI closely collaborates on analysis of simulations results, periodically revise and update applied scenarios, conduct interinstitutional exercises on data exchange and testing compatibility of applied modeling tools.

In 2023, VATESI and RSC participated in a benchmarking exercise organized by the European Commission to simulate the dispersion of radionuclides in the atmosphere and to assess the radiological consequences of a hypothetical severe accident at Zaporizhzhia NPP according to the scenario developed by the Joint Research Centre of European Commission.

Given the close proximity of the Belarusian Nuclear Power Plant, which is only 20 km from Lithuania's border and thus represents the highest radiological risk to Lithuania, the robust emergency preparedness and response plans for potential severe accidents at this nuclear installation are developed. Taking into account the greater distance from Ukrainian NPPs to Lithuanian borders it should be assumed that aforementioned emergency preparedness measures are adequate to respond effectively to a severe nuclear accident at Ukrainian nuclear installations.

*The challenge has been properly addressed.*

### **International peer review missions**

Lithuania continues to host and to participate in the international peer reviews. The following missions and activities have been performed or are planned for the period of 2022–2026:

- IAEA Integrated Review Service for Radioactive Waste and Spent Fuel Management, Decommissioning and Remediation (ARTEMIS) mission to the Republic of Lithuania, May 2022;
- IAEA ARTEMIS mission to review Deep Geological Repository project in Lithuania, July 2023;
- Second European Topical Peer Review on fire protection at nuclear installations, 2022-2025;
- The second full-scope IAEA IRRS mission is scheduled for May 2026.

For more details, please refer to the section below “Reporting on Major Common Issues” item 4.

## **Reporting on Major Common Issues**

At the Joint 8<sup>th</sup> and 9<sup>th</sup> CNS Review Meeting, several Major Common Issues arising from Country Groups Discussions were identified. Despite the fact that Lithuania has no nuclear installations within the scope of the CNS, Lithuania would like to share experience with other CP about actions related with INPP under decommissioning, spent nuclear fuel storage and radioactive waste management facilities.

### *1. Managing extraordinary circumstances impacting the safe operation of nuclear installations*

To strengthen regulatory resilience, VATESI has implemented several measures ensuring continuous oversight and the safety of nuclear installations during extraordinary circumstances, including the COVID-19 pandemic and potential extreme natural disasters. The measures include:

- Development of contingency plans for ensuring uninterrupted regulatory functions during emergencies, including remote inspections and digital communication tools;
- Revision of internal procedures to enable flexible response under various crisis scenarios, including pandemics;
- Implementation of remote oversight tools, desktop reviews, online meetings with the licensees;
- Regular training and exercises for VATESI staff on emergency preparedness and crisis communication;
- Exchange of regulatory experience in international fora;
- Integration of lessons learned from the COVID-19 pandemic into VATESI’s regulatory framework and emergency preparedness plans.

These actions contribute to maintaining the safety of nuclear installations in Lithuania under extraordinary circumstances, while also strengthening VATESI’s ability to adapt and respond to future challenges.

The State Enterprise Ignalina Nuclear Power Plant (SE Ignalina NPP) has established comprehensive emergency preparedness measures. These include an Emergency Preparedness Organization with a 24/7 Accident Management Centre, regular training and drills, and clearly defined responsibilities for key staff. In addition, SE Ignalina NPP has prepared a list of key positions within the EPO, identifying roles essential for organising, implementing, and coordinating emergency preparedness and civil protection activities at the nuclear facilities, as well as for responding to radiological accidents or emergencies. Accident management procedures, including responses to the COVID-19 pandemic, are set out in the Emergency Preparedness Plan and related instructions.

### *2. Strengthening national regulatory capabilities taking into account new and innovative technologies*

The Law on Nuclear Safety defines that: “The technologies used in the design and construction of the nuclear installation must be consistent with proven engineering practices, either based on experience or established by testing or analysis. The requirements for the application of proven engineering practices shall be laid down by the State Nuclear Safety Inspectorate”. Details on usage of proven engineering practices are provided in regulations of the State Nuclear Power Safety Inspectorate (VATESI).

VATESI also takes part in different IAEA, ENSREG, WENRA, other multilateral and bilateral activities concerning potential use of new and innovative technologies.

### *3. Fostering international collaboration*

The Government of Lithuania and state institutions fulfil its international obligations, participate in the relevant international arrangements, including international peer reviews, and promote international cooperation and assistance to enhance safety globally.

Lithuanian institutions participate in multilateral and bilateral cooperation between the relevant national and international organizations to enhance safety by means of harmonized approaches and exchange of information, knowledge, experience, and good practice.

On 26 November 2024 the Government of the Republic of Lithuania and the Government of the United States of America concluded intergovernmental agreement on cooperation in the implementation of the civil nuclear power programme. The agreement, which is the first US intergovernmental agreement in the development of next-generation nuclear power, provides that the US will share with Lithuania its experience in the development of next-generation nuclear power. In addition to collaboration in the deployment of SMRs, the Agreement envisions the exchange of experts to ensure the promotion of the highest standards of safety and security, the enhancement of security for all civil nuclear facilities in Lithuania, and consultation regarding best practices related to decommissioning and spent fuel management and workforce development.

In December 2024, Lithuania joined the U.S. Foundational Infrastructure for Responsible Use of Small Modular Reactor Technology program (FIRST). The FIRST partnership will help Lithuanian institutions gain the capabilities needed to consider and potentially deploy small modular reactors (SMR) and ensure the highest international nuclear security, safety, radioactive waste management and non-proliferation standards.

VATESI actively participates in different IAEA, EC, CTBTO, NEA, WENRA, ENSRA, ESARDA committees and groups, exchange information with different international and regional data bases, participate in IAEA technical cooperation activities. VATESI has signed bilateral cooperation arrangements with US Nuclear Regulatory Commission, State Nuclear Regulatory Inspectorate of Ukraine, Nuclear Regulation Authority of Japan.

The Radiation Protection Centre according its competence participates in different IAEA, EC, HERCA committees and groups and has signed bilateral cooperation arrangement with US Department of Energy National Nuclear Security Administration.

### *4. Foster international peer review missions and timely addressing of findings*

The full scope Integrated Regulatory Review Service (IRRS) mission to the Republic of Lithuania was carried out from 17 to 29 April 2016. The IRRS mission identified 27 recommendations, 32 suggestions and 4 good practices. The corresponding plan of measures was developed to implement recommendations and suggestions presented in the IRRS mission report. This plan was approved by the joint Order of the Minister of Energy, the Minister of Health, the Minister of Education and Science and the Head of VATESI.

IRRS follow-up mission to the Republic of Lithuania was organized from 16 November to 2 December 2020. The scope of the IRRS follow-up mission was the same as the scope of the initial mission in 2016. The experts reviewed the progress made by Lithuania in strengthening the nuclear and radiation safety system and implementing recommendations and suggestions that were submitted during the first IRRS mission in 2016. The IRRS team concluded that Lithuania has been responsive to each recommendation and suggestion made in 2016, and continues to place appropriate focus on implementing a framework that provides for effective nuclear and radiation safety for workers, patients, the public and the environment. 26 out of the 27 recommendations and 31 out of the 32 suggestions identified in 2016 have been closed. 1 new recommendation and 2 new suggestions were formulated on the basis of analysis of current situation in 2020. The IRRS team noted in the mission report that the Lithuanian Government, the State Nuclear Power Safety Inspectorate (VATESI) and the Radiation Protection Centre (RSC) have shown a strong commitment to nuclear and radiation safety.

The new plan of measures was developed to implement recommendations and suggestions presented in the IRRS follow-up mission report. Appropriate measures were implemented and all recommendations and suggestions presented in the IRRS follow-up mission report were closed in the beginning of 2024.

In October 2017, Lithuania hosted the IAEA International Physical Protection Advisory Service (IPPAS) mission. The scope of the mission covered all five modules: the legislative and regulatory framework for nuclear security, the physical protection of nuclear material and facilities, transport security, the security of radioactive material and computer security.

During the mission, the IPPAS team visited the Ignalina NPP, which is shutdown, and facilities located on-site, such as the Spent Nuclear Fuel Storage Facility. Experts also visited facilities where radioactive sources are in use and storage, including the hospital of the Lithuanian University of Health Sciences in the city of Kaunas.

The team observed that the nuclear security regime in Lithuania is well established and incorporates the fundamental principles of the amended CPPNM. In order to assist Lithuania in enhancing and sustaining nuclear security, the IPPAS team also identified 7 recommendations, 23 suggestions and 9 good practices. Responsibilities for implementation of recommendations and suggestions has been shared among related authorities and organizations and the Implementation Plan has been approved by Minister of the Health of the Republic of Lithuania, Minister of the Interior of the Republic of Lithuania and Head of State Nuclear Power Safety Inspectorate (VATESI). All recommendations and suggested identified by the IPPAS team in 2017 were considered and implemented.

Integrated Review Service for Radioactive Waste and Spent Fuel Management, Decommissioning and Remediation (ARTEMIS) mission to the Republic of Lithuania took place from the 15th to the 25th of May 2022.

The expert mission evaluated the Lithuanian national programme and the national framework for implementing the country's obligations for safe and sustainable radioactive waste and spent fuel management as well as the decommissioning programme of the INPP. The ARTEMIS team noted the strong commitment of the Government of Lithuania to ensure a safe implementation of the RAW and SF management activities in the country, in accordance with applicable legal and regulatory system, international conventions and IAEA safety standards. The ARTEMIS Review Team concluded that many aspects relevant to the safe management of radioactive waste in Lithuania are in place. However, they noted some important aspects, which should be evaluated and strengthened. ARTEMIS Review Team made 7 recommendations, 3 suggestions and 1 good practice. The report is publicly available at International Atomic Energy Agency website<sup>1</sup>.

IAEA ARTEMIS mission to review Deep Geological Repository (DGR) project in Lithuania was conducted in July 2023. The ARTEMIS review provided an independent international evaluation of the studies carried out by Lithuania on the first phase of the siting process of the envisaged deep repository project. Review Team provided 8 recommendations, 6 suggestions and 1 good practice to support Lithuania in the site selection process for their DGR project: on site selection and allocate responsibilities for decision making, on public engagement into the DGR project. The report is publicly available at International Atomic Energy Agency website<sup>2</sup>.

Addressing of recommendations and suggestions provided by ARTEMIS mission expert's teams are ongoing.

##### *5. Possible impact of global climate changes on the safe operation of nuclear installations*

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<sup>1</sup> [https://www.iaea.org/sites/default/files/documents/review-missions/final\\_report\\_artemis\\_lithuania.pdf](https://www.iaea.org/sites/default/files/documents/review-missions/final_report_artemis_lithuania.pdf)

<sup>2</sup> [https://www.iaea.org/sites/default/files/documents/review-missions/artemis\\_review\\_of\\_dgr\\_project\\_in\\_lithuania\\_final\\_report.pdf](https://www.iaea.org/sites/default/files/documents/review-missions/artemis_review_of_dgr_project_in_lithuania_final_report.pdf)

VATESI, fulfilling its state regulatory and supervisory functions, seeks to strengthen the nuclear energy sector's ability to adapt to and increase its resilience to climate change in terms of nuclear safety by establishing and regularly reviewing nuclear safety requirements regulating the assessment of extreme natural phenomena in the course of the evaluation of the site of nuclear facilities, the design of nuclear facilities, and the periodic safety evaluation of nuclear facilities.

Concerning existing nuclear facilities and activities, regularly periodic safety reviews are performed. One of the tasks of such reviews is to analyse changes in site characteristic and to identify corresponding safety improvement measures if needed.

Due to global climate change the probability of extreme weather conditions in Lithuania is experiencing no significant changes. Average and maximal seasonal temperatures as well as average precipitation rates, maximum wind speed rates tend to increase, winter precipitation tend to be more liquid than solid. These changes are observable and monitored, although they are not exceeding any design values for normal operation of nuclear facilities. It can be concluded that currently there is no significant impact of global climate change to the safe operation of spent nuclear fuel storage and radioactive waste management facilities in the Republic of Lithuania.

#### *6. Securing reliable supply chains*

The procurement process at State Enterprise Ignalina Nuclear Power Plant is managed within the Integrated Management System (IMS). General requirements for procurement are specified in the IMS Manual. Detailed requirements for procurement process (including those for selection, evaluation and control of suppliers) are set forth in the Procurement Procedure and respective working documents. The graded approach is applied, so special attention is paid to control of the suppliers of safety-related products. Control of safety related product suppliers is performed in accordance with the Procedure for assessment of safety-related product suppliers and sub-suppliers, and control of their activities at the SE INPP.

SE INPP applies various measures to protect against the supply of counterfeit goods at different supply stages:

Goods procurement planning and Technical Specification (TS) preparation stage.

SE INPP has appointed responsible persons/functions and internal control mechanisms which ensure that product customers (subdivision engineers, foremen) are responsible for checking that the product meets the specified requirements.

The prevention of potentially counterfeit, falsified, or fraudulent products is carried out by preparing technical specification for products, and this applies in particular to safety-important products; the requirement is specified that the Supplier must provide certificates of conformity for equipment (goods), components, and materials. This reduces the possibility of the Supplier delivering counterfeit goods. The specification also stipulates that the goods supplied must be new and unused.

Supply risk management (including contractors and subcontractors) is ensured by conducting market analysis. The procurement initiator or product customer relying on the List of Unreliable Suppliers. If a potential supplier is included in this list, no request for a commercial offer is sent to them.

Risk identification and monitoring throughout the product life cycle is carried out during the initial control of the purchased product: the procurement initiator and the product customer check the product's compliance with the requirements set out in the TS, review all accompanying documents, labels, and information tables.

These mechanisms help to prevent practical cases where counterfeit or non-compliant products have been identified or suspected.

Procurement stage.

As the purchasing organization, SE INPP recognizes the potential risk of counterfeit, falsified, or fraudulent goods in the supply chain and therefore applies the following measures to mitigate this risk:

- Verification of suppliers and documents: when evaluating offers of the suppliers, SE INPP check the documents submitted and the qualifications of suppliers using official registers. Also it

additionally checks whether the suppliers and manufacturers are not included in international sanctions lists and whether there are any restrictions on the country of origin of the goods;

- Requirements in procurement documents: the procurement conditions set out requirements for the reliability of the supply chain – suppliers must declare the origin of the goods, the manufacturers, and indicate whether they will use subcontractors;

- Contractual arrangements: contracts with suppliers provide for responsibility for the accuracy of the information provided and for delivery in accordance with the specification. In the event of non-compliance, sanctions are applied, including termination of the contract;

- Internal control mechanisms are ensured by decisions on suppliers' verification taken together with technical departments in accordance with internal control principles.

- To date, there SE INPP has no practical cases of counterfeit or falsified products at the SE INPP, but the measures in place help to systematically reduce this risk.

Another tool is the auditing of suppliers and manufacturers, including their supply chains: SE INPP conducts QA audits of suppliers of safety-critical equipment and services, checks the documentation and certificates received, testing equipment and conducting initial inspections, and performs preventive control of suppliers.

#### *7. Strategies for ageing management in support of the operation of nuclear installations*

Activities related to the ageing management of structures, systems and components (SSC) important to safety of nuclear facilities of SE Ignalina Nuclear Power Plant are carried out in accordance with nuclear safety requirements BSR-1.8.4-2018 “Ageing Management of Structures, Systems and Components Important to Safety of Nuclear Facilities”, which establishes requirements for the ageing management of SSC important to safety of nuclear facilities (NF) during the design, construction and throughout the entire service life of NF. In addition, IAEA recommendations are used: Methodology for the Management of Ageing of Nuclear Power Plant Components Important to Safety, Technical Reports Series No. 338; Ageing Management and Development of a Programme for Long Term Operation of Nuclear Power Plants, IAEA Safety Standards Series No. SSG-48; Ageing Management for Nuclear Power Plants: International Generic Ageing Lessons Learned (IGALL), Safety Reports Series No. 82 (Rev. 2).

The Programme for the Ageing Management of SSCs important to the safety of SE INPP nuclear facilities, together with the supporting procedures, has been developed. They include:

- procedure for screening of SSC for the purpose of ageing management;
- list of the SE INPP Nuclear Facilities SSC important to safety subject to ageing management;
- methodology for evaluation of the technical conditions and the remaining life time of the SSC important to safety;

- procedure for organising of the activity for the ageing management of SSC important to safety of the SE INPP nuclear facilities.

- The main task of the Ageing Management Programme is to ensure reliable operation of structures, systems and components important to safety of the SE INPP nuclear facilities. The SE INPP Ageing Management Programme ensures performance of the following functions:

- general assessment of ageing process according to the design documentation requirements;
- timely assessment of the condition of SSC important to safety to ensure reliable operation of nuclear facilities during the design lifetime;

- timely detection of degradation phenomena of SSC important to safety, including determination of unanticipated causes, their elimination and mitigation of consequences;

- performance of necessary modifications and change of operation conditions in order to mitigate degradation phenomena;

- assessment of residual service life of SSC important to safety and planning of necessary measures.

The process of ageing assessment includes:

- thermo-mechanical equipment;

- building structures;
- cables and electrical equipment;
- individual components of automatics and measurements;
- containers and the particular parts of containers;
- hoisting equipment.

The SE INPP ageing management programme for SSCs important to the safety of nuclear facilities is continuously reviewed and updated, taking into account changing conditions and the results of ageing management measures. It also reflects the current status of the decommissioning process of Units 1 and 2, including the isolation and dismantling of systems, the elimination of safety functions in some systems that were previously subject to mandatory ageing management, and, conversely, the inclusion of SSCs from newly constructed spent nuclear fuel and radioactive waste storage facilities

This programme will be implemented as long as the SSCs important to safety are required to remain in the decommissioning process of both Reactor Units, also for the existing and newly constructed spent nuclear fuel and radioactive waste storage facilities.

#### *8. Strengthening emergency preparedness and response arrangements and fostering cross border collaboration*

The Baltic States plan to sign a Memorandum of Understanding on cooperation in strengthening civil protection in the region in 2025. Consultations with Poland on signing the memorandum are underway. The main objective of the memorandum is to strengthen regional cooperation in the evacuation of residents within the country and during cross-border evacuations, by preparing joint mass evacuation planning documents and ensuring the exchange of information. The parties to the memorandum will coordinate actions among themselves and appoint operational-level institutions responsible for organizing the evacuation of residents at the state level, assess the needs and possibilities for the deployment of the necessary capacities (for example, transport), determine possible evacuation directions and border crossing points for cross-border evacuations. The parties to the memorandum will seek to further strengthen evacuation capabilities and capacities in order to ensure assistance to evacuated persons, especially vulnerable groups.

Lithuania has signed intergovernmental agreements on mutual assistance and cooperation in field of disaster prevention, preparedness and response with Poland, Latvia, Estonia and other non-bordering countries (Moldova, Georgia, Azerbaijan).

Also, Lithuania participates in the EU Civil Protection Mechanism. All EU Member States, as well as the United Kingdom, Norway, Iceland, Montenegro, Serbia, Turkey and North Macedonia, participate in the Mechanism. The Mechanism aims to strengthen cooperation between the EU and its Member States and to facilitate coordination of activities in the field of civil protection, with a view to improving the effectiveness of systems for preventing, preparing for and responding to natural and man-made disasters.

## **Reporting Article by Article**

### **Article 6 Existing Nuclear Installations**

*Each Contracting Party shall take the appropriate steps to ensure that the safety of nuclear installations existing at the time the Convention enters into force for that Contracting Party is reviewed as soon as possible. When necessary in the context of this Convention, the Contracting Party shall ensure that all reasonably practicable improvements are made as a matter of urgency to upgrade the safety of the nuclear installation. If such upgrading cannot be achieved, plans should be implemented to shut down the nuclear installation as soon as practically possible. The timing of the shut-down may take into account the whole energy context and possible alternatives as well as the social, environmental and economic impact.*

## Summary Statement for Article

Lithuania has no nuclear installations (NI) and Article 6 is therefore not applicable. Lithuania addressed the obligations of Article 6 for NIs that were in existence when the Convention came into force for Lithuania (see the Lithuanian National Reports for the 1<sup>st</sup> to 7<sup>th</sup> and the Joint 8<sup>th</sup> and 9<sup>th</sup> Review Meetings).

## Article 7 Legislative and Regulatory Framework

*1. Each Contracting Party shall establish and maintain a legislative and regulatory framework to govern the safety of nuclear installations.*

*2. The legislative and regulatory framework shall provide for:*

- (i) the establishment of applicable national safety requirements and regulations;*
- (ii) a system of licensing with regard to nuclear installations and the prohibition of the operation of a nuclear installation without a licence;*
- (iii) a system of regulatory inspection and assessment of nuclear installations to ascertain compliance with applicable regulations and the terms of licences;*
- (iv) the enforcement of applicable regulations and of the terms of licences, including suspension, modification or revocation.*

## Summary Statement for Article

Lithuania fulfils the obligations of Article 7.

### Article 7(1) – Establishing and maintaining a legislative and regulatory framework

#### Overview of the primary legislative framework for nuclear safety, including interfacing national legislation

The main laws, regulating nuclear energy, are:

- Law on Nuclear Energy;
- Law on Nuclear Safety;
- Law on Radiation Protection;
- Law on the Management of Radioactive Waste.

*The Law on Nuclear Energy* sets general legal basis for activities involving nuclear materials, for other areas of nuclear power involving sources of ionizing radiation and for management of nuclear fuel cycle materials, including radioactive waste, managed at a nuclear facility. Regulation and supervision of nuclear safety, radiation protection and safety of radioactive waste management in the area of nuclear energy is carried out under this Law, the Law on Nuclear Safety, the Law on Radiation Protection and the Law on the Management of Radioactive Waste.

*The Law on Nuclear Safety*, among other provisions, establishes a procedure for issuing licenses, permits and other types of authorization, including main documents required and conditions to be fulfilled for granting authorization. This law also establishes the main principles for safety assessment and provides for different types of enforcement measures, including economic sanctions (penalties) for the most severe cases of noncompliance with safety requirements.

*The Law on Radiation Protection* establishes the legal basis for radiation protection, enabling protection of people, subject to occupational, medical and public exposure, and the environment from the harmful effects of ionizing radiation. The law establishes an authorization system for the use of radioactive materials and radiation sources, and prescribes general rules for their use. The law also provides powers and responsibilities to the authorities in this field.

*The Law on the Management of Radioactive Waste* establishes the rights, duties and functions of the state executive and supervisory authorities and of persons and legal entities involved in radioactive waste management.

The Law on Radiation Protection during the reporting period was amended as a result of process of harmonization with EU legal acts, especially with *Council Directive 2013/59/Euratom*, which lays down basic safety standards for protection against the dangers arising from exposure to ionizing radiation as well as update of national secondary legislation e.g. Lithuanian Hygiene Norm HN 89:2022 "Management of Radioactive Waste" and "Description of the Procedure for Training and Instruction in Radiation and Radioactive Source Physical Security".

Lithuania has established and continually maintains a comprehensive legislative and regulatory framework for nuclear safety. This framework is anchored in different national laws and supporting secondary legislation, which are periodically updated to reflect current IAEA safety standards and international obligations.

During the reporting period there was established the primary legal act governing crisis management and civil security. The *Law of the Republic of Lithuania on Crisis Management and Civil Security* came into force on January 1, 2023, replacing the previous Law on Civil Protection and which is specifically based on and implements the following key European Union directives: Directive 2003/4/EC of the European Parliament and of the Council of 28 January 2003 on public access to environmental information and repealing Council Directive 90/313/EEC, Directive 2012/18/EU of the European Parliament and of the Council of 4 July 2012 on the control of major-accident hazards involving dangerous substances, amending and subsequently repealing Council Directive 96/82/EC (known as the SEVESO III Directive) and Directive (EU) 2022/2557 of the European Parliament and of the Council of 14 December 2022 on the resilience of critical entities, repealing Council Directive 2008/114/EC.

This law sets out the legal framework for preventing and preparing for crises and emergencies, managing them, and mitigating their consequences, as well as the requirements to ensure the resilience and operational continuity of critical entities.

### **Ratification of international conventions and legal instruments related to nuclear safety**

Lithuania is a party to the main relevant international conventions. There was no new development in the area of ratification of international conventions or other legal instruments over the reported period.

## **Article 7(2)(i) – National safety requirements and regulations**

### **Overview of the secondary legislation for nuclear safety**

Lithuanian secondary legislation in nuclear safety consists of:

- Government Resolutions;
- Regulations of VATESI;
- Legal acts of other authorities (RSC, Ministry of Health, Fire and Rescue Department, etc.)

Together, these acts form a comprehensive regulatory framework that ensures the safe use of nuclear power, spent fuel management, radioactive waste management, and emergency preparedness.

During the reporting period the following most significant Governmental legal documents were approved:

- The Resolution No. 898, of 30 October 2024, of the Government of the Republic of Lithuania On the Amendment of Resolution No. 1406 of the Government of the Republic of Lithuania of 21 November 2012 "On the Approval of the Statute of the State Nuclear Power Safety Inspectorate". The new edition of the Statute was adopted to reflect the latest practices, distinguishing between the functions of the State Nuclear Power Safety Inspectorate and those of its Head.

- The Resolution No. 720, of 28 August 2024, of the Government of the Republic of Lithuania, Amending Resolution No. 1872 of 3 December 2002 "On Approval of the Procedure for Providing

Data to the European Commission on Activities Involving the Disposal of Radioactive Waste”. The amendment to the Resolution approved a new version of the Procedure for Providing Data to the European Commission on Activities Involving the Disposal of Radionuclides into the Environment. The updated Description defines relevant concepts and provisions, taking into account the changes in legal regulation in the fields of nuclear energy, radiation protection and environmental impact assessment of planned economic activities, with the aim of ensuring clarity and consistency with the revised legal technical requirements and terminology used in the applicable legislation.

### **Overview of regulations and guides issued by the regulatory body**

The comprehensive legislative and regulatory framework for nuclear safety in Lithuania is consistently reinforced through regulations issued by VATESI, acting as the primary regulatory body. Regulations are of two categories – nuclear safety requirements and nuclear safety rules.

VATESI regularly reviews and updates its regulations to reflect technological advancements, operational experience, and lessons learned from international events and regulatory practice. This continuous improvement process ensures that the national safety requirements remain robust and effective in addressing current and future challenges in nuclear safety.

#### *Regulatory System, Inspection, and Enforcement*

A new regulation - Nuclear Safety Requirements BSR-1.1.7-2023 "Permanent oversight of nuclear facilities performed by authorized personnel of the State Nuclear Power Safety Inspectorate" was approved on January 26, 2023. These Requirements establish the procedure for permanent oversight of nuclear facilities carried out by VATESI's Surveillance Division (resident inspectors), as stipulated in Article 28, Paragraph 2 of the Law on Nuclear Safety.

It was adopted in order to: 1) determine the permanent oversight carried out by VATESI's Surveillance Division in nuclear facilities; 2) emphasize the systemic and continuous involvement of the regulatory authority in ensuring safety, not limited to periodic inspections; 3) strengthen the regulatory body's ability to respond promptly and oversee facility operations in real-time.

Nuclear Safety Requirements BSR-1.4.2-2014 “Management of the Construction of a Nuclear Energy Facility” (as last amended in 2023) set out the requirements for the licensee’s responsibilities during the construction of structures, systems, and components important to the safety of a nuclear energy facility. These requirements aim to ensure compliance with the facility’s structural design, safety justification documents, and applicable technical standards. The legal act also defines the requirements for construction-related documentation concerning such safety-important structures, systems, and components. These documents must be retained throughout the construction process and transferred to the nuclear facility’s commissioning stage to ensure traceability.

Nuclear Safety Requirements BSR-1.1.3-2016 “Inspections of the State Nuclear Energy Safety Inspectorate” (as last amended in 2023). The provisions regarding the submission of inspection reports or control inspection checklist report to economic entities — specifically concerning the transfer of inspection results to the employer of a posted worker — have been clarified in the updated Nuclear Safety Requirements. The name of the National Electronic Delivery Information System and the procedures for sending prepared letters, inspection reports, and other documents to interested parties have also been specified.

Nuclear Safety Requirements BSR-1.8.8-2020 “Lifting Equipment and Equipment Important to the Safety of a Nuclear Power Facility” (as last amended in 2022). The Nuclear Safety Requirements have been supplemented with provisions requiring that the holder of a licence to operate a nuclear power facility (hereinafter – NPF), upon commissioning new lifting equipment or equipment important to the safety of the NPF, or upon deciding to decommission existing lifting equipment or such safety-important equipment, must review and update the list of lifting equipment and equipment important to the safety of the NPF and coordinate it with VATESI.

Nuclear Safety Requirements BSR-1.8.9-2020 “Structures and Structural Elements of a Nuclear Energy Facility” (as last amended in 2022). The Nuclear Safety Requirements has been revised and supplemented with provisions related to the design of structures and safety-important structural elements of a nuclear energy facility (NEF), their use and maintenance during the operation of the

NEF, the assessment of the technical condition of such structures, the evaluation of their remaining service life, and the extension of their design service life. In addition, inaccuracies have been corrected and editorial revisions made to reflect amendments to the referenced legislation.

Taking into account the amendment to BSR-1.8.9-2020, the revised versions of the following Nuclear Safety Requirements have also been updated and entered into force concurrently: BSR-1.4.2-2014 “Management of the Construction of a Nuclear Energy Facility” and BSR-1.8.5-2018 “Recognition of a Nuclear Energy Facility as Suitable for Operation.”

#### *Radioactive waste, spent fuel and fissile material management*

Nuclear Safety Requirements BSR-3.1.1-2016 "The Management of Spent Nuclear Fuel in Dry Type Storage Facility" (as last amendment, 2023) have been supplemented with provisions detailing the content of the technical specification for operational limits and conditions, ensuring clarity and stringency in managing spent nuclear fuel.

Nuclear Safety Requirements BSR-3.1.2-2017 "Regulation on the Pre-disposal Management of Radioactive Waste at the Nuclear Facilities" (as last amended in 2023). Similar to BSR-3.1.1-2016, this regulation has been updated with provisions on the content of the technical specification for operational limits and conditions, strengthening the oversight of pre-disposal waste management.

Nuclear Safety Requirements BSR-3.2.2-2016 "Radioactive Waste Disposal Facilities" (as last amended in 2024) a key regulation governing radioactive waste disposal has undergone significant updates:

- it has been supplemented with provisions obliging the licensee to draft and agree with VATESI an updated safety analysis report before submitting an application for closure. This ensures a thorough safety review prior to the closure phase of disposal facilities;
- the regulation has been revised to adjust the responsibility of the licensee for ensuring the availability of information related to the disposal facility and its site. The licensee must ensure the keeping of relevant information during the operation and post-closure surveillance of the closed disposal facility, as well as the transfer of this information for further long-term storage. This amendment, aims to establish clear requirements for public information availability regarding potential radiological hazards.

Nuclear Safety Requirements BSR-1.9.2-2018 “Determination and Application of Radionuclide Release Levels for Materials and Waste Generated during Nuclear Energy Activities Involving Ionizing Radiation Sources” (as last amended in 2024). The revised legal act establishes conditional clearance levels for radioactive waste accumulated at the so-called Ignalina NPP industrial waste landfill, as well as the criteria and conditions for their assessment in order to remove such waste from regulatory control from the perspective of radiation protection.

Nuclear Safety Guide BST-3.1.1-2021 “Radioactive Waste Incineration Facilities” (as last amended in 2023). The Nuclear Safety Guide have clarified the procedure for appointing a commission to inspect the technical condition of radioactive waste incineration facilities.

#### *Decommissioning*

Nuclear Safety Requirements BSR-1.5.1-2019 "Decommissioning of Nuclear Facilities" (as last amended in 2023) have been supplemented with requirements for using aerosol containment systems during activities that may lead to air and/or surface contamination with radioactive substances. It also includes a recommendation to follow particular international standards when designing ventilation systems, enhancing safety during decommissioning.

#### *Commissioning, Operation, Modifications*

Nuclear Safety Requirements BSR-1.6.3-2024 "Ensuring cybersecurity in nuclear facilities" (approved on January 15, 2024) reflect the increasing relevance of cyber threats in the nuclear energy sector. It sets specific requirements for cybersecurity to protect nuclear facilities from digital attacks that could affect technological processes, safety-critical equipment, and the integrity of safety

information. This is a critically important document that adapts to the evolving threat landscape and ensures modern protection for nuclear facilities.

Aforementioned regulatory updates highlight Lithuania's proactive commitment to nuclear safety, ensuring that national requirements are consistently reviewed and enhanced in line with evolving safety standards and operational needs.

### **Overview of the process of establishing and revising regulatory requirements, including the involvement of interested parties**

Pursuant to the Article 5 of the Law on Nuclear Safety, the Head of VATESI approves the nuclear safety requirements and the nuclear safety rules, mandatory to all persons acting in the field of nuclear energy and approves the description of the procedure for drafting the nuclear safety requirements and the nuclear safety rules.

Pursuant to Article 22 Paragraph 1 Sub-Paragraph 11 of the Law on Nuclear Energy, VATESI has a right, within its competence and in the manner laid down by the legal acts, draw up and (or) submit to the Government the draft laws and legal acts of the Republic of Lithuania on nuclear safety, physical security, accounting for and control of nuclear materials, as well as radiation protection in carrying out nuclear energy related activities involving sources of ionizing radiation and on activity administration of the VATESI.

The procedure for review of regulatory requirements consists of following stages:

1. *Planning*. A five-year Program for Development of Normative-Technical Documents, describing priorities and needs of the development of these documents in the different areas of nuclear safety (the Programme for 2025–2029 is currently in force; it is revised every year) and The Plan for drafting and review of Normative-Technical Documents (for each year) are approved by the Head of VATESI. As per requirement within VATESI integrated management system documents, all new legal acts need to be reviewed no later than within two years of their approval and no later than within five years after that.

2. *Drafting*. The draft legal act is developed by specialists of VATESI and discussed internally.

3. *Agreement*. The draft legal act is provided for agreement of other state institutions (if needed) and for comments or proposals of other interested parties (licensees, such as SE INPP) by publishing it in the Legislative Information System of Chancellery of Seimas (Parliament of Republic of Lithuania) (the addressees get notifications about a new draft), which is a mandatory procedure. As the database is public, all drafts are also available for the comments of the public. If there are a lot of relevant and complex comments or proposals, meetings can be organized in order to discuss and solve the issues. All comments need to be evaluated.

4. *Approval* by the Head of VATESI and *publishing* in the Register of Legal Acts or submittal for approval of other relevant institutions (The Government or the Parliament).

### **Article 7(2)(ii) – System of licensing**

#### **Overview of the licensing system and processes including types of licensed activity**

The Law on Nuclear Energy and the Law on Nuclear Safety together with implementing legislation establish the authorization system for activities related to nuclear materials and nuclear fuel cycle materials, as well as for nuclear facilities during the following its life-stages: site evaluation, design, construction, commissioning, operation, decommissioning as well as release from control. The licensing and supervision of closed radioactive waste repository, acquisition, keeping, use and transportation of nuclear and nuclear fuel cycle materials is also carried out in accordance with the above laws. It should also be mentioned that some activities require separate authorizations at different stages of the life of a nuclear facility, which must be based on a safety assessment and evaluation.

The licensing process for new nuclear facilities are divided into several steps laid down in Article 22 of the Law on Nuclear Safety and sub-steps:

- Construction licence or combined construction and operation licence. The applicant has the option to apply for a combined construction and operation licence instead of a construction licence. The requirements for obtaining construction and operation licence are the same as the requirements for a construction licence and both licences allow construction of a nuclear facility. The application for a licence allowing construction can be considered only if the environmental impact assessment process has been completed, the site assessment has been carried out, and the technical specifications of the nuclear facility have been agreed with VATESI. The construction design coordination before construction and the coordination of commissioning documents before commissioning are used as an authorization sub-steps. Modifications of an authorised design, if any, has to be also authorised by VATESI.

It should also be noted, that the application for a licence allowing construction can be accepted only if the Parliament of Lithuania (in case of nuclear power plant) or the Government of Lithuania (in case of other types of nuclear facilities) has adopted a legal act on the construction of the facility. Any licence allowing construction of a nuclear facility cannot be issued before the State Territorial Planning and Construction Inspection under the Ministry of Environment of the Republic of Lithuania has issued a permit to construct that facility. The law also establishes more conditions for issuing a license, in which other institutions also participate.

- Operating licence replacing construction licence or permit for delivery of nuclear or nuclear fuel cycle materials to the site of a nuclear facility and/or for the first test using nuclear or nuclear fuel cycle materials in such nuclear facility, that is issued to the holder of common licence for construction and operation only. The operational phase begins when testing with radioactive material is authorised. A person to whom a licence for construction and operation has been issued no longer needs to obtain a separate licence for operation, nevertheless he must demonstrate the compliance of the constructed facility with nuclear safety requirements and the applicant's readiness to operate it before obtaining permit. Then, commercial operation is authorised after positive results of tests using radioactive materials by issuing a permit for commercial operation.

- Decommissioning licence. Under the regulatory framework for decommissioning of a Lithuanian nuclear power plant, an overall decommissioning plan must be prepared in advance, setting out the general constraints and conditions for the entire decommissioning. A decommissioning licence can only be issued if the nuclear fuel has been removed from the nuclear facility. Subsequently, in order to allow for the decontamination and (or) dismantling of contaminated SSC of a nuclear power plant, VATESI has to issue a permit for each dismantling project. Only those systems and equipment that are no longer required for safety are allowed to be dismantled.

- Release from control. Release from control can only be granted if the objectives of the overall decommissioning plan are achieved.

The types of licences and permits issued by VATESI are set out in the Law on Nuclear Safety. The Law on Nuclear Safety, together with the Rules on the Issue of Licences and Permits in Nuclear Energy Activities regulates issuance, amendment, suspension, revocation of the suspension and revocation of licences and permits, listed in the Law on Nuclear Safety, as well as lists of safety documents to be submitted for each type of authorization (hereinafter referred to as the application documents). The detailed requirements for the scope of the application documents are laid down in the relevant nuclear safety requirements and rules issued by the Head of VATESI, however, some requirements for content of the documents are also laid down in the above-mentioned Rules.

Each application shall be accompanied by a schedule of application documents to be approved by VATESI. The conditions for the acceptance of applications and schedules of application documents as well as the deadlines for the acceptance of applications, schedules and the application documents accepted for consideration, are laid down in the Law on Nuclear Safety.

After the examination of the application documents, the designated VATESI specialists shall prepare a review and evaluation report for each application document, which is necessary to support the VATESI decision on issuing an authorization. The procedures for the examination of application documents are described in the VATESI management system documents “Procedure Document on Review and Assessment of Safety Justifying Documents” and “Procedure Document for Licensing”.

The applicant may be provided with the safety evaluation reports for nuclear facility, and summaries of these reports shall be made publicly available on the VATESI website. In accordance with the Rules on the Issue of Licences and Permits in Nuclear Energy Activities, a list of finalised documents on the basis of which the licence or permit is issued shall be drawn up after each licence or permit is issued. The list must be regularly updated to include the most recent versions of the documents and must be kept until the licence is revoked. The list shall specify which documents the licensee must agree with VATESI before approving updates. It shall be sufficient to inform about the updates of the remaining documents.

The Law on Nuclear Safety lays down the requirements, conditions and time limits for issue of a licence or permit. The Law on Nuclear Safety and the Law on Nuclear Energy also lay down some additional conditions (e.g., necessary authorizations by other national regulatory authorities). The licence or permit is granted for an indefinite period of time, pending a formal decision of the matter by the regulatory authority. The Law on Nuclear Safety also lays down the conditions under which a decision to refuse a licence or permit is taken.

### **Involvement of the public and interested parties**

VATESI applicants, licensees, other stakeholders, including the public, are considered as VATESI stakeholders in authorization process, with whom external communication is maintained, as specified in the VATESI documents “Manual of Integrated Management System” and the “Procedure Document on Monitoring of Interested Parties”.

In accordance with the legislation on the provision of information to the public, VATESI is required to provide information on decisions taken by VATESI and on the reasons for decisions to grant or refuse an authorization. The following information is generally provided:

- a list of licences, permits and licensed activities on the VATESI website;
- a summary of the evaluation of safety assessment report and other application documents.

As regards the authorization for site evaluation, construction, commissioning, operation or decommissioning of a nuclear facility as well as for the supervision of closed radioactive waste repository, additional provisions are laid down in the Law on Nuclear Safety. In order to implement the Law Nuclear Safety, Requirements BSR-1.1.5-2017 “Rules of Procedure for Public Participation in Decision-Making in the Area of Nuclear Energy” have been adopted by the order of the Head of VATESI. In accordance with these Nuclear Safety Requirements, VATESI and (or) licensee should:

- provide information to the public on the start of an authorization process;
- ensure that the public has access to the draft decisions on authorizations and application documents;
- consider comments submitted by the public on the draft decisions and application documents;
- organise public hearing in accordance with the procedure described (if necessary). The procedure for providing information to the public is described in the VATESI management system document “Procedure on Public Communication”.

### **Legal provisions to prevent the operation of a nuclear installation without a valid licence**

Paragraph 4 of the Article 22 of the Law on Nuclear Safety prohibits the performance of the activities referred to in Paragraph 1 and 2 of the Article 22 (licences and permits related to nuclear facilities, nuclear materials and nuclear cycle materials) without an authorization for these activities issued by VATESI. Carrying out activities without the relevant licence or permit may lead to penalties in accordance with the procedures established by the Code of Administrative Offences and the Criminal Code.

## **Article 7(2)(iii) – System of regulatory inspection and assessment**

### **Regulatory strategies**

VATESI carries out inspections of facilities and activities to verify if the authorized party is in compliance with the regulatory requirements. The regulatory inspections are conducted at all stages of the lifetime of a nuclear facility: during the evaluation of a construction site for a nuclear facility, construction, commissioning, operation and decommissioning stages, as well as during supervising the closed radioactive waste repository, procuring, storing or transporting nuclear and (or) nuclear fuel cycle materials and/or nuclear dual-use items. VATESI has a right to inspect the applicants for registered activities with radiation sources, the applicants for obtaining licenses, permits and temporary permits, economic entities performing registered activities, license, permit, temporary permit and certificates' holders, dosimetry services for nuclear facilities, suppliers of goods or contractors performing works for the holders of VATESI issued licenses and permits, the entities carrying out the assessment of the construction site of the nuclear facility and other entities performing operations related to nuclear or nuclear fuel cycle materials. VATESI also has on-site inspectors, who perform walkdowns and other actions of permanent oversight.

### **Overview of the regulatory inspection and assessment process with regard to the safety of nuclear installations**

The regulatory inspections of nuclear facilities include planned inspections and unplanned inspections. In general, the legal basis for inspections of economic entities is set in the Law on Public Administration and it shall be followed by all state institutions, having regulatory supervision functions.

VATESI conducts three general types of inspections, namely Special inspections, Regular (routine) inspections and Technical inspections. Special inspections are carried out by VATESI inspectors to check the specific aspects of safety or to respond to the existing unexpected, unplanned, unusual situations, an incident or obtained specific information. Regular or routine inspections are inspections carried out according to the schedules or other aspects of ordinary activities carried out by economic entity, which must be regularly inspected in pursuit of the objectives of state supervision of the economic entity's activities within the limits of competence of the VATESI. During the technical inspections VATESI inspectors observe technical checks of SSC or other equipment of nuclear facilities, functional checks of equipment or other checks carried out by economic entity in accordance with the equipment manufacturer's orders, documents of the licence holder's management system or other information, which is within the competence of the VATESI.

Inspections are planned and conducted in compliance with the principle of graded approach, in order to ensure a more efficient use of financial and human resources and to target inspections at activity areas which related to nuclear safety, radiation protection and physical security and fulfilment of obligations on non-proliferation of nuclear weapons and pose a higher potential risk to employees of the licence holders being supervised, population and environment.

Periodicity of inspections is established considering results of previous inspections and essential events, which has influence on organization activities.

The results of an inspection are provided in the inspection's report, and the economic entity is familiarized with it. If violations of regulatory requirements are identified during the inspection, the enforcement actions shall be applied in accordance with the procedure set forth by the laws and secondary legislation. The inspection's report together with the document formalizing the enforcement measures shall be sent to the inspected economic entity. The economic entity shall prepare plan for corrective measures within the term set by VATESI. VATESI performs supervision of the plan of implementation of corrective measures. If incompliances with good practice are identified during the inspection, the inspected economic entity shall prepare plan of measures for improvement of safety, or justify that corresponding actions are not necessary.

The main regulation for conducting regulatory inspections is Nuclear Safety Requirements BSR-1.1.3-2016 "Inspections Conducted by State Nuclear Power Safety Inspectorate". Based on this

regulation, VATESI's management system document "Procedure document for inspections" PR-6 was approved in November, 2014.

Nuclear Safety Requirements BSR-1.1.3-2016 "Inspections Conducted by the State Nuclear Power Safety Inspectorate" are regularly revised in order to streamline provisions related to the procedure of organizing and conducting inspections of supervised economic entities.

The main regulation for continuous supervision of nuclear facilities, provided for in the provisions of the Article 28(2) of the Law on Nuclear Safety is Nuclear Safety Requirements BSR-1.1.7-2017 "Continuous supervision of nuclear facilities by authorised staff of the State Nuclear Power Safety Inspectorate" was approved by Order No. 22.3-12 of the Head of the State Nuclear Power Safety Inspectorate of 2 February 2023.

The Law on Nuclear Safety, among other provisions, establishes the main principles for safety assessment. Pursuant to Article 30 of the Law on Nuclear Safety the assessment of nuclear safety shall be a systematic process intended for verifying whether the siting, design, construction, operation and decommissioning of a nuclear facility are safe – i.e. meet safety requirements established by the legal acts, technical codes and standards and other documents. The assessment of nuclear safety shall be conducted in the prescribed manner at all the stages of a lifecycle of a nuclear facility. The assessment of nuclear safety shall get sufficient attention and shall be assigned sufficient resources. The amount of resources shall be adequate to a possible issue's impact on nuclear safety.

The applicant or the licence holder carries out the analysis and justification of nuclear safety in the area of nuclear energy activities as well as other activities involving nuclear and nuclear fuel cycle materials, whereas VATESI is responsible for review and assessment of the results of the analysis and justification of nuclear safety. The responsibility for carry out of an analysis and justification of nuclear safety during the evaluation of the construction site of a nuclear facility falls on persons implementing a nuclear facility project. The results of the analysis and justification of nuclear safety are executed in the documents evidencing nuclear safety, which are established in the manner prescribed in the Law on Nuclear Safety and other legal acts. The results of the analysis and justification of nuclear safety are independently verified in the manner set out by VATESI. The applicant or the licence holder is responsible for the performance of such independent verification, whereas in case of the construction site of a nuclear facility evaluation – the responsibility for performance of an independent verification falls on persons implementing the nuclear facility project.

In addition to the main safety document evidencing nuclear safety, i.e. safety analysis report, the applicant or the licence holder shall provide to VATESI design documentation of a nuclear facility, which are necessary for the assessment of the safety analysis report. The nuclear facility design documentation shall establish and classify all the SSC of a nuclear facility according to their functions and importance to safety, and shall contain a comprehensive description of all the SSC, and operation processes that are important to safety.

Pursuant to Article 32 Paragraphs 7 and 7<sup>1</sup> of the Law on Nuclear Safety, a licensee shall perform a periodic safety analysis and justification and prepare a periodic safety review report at least every 10 years after the issuance of a permit for the commercial operation of a nuclear facility, or after approval by VATESI of the last safety case of corresponding nuclear facility, if the nuclear facility was commissioned before September 2017. The periodic safety review report shall be submitted to the VATESI for review and assessment. Thereafter, the VATESI shall adopt a decision regarding the acceptability of such report.

The review and assessment of nuclear safety shall be conducted by VATESI and results of such review and assessment shall be documented. The main goal of regulatory review and assessment process is to verify if the safety justification document complies with normative technical documents of nuclear safety and complies with factual circumstances. The decision on the safety justification document shall be made taking into account results of the review and assessment. The review and assessment of safety justification documents are performed in accordance with the PR-5 "Procedure document for review and assessment of safety justification documents", which is procedure document of VATESI management system. This procedure document defines formal procedure for regulatory review and assessment of safety justification documents. The outcomes, e.g. safety evaluation report

of the VATESI review and assessment are documented in accordance with the provisions foreseen in procedure document PR-5.

VATESI also can require for additional information from licensee or conduct relevant inspections, if it finds out that the information gained during review and assessment of the submitted documents is not sufficient to assess conformity of the planned or performed activity with requirements of legal acts and acceptance criteria.

Regulatory review and control is also ensured by carrying out VATESI’s inspections of nuclear facilities during all stages of lifetime of nuclear facilities.

### Basic features of inspection programmes

VATESI issues two planning documents for the systematic performance of inspections: inspection program and annual inspections plan. The program and the plan are developed in accordance with the established criteria and taking into account risk in the corresponding facility or activity. The inspection program is developed for period of following five years. The inspection program is revised annually. Backbone of this program are Regular (routine) inspections with established periodicity. Annual inspections’ plan is developed on the basis of the inspection program.

The regulatory inspections are focused on safety of finally shut-down Ignalina NPP units, maintenance, fire protection, ageing management of SSC important to safety and other safety aspects within competence of VATESI. VATESI also monitors how works under projects of equipment dismantling and decontamination are performed, how radioactive waste is managed, how physical security and radiation safety of the nuclear facilities and nuclear material and emergency preparedness is ensured, how employees of Ignalina NPP are trained and how an adequate level of their qualification is ensured.

The number of inspections performed by VATESI during period 2019–2024 are presented in Figure 7.1.

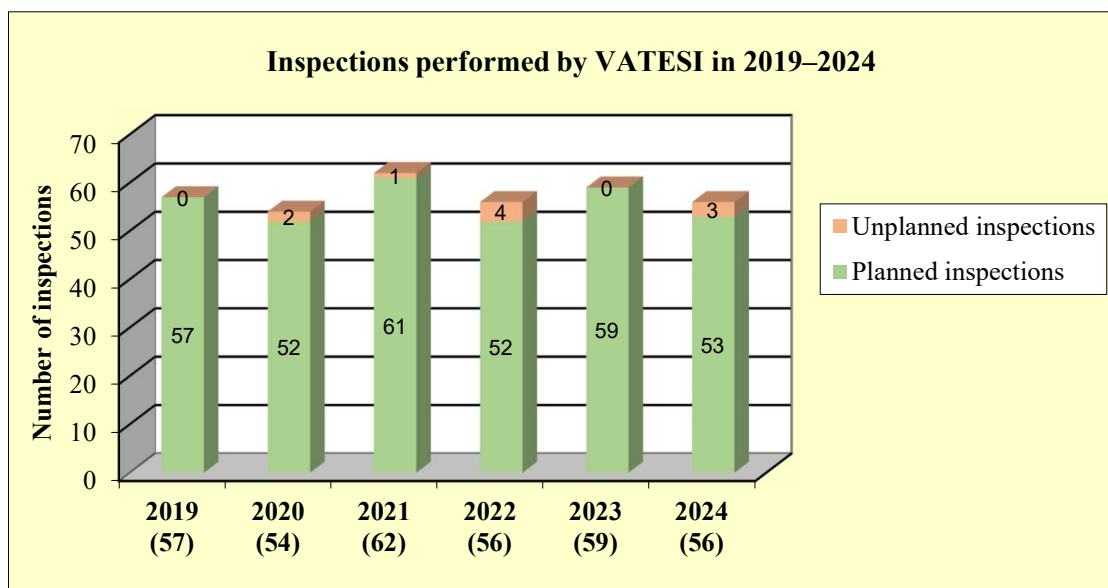


Figure 7.1. The number of inspections performed by VATESI during period 2019–2024

## Article 7(2)(iv) – Enforcement of applicable regulations and terms of licences

### Power for legal actions

In performing the state regulatory and supervision functions of nuclear safety, pursuant to Article 11 Paragraph 2 of the Law on Nuclear Safety, VATESI applies enforcement measures in the manner set out by the Law on Nuclear Safety and other legal acts, requires relevant persons to

implement corrective measures and (or) to eliminate the violations, and supervises the implementation of such requirements.

### **Overview of enforcement measures available to the regulatory body**

Enforcement measures are applied in accordance with the legal principle of graded approach. All enforcement measures which are applied by VATESI are arranged progressively considering the character of violation.

Pursuant to the Law on Public Administration and Order No. 22.3-106, 24th of October, 2011, approved by the Head of State Nuclear Power Safety Inspectorate “On the Approval of Nuclear Safety Requirements BSR-1.1.4-2017 “Rules of Procedure for Applying the Enforcement Measures Set by the State Nuclear Power Safety Inspectorate”, VATESI is empowered to issue to the economic entity, individual referred to in the Article 8 Paragraph 1 of the Law on Radiation Protection, radiation protection officer, dosimetry service with mandatory requirement to eliminate insignificant violations of legal acts.

Pursuant to the Law on Nuclear Safety VATESI is empowered to impose the following administrative enforcement measures:

- to issue mandatory requirement to licence or permit holders, committing them to eliminate identified violations, to suspend the works within the time-limits set by the Head of VATESI and/or to shut-down the nuclear reactor, to decrease its capacity, to discontinue operation of other equipment or activities;
- to impose fines on legal entities according to the Article 47 Paragraphs 1 and 2 of the Law on Nuclear Safety (known as economic sanctions);
- to issue the licence or permit holder with a warning regarding the possible license or permit suspension, to suspend the licence or permit, to revoke the license or permit.

Pursuant to the Law on Radiation Protection VATESI is empowered to impose the following administrative enforcement measures:

- to issue mandatory requirement to the individual, referred to in the Article 8 Paragraph 1 of the Law on Radiation Protection, to eliminate violations of legal acts governing radiation safety and/or physical security of radiological sources, to issue a warning to suspend activities with ionizing radiation sources, to suspend activities with ionizing radiation sources;
- to issue a warning regarding the possible revocation of activity registration, revocation of activity registration;
- to issue the licence or temporary permit holder with a warning regarding the possible license or temporary permit suspension, to suspend the licence or temporary permit, to revoke the license or temporary permit;
- to issue person who provides radiation protection trainings with mandatory requirement to eliminate violations of legal acts governing radiation protection trainings;
- to issue natural person holding radiation protection attestation certificate with a warning about possible suspension of radiation protection attestation certificate, to suspend radiation protection attestation certificate, to revoke radiation protection attestation certificate;
- to issue nuclear facility dosimetry service or other individuals responsible for measurement and/or evaluation of exposure-dose with a mandatory requirement to eliminate violations of legal acts governing recognition requirements, to issue a warning about possible suspension of recognition certificate, to suspend validity of recognition certificate, to revoke validity of recognition certificate;
- to issue radiation protection expert with a warning about possible suspension of validity of radiation protection expert certificate, to suspend validity of radiation protection expert certificate, to revoke validity of radiation protection expert certificate;
- to revoke permission to transport radioactive material or validity of standard document to transport radioactive material.

Some violations, identified during regulatory inspections, in accordance with legal acts can be recognised as insignificant. Such violations are required to be eliminated by oral request of inspector

in his presence, either inspector shall issue mandatory written requirement to licence or permit holders, committing them to eliminate the identified insignificant violations.

Pursuant to the Code of Administrative Offences of the Republic of Lithuania VATESI is empowered to impose administrative fines and other administrative sanctions on natural persons.

### Experience with legal actions and enforcement measure

During the reporting period VATESI applied enforcement measures by issuing:

- mandatory requirements to eliminate identified insignificant violations of legal acts;
- mandatory requirements to eliminate identified violations of the nuclear safety requirements and rules (to take corrective actions).

The number of violations, including insignificant violations, identified during period 2019–2024 are presented in Figure 7.2.

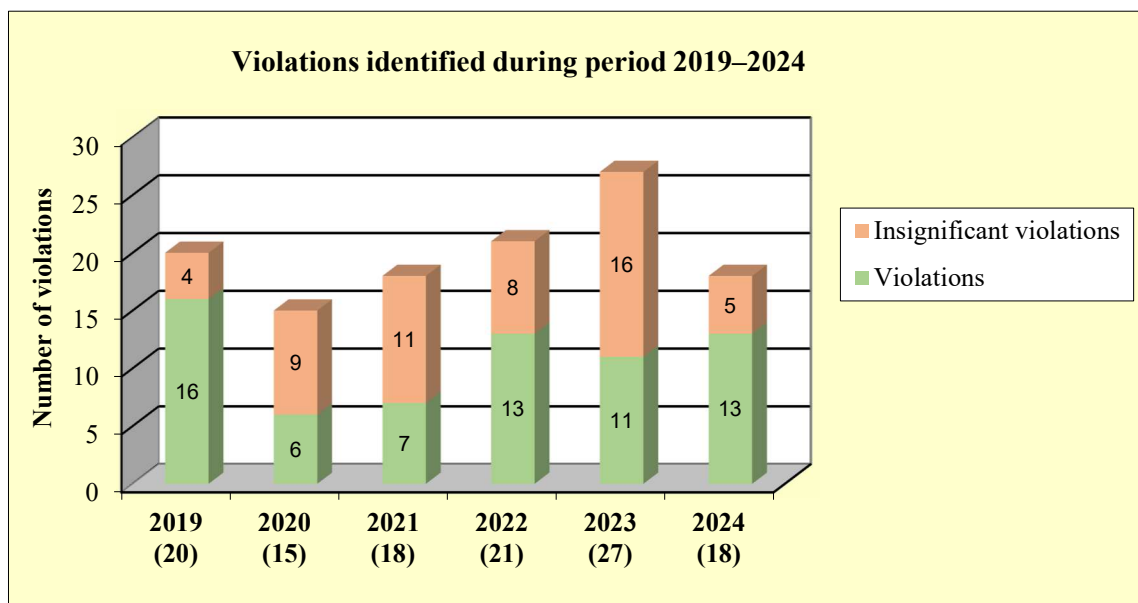


Figure 7.2. The number of violations, including insignificant violations, identified during period 2019–2024.

## Article 8 Regulatory Body

*1. Each Contracting Party shall establish or designate a regulatory body entrusted with the implementation of the legislative and regulatory framework referred to in Article 7, and provided with adequate authority, competence and financial and human resources to fulfil its assigned responsibilities.*

*2. Each Contracting Party shall take the appropriate steps to ensure an effective separation between the functions of the regulatory body and those of any other body or organization concerned with the promotion or utilization of nuclear energy.*

### Summary Statement for Article

Lithuania fulfils the obligations of Article 8.

## **Article 8(1) – Establishment of the regulatory body**

### **Legal foundations and statute of the regulatory body**

VATESI was established by the Decree of Government on 18 October 1991 to regulate and supervise the safety of nuclear facilities within the territory of Lithuania.

In accordance with provisions of Law on Nuclear Energy, Law on Nuclear Safety, Law on Radiation Protection and the Law on the Management of Radioactive Waste, VATESI is the state regulatory and supervisory authority in the nuclear power area and the safety of activities involving sources of ionizing radiation in this area. The Statute of VATESI, adopted in 1992 with subsequent amendments, describes its objectives, main functions and rights.

### **Mandate, mission and tasks of the regulatory body**

Legal framework establishes VATESI as a single organization, responsible for state regulation and supervision of nuclear safety in the Republic of Lithuania.

Mission of VATESI is to carry out state regulation and supervision of safety of nuclear facilities and activities with nuclear and nuclear fuel cycle materials in order to protect the public and the environment from harmful effects of ionizing radiation.

VATESI sets safety requirements and rules, supervises whether they are complied with (conducts inspections, has a right to apply enforcement measures), issues licences, permits, temporary permits, other authorization decisions, performs safety assessment of nuclear facilities.

### **Authorities and responsibilities of the regulatory body**

The Law on Nuclear Energy provides for main legal authority and responsibilities of VATESI as a regulatory body. According the Law on Nuclear Energy, VATESI performs the following main functions:

- creates and improves the state regulatory and supervision system for nuclear safety, radiation safety in the area of nuclear energy, physical security of nuclear facilities, nuclear and nuclear fuel cycle materials, as well as accounting and control of nuclear materials, including drafting and submitting to the Government laws and secondary legislation regarding aforementioned areas, and approving mandatory requirements and rules;
- supervises the compliance with requirements of the legal acts regulating nuclear safety, radiation safety in the area of nuclear energy, physical security of nuclear facilities, nuclear materials and nuclear fuel cycle materials, accounting for and control of the nuclear materials. Supervision includes inspection and enforcement measures, described in the Law on Nuclear Safety and the Law on Radiation protection;
- supervises the implementation of requirements arising out of the international obligations for non-proliferation of nuclear weapons assumed by the Republic of Lithuania;
- analyses and assesses the documents submitted by applicants for obtaining a licence or a permit, also the documents submitted by licence holders or permit holders or other persons, adopt relevant decisions regarding such documents, review and evaluate the nuclear safety;
- in the event of a nuclear and (or) radiological accident provides the interested state and municipal authorities with the time-critical information about the radiation situation in the nuclear facilities, estimated threats of the nuclear and (or) radiological accident and other related information.

Exercising the entrusted functions of state regulation and control of nuclear safety, VATESI has the right:

- to receive all information required for the review and evaluation of nuclear safety from applicants and authorized persons, as well as from their service and goods providers, contractors or persons carrying out other activities related to nuclear and (or) nuclear fuel cycle materials;
- to enter the premises of applicants, authorized persons and perform inspections, use technical equipment for recording and investigation of suspected infringement;

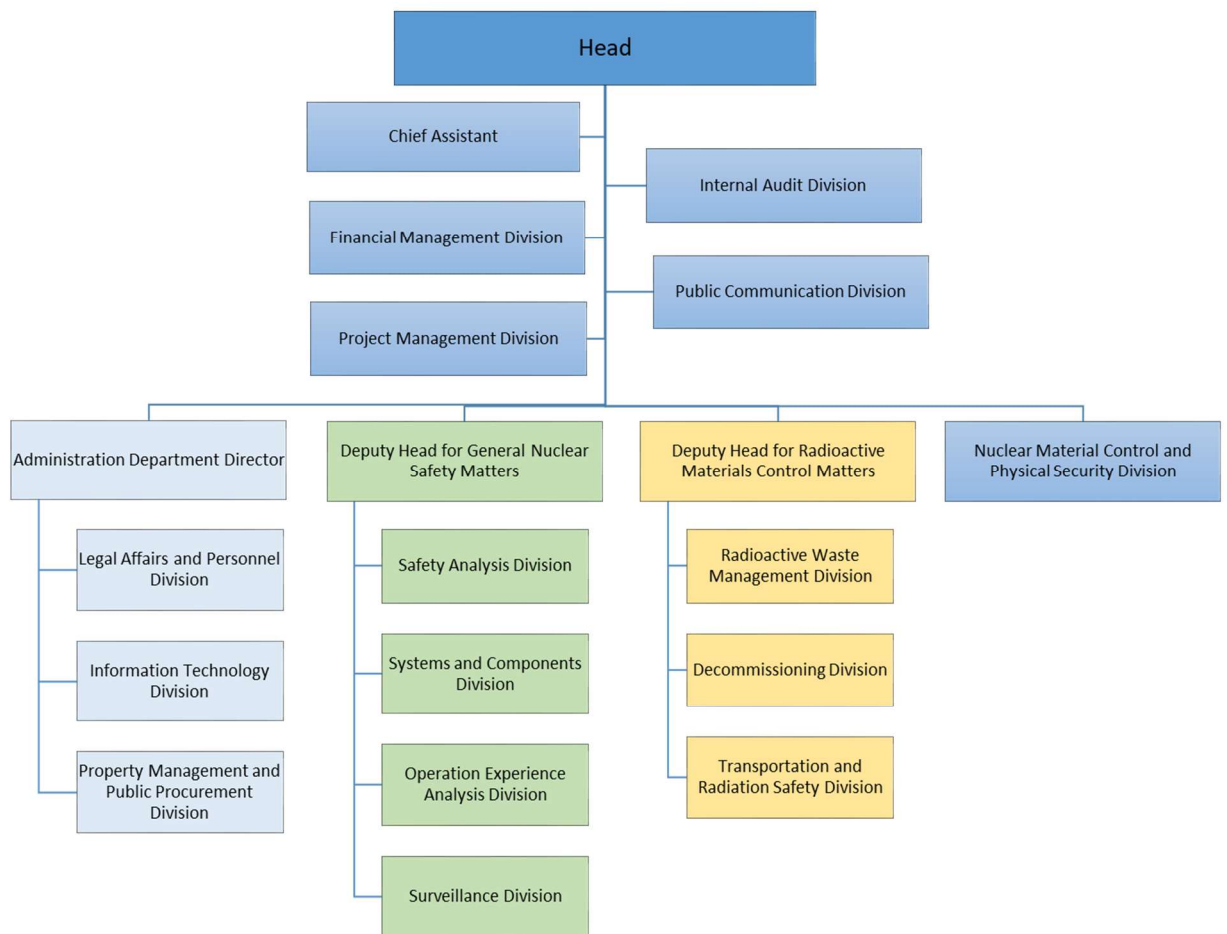
- to coordinate actions with other state regulatory and (or) municipal institutions, if it is required for the performance of the functions of the nuclear safety regulation;
- to obtain the services provided by experts and consultants, scientific-technical support organizations, other independent suppliers that are not related to the applicants, licence holders or persons involved in other activities related to nuclear and (or) nuclear fuel cycle materials.

The Law on Radiation Protection establishes VATESI as a regulatory body carrying out regulatory control of activities with sources of ionizing radiation in the nuclear energy area, which implements state policy on radiation protection of aforementioned activities as described in this Law, including approval of legal acts regulating radiation protection of workers of nuclear facilities, other persons carrying out activities in nuclear facilities, as well as visitors. As a part of the mandate prescribed in the Law on Radiation Protection, VATESI supervises compliance with radiation protection legal acts and has a right to enter premises where activities are carried out, receive and review documents in any format, receive explanations, documents from persons carrying out supervised activities, carry out radiological tests, including collecting samples for the tests, use photography, recording and other technical equipment for recording and investigation of suspected infringement.

### Organizational structure of the regulatory body

The structure and competence of VATESI and its resources corresponds with the nature and scope of the activities in the field of nuclear energy, activities involving nuclear materials and other activities in the field of nuclear energy involving sources of ionizing radiation undertaken and planned to be undertaken in the Republic of Lithuania.

The current organizational structure of VATESI is shown in Figure 8.1.



**Figure 8.1. Organizational structure of VATESI**

## **Development and maintenance of human resources of the regulatory body over the past three years**

VATESI currently has 64 job positions.

VATESI's Rules of Procedure for Planning of Human Resources defines the following tools for better long-term management of human resources as a part of its integrated management system:

- procedure for management turnover of personnel: all positions are divided into groups indicating their likelihood of turnover, availability of human resources for replacement, the importance of the position, etc.; a plan of measures for compensation of departure of staff is composed for positions, that are deemed to make highest impact upon leaving and most difficult to replace;
- different methodologies for evaluating how many and what kind of employees are needed in long-term perspective.

Even though the need of human resources is taken into account in yearly planning activities, in 2024 VATESI carried out a long-term evaluation of functions and workload and subsequently established a plan for further actions.

### **Measures to develop and maintain competence**

Statute of Training of VATESI Personnel regulates methods of training, methods of evaluation of competence, conclusion of 5-year individual plans for improvement of competence, detailed procedures for training new employees and evaluation of their suitability to start working individually, periodical (every five years) evaluation of knowledge of inspectors, procedures of organizing training, etc.

Over reported period different methods of training – formal training (courses, workshops), initial (introductory and extended) internal training, lecturing by VATESI employees, independent studies, work with more experienced specialists – were used in order to maintain the qualification of more experienced employees and to train new employees.

## **Developments with respect to financial resources of the regulatory body over the past three years**

VATESI is a budget institution financed from the State Budget of the Republic of Lithuania and by other legally generated income. Budget of VATESI is justified by 3 years Strategic Plan of VATESI, approved by the Head of VATESI.

### **Statement of adequacy of resources**

Over the reported period, during which VATESI was financed from State Budget, VATESI financial resources were in principle adequate to its needs.

Over reported period human resources were adequate to VATESI needs, taking into consideration existing nuclear facilities – INPP under decommissioning, spent nuclear fuel storage and radioactive waste management facilities.

### **Management system of the regulatory body**

VATESI has established and implemented integrated management system (IMS), aligned with the safety goals and corresponding to the requirements of standards ISO 9001 and IAEA's General Safety Requirements GSR Part 2 "Leadership and Management for Safety". VATESI IMS was certified as compliant with ISO 9001:2008 in 2015 and ISO 9001:2015 in 2018. The last VATESI quality management system recertification audit was conducted in 2024 and certificate of compliance with the ISO 9001:2015 quality standard was issued on the 31<sup>st</sup> of May 2024. VATESI management system is applied in the area of state regulation and supervision of safety (nuclear safety, radiation safety, physical security of nuclear facilities, sites of nuclear facilities, nuclear and nuclear fuel cycle materials and radioactive sources, nuclear material accounting and control, as well as implementation of other international non-proliferation obligations undertaken by the Republic of Lithuania) of nuclear power area activities, activities with nuclear materials and other nuclear power area activities with sources of ionizing radiation.

## **Openness and transparency of regulatory activities, including actions taken to improve transparency and communication with the public**

Pursuant to Article 39 of the Law on Nuclear Safety:

- VATESI and licence holders upon request and on their own initiative must provide information on nuclear safety and radiation protection, except if provision of such information is not prohibited by laws;
- VATESI and licence holders are obligated to inform the state and municipal institutions and the general public as well as other persons whose activities are directly related to the licensed activities of a relevant licence holder about the conditions of nuclear safety and radiation protection by publishing reports on their activities at least once a year;
- VATESI has to deliver public announcements on the results of supervision the implementation of nuclear safety requirements at least once a year;
- VATESI is obligated to organize meetings with municipal institutions, the general public as well as other persons in the vicinity of the nuclear facilities, in order to inform them about conditions of nuclear safety and radiation protection in these facilities;
- Organizations operating nuclear facilities must inform their workers, persons entering the site of nuclear facility and the general public on operating conditions and their compliance with normal operation conditions in a manner described in the Law on Nuclear Safety.

While implementing its regulatory functions VATESI provides consultations to interested parties, which can be oral (on the phone, during a meeting), written (e.g. emails), written consultations approved by the Head of VATESI and public consultations (published on VATESI website).

Pursuant to Article 39<sup>1</sup> of the Law on Nuclear Safety (as amended in September 2017), the public has a right to participate in decision making process of the most important authorization decisions related to nuclear safety: approval of the site evaluation report, issuance of licences for construction, operation, decommissioning of a nuclear facility, supervision of a closed radioactive waste repository, issuance of permits for first delivery of nuclear fuel to the site of nuclear facility. In order to facilitate the implementation of this right, VATESI, as well as the applicant, publishes information related to the decision on its website and all stakeholders are able to provide their comments, opinion and questions, which during the announced time period are evaluated and considered before the final decision is made. All information regarding applications and status of regulatory decision-making process, public participation process beginning and end period is available at the VATESI website.

Additionally, the following means of ensuring the transparency are used:

- all draft legal documents are public in order to inform and get a response (suggestions, remarks, comments) from interested parties;
- all legal acts are public;
- press releases and other publications on VATESI's website;
- information on issues licences, permits, other authorizations is published on VATESI's website;
- reports on implementation of conventions and the law of EU, VATESI annual reports (Nuclear Power Safety in Lithuania) and annual reports to the President and the Government in terms of activities and finances are published on VATESI's website.

To improve transparency and ensure feedback, VATESI organizes surveys of stakeholders, including the general public.

### **External technical support**

VATESI cooperates with the TSOs of Lithuania as well as of foreign countries, which provide VATESI with expertise and necessary technical-scientific support during safety reviews, verification of safety justifications, drafting of legal acts. Some TSOs are involved in international projects implemented through international and bilateral cooperation, coordinated by VATESI. Legal acts do

not establish an advisory body for VATESI. Pursuant to Article 45 of the Law on Nuclear Safety, in selecting specific contractors, the principle of impartiality of the contractors shall be applied. During the reporting period the main VATESI cooperation directions with TSOs remained in the area of expert services as a support for VATESI while evaluating safety justification documents provided by the SE Ignalina NPP.

## Article 8(2) – Status of the regulatory body

### Place of the regulatory body in the governmental structure

Over reported period VATESI’s position in Governmental structure remained unchanged (as shown in Figure 8.2).

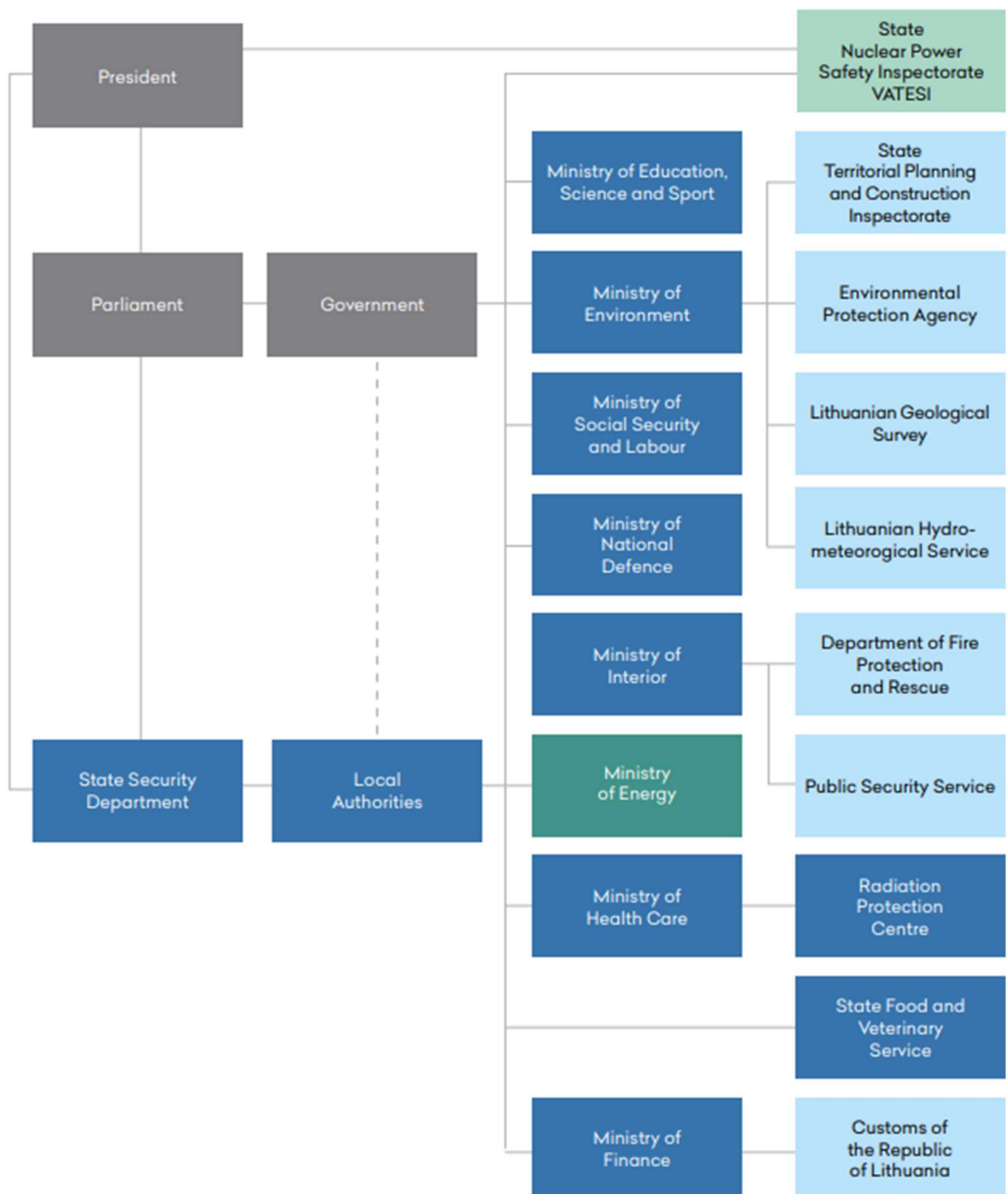


Figure 8.2. VATESI position in Governmental structure

## **Regulatory body reporting obligations**

The Head of VATESI is responsible for activities of VATESI and accountable to the President and the Government. VATESI informs other national and international bodies about its activities according to the national and international legal acts and treaties.

By 1st May each year VATESI has to submit an annual report on activities of VATESI and a set of financial statements to the President and to the Government of the Republic of Lithuania and have to make them public in the manner laid down in the legal acts. The President and the Government may invite the Head of VATESI to present the annual results of VATESI in terms of its activities and finances.

Means by which effective separation is ensured between the functions of the regulatory body and those of any other body or organization concerned with the promotion or utilization of nuclear energy, and means by which independence of the regulatory body in making its safety-related decisions is assured.

The nuclear safety regulatory body's independence is of a fundamental importance in the legal framework of Lithuania. The principle of separation on functions is clearly stated both in the Law on Nuclear Energy (Paragraph 3, Article 21) and in the Law on Radiation Protection (Paragraph 3, Article 7).

Clear description of responsibilities and areas of competencies of stakeholders (policy makers (Parliament, Government and Ministry of Energy), implementing entities (licence holders), other state institutions involved and VATESI as the regulatory authority for nuclear safety provided in the laws and procedures for authorization of nuclear facilities and activities lead to effective independence of regulatory authority and its safety related decision making.

The Head of VATESI is appointed by the President or Republic of Lithuania after nomination of the Prime Minister. The Law on Nuclear Energy includes a finite list of objective grounds for his dismissal. The Head of VATESI is exclusively responsible and reports to the President of Republic of Lithuania and the Government in corpore. All safety decisions are made solely and there is no other body that can make direct influence on safety decisions of the Head of VATESI.

There were no new development or changes in laws or secondary legislation concerning separation of functions of VATESI as a regulatory body and other entities.

## **Article 9 Responsibility of the Licence Holder**

*Each Contracting Party shall ensure that prime responsibility for the safety of a nuclear installation rests with the holder of the relevant licence and shall take the appropriate steps to ensure that each such licence holder meets its responsibility.*

### **Summary Statement for Article**

Although Lithuania is a Category 4 Contracting Party and it has no nuclear installations subject to the CNS, it voluntarily reports on its fulfilment of the obligations of Article 9.

Lithuania fulfils the obligations of Article 9.

### **Legislation assigning responsibility to the licence holder**

The responsibility for the safety rests with the licensee as defined in the Article 30 of the Law on Nuclear Energy and Article 16 of the Law on Nuclear Safety.

Article 3 of the Law on Nuclear Safety lays down the fundamental principles for ensuring nuclear safety, including the principle assigning responsibility for ensuring safety of nuclear facilities and activities.

Article 3 of the Law on Nuclear Energy identifies the legal principles of activities involving nuclear materials and other activities in the field of nuclear energy involving sources of ionizing radiation. The first paragraph of this article states, that activities involving nuclear materials and other activities in the field of nuclear energy involving sources of ionizing radiation in the Republic of Lithuania shall be permitted only subject to a licence or a permit issued by an authorised state institution. If such activities are conducted without a licence or a permit, they shall be considered illegal and shall incur legal responsibility as provided by the laws of the Republic of Lithuania. The second paragraph states, that a licence holder or a permit holder shall be liable for compliance of the activities pursued thereby with the requirements of the Law on Nuclear Energy, the Law on Nuclear Safety, the Law on Radiation Protection, the Law on Management of Radioactive Waste, other laws and legal acts. The final paragraph of the article prescribes, that an applicant having filed in an application for a licence or a permit, and a licence or a permit holder shall notify state and/or municipal authorities, international organizations and the general public of the intended or pursued activities in the manner prescribed by the Government or its authorized institution.

Article 16 of the Law on Nuclear Safety determines that full responsibility for the nuclear safety of a nuclear facility and for nuclear safety in carrying out other activities with nuclear and/or nuclear fuel cycle and fissile materials shall solely fall on persons that are engaged in such activities and hold relevant licences, permits and/or certificates.

The Article 30 of the Law on Nuclear Energy identifies the basic duties of the licence holder, which include the following responsibilities:

- the licence holder shall be responsible for the adequate and safe operation of the installation in accordance with the requirements stipulated in the laws and other legal acts, also licence holder's statute, technical normative documents of the licence holder. The licence holder shall be responsible for safety of the undertaken activities or and the nuclear facility;

- a nuclear facility shall be used only for the intended purpose as stipulated in its design. The purpose of nuclear facilities may be changed in accordance with the procedure provided in the legal acts.

- The licence holder shall:

- include into accounting the nuclear materials belonging to the nuclear installation or used in the operation and exercise their control in such a manner as to ensure performance of the obligations of the Republic of Lithuania regarding the safeguards of the IAEA and the European Atomic Energy Community (the EURATOM);

- investigate nuclear and/or radiological accidents and nuclear incidents in the manner prescribed by the laws and other legal acts;

- carry out and submit to the VATESI the analysis of the potential effects of nuclear and radiological accidents in a nuclear facility, specifying the radiological consequences of nuclear and/or radiological accidents outside the sanitary protection area of the nuclear facility and the characteristics of radionuclide releases resulting from such accidents. Requirements for this analysis shall be set out by the VATESI;

- prepare an emergency preparedness plan of a nuclear facility and ensure preparedness to eliminate the consequences of a nuclear and radiological accident in the nuclear facility and within its sanitary protection area;

- perform other duties established on the grounds of Law on Nuclear Energy and other laws.

In addition, organizations operating the nuclear facilities and other holders of licences and/or permits, according to the national legal requirements shall:

- have the material, financial and human resources that are sufficient for involvement in the licensed activity or operations regulated by permits in compliance with the legal acts and technical standard documents of nuclear safety;

- ensure high level of safety culture and competence of the organisation and its workers;

- on a regular basis analyse the state of nuclear safety and improve it;

- consider human factors (human capabilities and their limits) at all stages of life of a nuclear facility;
- maintain an effective integrated management system with due priority on nuclear safety;
- develop an organizational structure which would ensure the fulfilment of nuclear safety policy formation, implementation and control functions;
- ensure radiation protection of staff and population during normal operation, and for design basis and beyond design basis accidents not to exceed the allowed levels of exposure for staff and population;
- ensure quality of the licensed activity, proper management of documentation, its storage during all life-time of a nuclear facility, renewal in time and approval by licensing authority when it is necessary;
- be responsible for the safety of a nuclear facility even if the validity of the licence is suspended or it is revoked;
- monitor emissions of radionuclides into the environment in a systematic manner;
- monitor and investigate the contamination of a nuclear facility /site and environment in a systematic manner and present to the regulatory institutions with the data about emission of radionuclides, contamination of a nuclear facility /site and the environment;
- apply principles of “defence-in-depth” and the ALARA.

A licence holder is liable for the nuclear damage resulting from the activity subject to the licence or related to that activity. Pursuant the Article 44 of the Law on Nuclear Energy the organization operating the nuclear facility must in the manner and subject to the terms established by the Government insure the nuclear facility operated by the operating organization or ensure in some other way the funds necessary for the compensation for the nuclear damage. If the insurance and other available funds are not sufficient for the compensation of the nuclear damage, the payment of the deficient amount shall be guaranteed by the State pursuant to the obligations assumed by the Republic of Lithuania under the Vienna Convention.

## **Article 10 Priority to Safety**

*Each Contracting Party shall take the appropriate steps to ensure that all organizations engaged in activities directly related to nuclear installations shall establish policies that give due priority to nuclear safety.*

### **Summary Statement for Article**

Although Lithuania is a Category 4 Contracting Party, it voluntarily reports on its fulfilment of the obligations of Article 10.

Lithuania fulfils the obligations of Article 10.

### **Main Requirements and Administrative Arrangements**

The priority of safety is emphasized in the Article 3 and 17 of the Law on Nuclear Safety and in the VATESI’s Nuclear Safety Requirements BSR-1.4.1-2016 “Management System”.

Article 3 of the Law on Nuclear Safety lays down the fundamental principles for ensuring nuclear safety. This include the principle of nuclear safety as a priority in the management of organizations involved in nuclear energy activities and other activities involving nuclear and nuclear fuel cycle materials. Effective leadership and management for safety must be established and maintained by all those involved in the operation of nuclear facilities, the use of nuclear and nuclear fuel cycle materials and other activities. The highest priority in the management system of licensees shall be the assurance of nuclear safety.

The Article 17 of the Law on Nuclear Safety defines general requirements for licence holders, which among other include the requirements to ensure due priority to safety in the management systems, high safety culture and sufficient resources.

Safety as the highest priority is also emphasized in the Nuclear Safety Requirements BSR-1.4.1-2016 “Management System”. Nuclear Safety Requirements BSR-1.4.1-2016 “Management System” sets requirements for leadership and management systems. This regulation is based on IAEA GSR Part 2 and includes detailed requirements for promoting good safety culture. This regulation requires the licensee to establish integrated, process-oriented management system, which includes provisions for use of graded approach, establishment of corresponding safety policies, requirements for processes, arrangements for safety and security culture development and improvement, self-assessments, independent assessments, etc.

The management systems of licence holder is the subject for regulatory review and assessment and regulatory inspections.

### **Article 11 Financial and Human Resources**

*1. Each Contracting Party shall take the appropriate steps to ensure that adequate financial resources are available to support the safety of each nuclear installation throughout its life.*

*2. Each Contracting Party shall take the appropriate steps to ensure that sufficient numbers of qualified staff with appropriate education, training and retraining are available for all safety-related activities in or for each nuclear installation, throughout its life.*

#### **Summary Statement for Article**

Article 11 does not apply to Lithuania, as a Category 4 Contracting Party.

### **Article 12 Human Factors**

*Each Contracting Party shall take the appropriate steps to ensure that the capabilities and limitations of human performance are taken into account throughout the life of a nuclear installation.*

#### **Summary Statement for Article**

Article 12 does not apply to Lithuania, as a Category 4 Contracting Party.

### **Article 13 Quality Assurance**

*Each Contracting Party shall take the appropriate steps to ensure that quality assurance programmes are established and implemented with a view to providing confidence that specified requirements for all activities important to nuclear safety are satisfied throughout the life of a nuclear installation.*

#### **Summary Statement for Article**

Article 13 does not apply to Lithuania, as a Category 4 Contracting Party.

## Article 14 Assessment and Verification of Safety

*Each Contracting Party shall take the appropriate steps to ensure that:*

*(i) comprehensive and systematic safety assessments are carried out before the construction and commissioning of a nuclear installation and throughout its life. Such assessments shall be well documented, subsequently updated in the light of operating experience and significant new safety information, and reviewed under the authority of the regulatory body;*

*(ii) verification by analysis, surveillance, testing and inspection is carried out to ensure that the physical state and the operation of a nuclear installation continue to be in accordance with its design, applicable national safety requirements, and operational limits and conditions.*

### Summary Statement for Article

Article 14 does not apply to Lithuania, as a Category 4 Contracting Party.

## Article 15: Radiation Protection

*Each Contracting Party shall take the appropriate steps to ensure that in all operational states the radiation exposure to the workers and the public caused by a nuclear installation shall be kept as low as reasonably achievable and that no individual shall be exposed to radiation doses which exceed prescribed national dose limits.*

### Summary Statement for Article

Although Lithuania is a Category 4 Contracting Party, it voluntarily reports on its fulfilment of the obligations of Article 15.

Lithuania fulfils the obligations of Article 15.

### Overview of arrangements and regulatory requirements concerning radiation protection at nuclear installations

Protection of the general public, workers of nuclear facilities and the environment against the possible radiation impact is regulated by the laws, norms and standards.

The basic standards and safety requirements for occupational and public exposure (including dose limits) are established in the Lithuanian Hygiene Standard HN 73:2018 “Basic Standards of Radiation Protection”, which is in line with the General Safety Requirements No. GSR Part 3 “Radiation Protection and Safety of Radiation Sources: International Basic Safety Standards” and the Basic Safety Standards Directive.

The basic regulation setting out requirements for radiation protection of workers working at the nuclear facilities is Nuclear Safety Requirements BSR-1.9.3-2016 “Radiation Protection at Nuclear Facilities”. These requirements are in compliance with the General Safety Requirements No. GSR Part 3 “Radiation Protection and Safety of Radiation Sources: International Basic Safety Standards” and the Basic Safety Standards Directive as well.

The radiation protection requirements for contractors’ personnel are set in the Lithuanian Hygiene Standard HN 73:2018 “Basic Standards of Radiation Protection”. The principal requirement is that the radiation protection of contractors’ personnel shall be at the same scale as of permanent workers of the NPP. The employers, whose workers are performing their activities within the controlled area of the nuclear power plant, shall establish the co-operation agreements with licence holders, where the order and procedure of registration and estimation of workers exposure, measures of exposure reduction and other significant means from the radiation protection point of view shall be described.

Pursuant to the Law on Nuclear Safety the plan for radioactive discharges into environment is one of documents that shall be submitted to VATESI together with documents accompanying the application for the issuance of licences for activities indicated in the Law. A plan for radioactive discharges into environment shall be prepared and updated in accordance with the procedure established by the Nuclear Safety Requirements BSR-1.9.1-2017 “Standards of Release of Radionuclides from Nuclear Facilities and Requirements for the Plan on Release of Radionuclides”. These requirements regulate the limitation of the release of radionuclides from nuclear facilities and establish that the activity of the radionuclides released from nuclear facility including controlled temporary increases of pollution shall be restricted insomuch that the annual effective dose of the representative person would not exceed a dose constraint. Annual effective dose constraint of general public applicable while designing, operating (during normal operation and anticipated operational events) and decommissioning of nuclear facility is 0.2 mSv. If the public exposure resulted from the operation of more than one nuclear facility, a total annual effective dose, caused by operations of all nuclear facilities, shall not exceed the established annual effective dose constraint.

### **Regulatory expectations for the licence holder’s processes to optimize radiation doses and to implement the ALARA principle**

Relying on the Basic Safety Standards Directive, as well as on the international recommendations, Lithuanian regulation (the Law on Radiation Protection, Lithuanian Hygiene Standard HN 73:2018 “Basic Standards of Radiation Protection” and Nuclear Safety Requirements BSR-1.9.3-2016 “Radiation Protection at Nuclear Facilities”) clearly refer to the ALARA principle: any kind of exposure of individuals and society must be as low as reasonably achievable, economic and social factors being taken into account. There is a regulatory requirement that the optimisation of radiation protection is to be applied, together with the principle of justification of practices and the principle of limitation of individual exposures.

According to the requirements of Nuclear Safety Requirements BSR-1.9.3-2016 “Radiation Protection at Nuclear Facilities”, one of the items of the radiation protection programme must be the application of optimisation principle (ALARA). For this purpose the ALARA programme shall be carried out at nuclear facility. ALARA programme shall contain description of organizational arrangements for implementation of ALARA principle, procedures for implementation of ALARA principle and the list of high dose tasks for the next year, which shall be reviewed annually. For high dose tasks ALARA analysis document shall be prepared well in advance before the planned activities to ensure implementation of ALARA measures indicated in ALARA analysis document (i.e. modification of equipment, modification of procedure, installation of protective equipment, installation of new working tools etc.) in due time. Analysis of the effectiveness of ALARA measures shall be implemented after completion of every high dose task and the results of this analysis shall be taken into account for optimization of radiation protection in other tasks where appropriate.

### **Processes implemented and steps taken to ensure that radiation exposures are kept as low as reasonably achievable for all operational and maintenance activities**

Implementation of the ALARA Programme at the SE INPP was started in 1996. The aim of the ALARA Programme at SE INPP is to make the personnel exposure dose as low as reasonable achievable with regards to established individual exposure limit of 20 mSv/year, as well as to reduce the personnel collective annual dose.

The ALARA Programme has the following basic directions at the SE INPP:

- proper organization of the activities;
- improvement of working conditions and Personnel learning and training;
- perfection of engineering process;
- quality maintenance and Safety culture;
- human factor impact;
- identification of high dose tasks;
- ALARA analysis.

Since 1997 SE INPP has been implementing the Quality Assurance Program. The procedures of the first and second levels have been prepared and their main purpose was to address safety in all activities paying special attention to ALARA principle.

Responsibility for radiation protection is defined at the SE INPP in accordance with a Control Procedure of the second level “Radiation Safety” MS-2-005-1.

The staff that works in radiation exposure conditions is trained according to the programs on radiation protection training.

Requirements for radiation protection training are included in a worker’s Job Description as well as in program for a post preparation. The course duration is 30 hours for workers dealing with the ionizing exposure sources and 60 hours for those responsible for radiation protection. The personnel engaged in works related to high exposure doses shall undergo additional training course before they can start working. The training is arranged on a regular basis, and special training simulators are applied. Contractors’ personnel are also trained and examined on radiation protection according to the same programs before they are allowed to work in a controlled area. Radiation protection training is implemented in accordance with a Control Procedure MS-2014-1.

According to the Nuclear Safety Requirements BSR-1.9.3-2016 “Radiation Protection at Nuclear Facilities” the INPP territory and its premises are subdivided into the controlled area and the supervised area. The premises in the INPP controlled area are subdivided into three categories according to their radiation conditions, see Table 15.1.

**Table 15.1. Classification of INPP controlled areas**

Room category	Colour of the area	Frequency of service	Dose rate mSv/h	Surface alpha contamination Bq·cm <sup>-2</sup>	Surface beta contamination Bq·cm <sup>-2</sup>	Total aerosol activity Bq·cm <sup>-3</sup>
I	Red	No service	>0.056	>20	>266	>1110
II	Yellow	Periodic	0.012-0.056	4-20	40-266	185-1110
III	Green	Permanent	<0.012	<4	<40	<185

The first category premises are unmanned ones. The doors of category I rooms are tagged by a sign with red labels and in addition are tagged by according signs of radiation danger. The access to the room is authorised under the orders, written orders or special programmes approved in accordance with the established procedure with the permission of the Shift Supervisor or Radiation Safety Control dosimetrist.

The second category premises are those, the entrance into which is only permitted for periodic maintenance of the equipment located in them (Central Hall, a Spent Fuel Storage Pools Hall, a sample cutting room). The doors of these rooms are tagged by a sign with yellow labels and in addition are tagged by according signs on radiation danger. The access to the specified rooms is authorised according to SE INPP valid procedures.

The third category premises are those of personnel permanent residence (for example, operator rooms, control panels, workshops, laboratories, corridors, etc.). Doors of these rooms are tagged by a sign with green labels.

The access to the premises, which under any radiation factor are related to categories I or II, is strictly regulated. The works in these premises are carried out in the following order:

- people responsible for radiation protection shall assess the radiation condition of working places and develop the principles of requirements to safety;
- operators shall prepare the working place;
- workers get appropriate instructions;
- workers shall be followed by a person responsible for dose monitoring, who assess the radiation conditions.

In order to reduce the personnel expose dose the working area or object is decontaminated before the activities can be started. The activities with increased exposure are usually carried out with

the following radiation protection means: lead screens, distance safety equipment, video-monitoring systems.

To provide radiation protection a system of job confirmation procedures has been developed at the plant, a system of permission issue for carrying out of radiation dangerous works is being efficiently used. All activities under ionizing exposure conditions are carried out in accordance with “Direction on Radiation Accident Prevention during Work Performance in Controlled Area” requirements.

Medical examination of the personnel who works in a controlled area includes an initial medical examination and a subsequent annual health control. According to the Order No. 561 issued by the Ministry of Health the plant personnel shall pass medical examination once a year. In case doctors find any contraindications, this person is not allowed to work with sources of ionizing radiation.

### **Regulatory review and control activities**

There are two radiation safety regulatory authorities in Lithuania with clear function separation: VATESI and Radiation Protection Centre (hereinafter – RSC).

VATESI is responsible for supervision of radiation safety in nuclear power area. For the regulatory purposes, VATESI drafts and approves legal acts related to occupational radiation protection in nuclear energy area, which shall be coordinated with the Ministry of Health. VATESI also sets the requirements for different life stages of nuclear facilities taking into account radiation protection aspects, sets the requirements for clearance of radioactive materials and establishes the procedure and limits for the release of radionuclides from nuclear facilities.

To evaluate how the radiation safety requirements are fulfilled by the licence holder VATESI conducts inspections. During the inspections at nuclear facilities VATESI checks how the licence holder performs the individual and workplace monitoring, manages the controlled area, implements the principle of optimization, applies personal protective equipment, ensures the radiation protection training of workers and implement other radiation protection measures during the decommissioning of INPP. During the annual inspections on implementation of environmental monitoring programme, procedures of operational control of liquid and gaseous discharges from INPP are inspected as well.

Also VATESI performs review of safety related documents, including reports on occupational exposure and release of radionuclides, which shall be submitted to VATESI on regular basis. By the end of the year VATESI is provided with the report on the impact of nuclear facilities on the environment.

The radiation protection issues during decontamination and dismantling of the INPP buildings and equipment and the radioactive waste management, control of occupational and public exposure during the decommissioning of the INPP will remain one of the underlying areas of regulatory activities.

RSC is regulatory authority executing regulatory control of exposure of people and environment and practices with sources of ionizing radiation, except of regulation and supervision of the practices in the area of nuclear power. Among other responsibilities the RSC is responsible for the radiation protection of the general public from negative impact which may cause the ionizing radiation, including ionizing radiation, arising from nuclear facilities in operation and decommissioning.

RSC as regulatory body takes part in evaluation of Environment Impact Assessment Reports of Ignalina NPP decommissioning projects and also is regularly assessing exposure for public due to discharges to the atmosphere and water from Ignalina NPP.

Within State Environmental Radiological Monitoring the measurements of radioactivity in the foodstuffs (milk, meat, vegetables, grains, and fish), raw food, drinking water, and mushrooms are performed at a schedule approved by Minister of Health Care. Milk and drinking water are analysed on quarterly basis, fish, meat – twice per year, vegetables, grains, mushrooms – during summer time. Results showed that the levels of artificial radioactivity in the samples analysed are very low, and radioactivity in the samples in Ignalina NPP area is the same as in the other territory of Lithuania.

There are five automatic gamma dose rate measurement stations in vicinity of INPP. There is a nonautomatic station for aerosol sampling in 60 km distance from INPP. Environmental samples are

periodically taken within the zone of INPP. Control of INPP laboratory is provided for ensuring of reliability of results.

The Radiation Early Warning Network (RADIS), which is used for continuous environmental radiological monitoring and early warning, was upgraded from 2022 to 2024. The national monitoring network RADIS has a total of 51 operating automatic monitoring and early warning stations, including four that measure radiation levels in the major Lithuanian rivers Neris and Nemunas. Fourteen stations were installed along the border with Belarus in response to the construction of nuclear power station in Ostrovets, Belarus, approximately 20 km from the Lithuanian border and 40 km from capital Vilnius. By the end of 2025, RADIS is expected to expand by six more monitoring sites (the stations have been purchased, and the installation sites have been identified) being allocated along the state border.

## **Article 16 Emergency Preparedness**

*1. Each Contracting Party shall take the appropriate steps to ensure that there are on-site and off-site emergency plans that are routinely tested for nuclear installations and cover the activities to be carried out in the event of an emergency.*

*For any new nuclear installation, such plans shall be prepared and tested before it commences operation above a low power level agreed by the regulatory body.*

*2. Each Contracting Party shall take the appropriate steps to ensure that, insofar as they are likely to be affected by a radiological emergency, its own population and the competent authorities of the States in the vicinity of the nuclear installation are provided with appropriate information for emergency planning and response.*

*3. Contracting Parties which do not have a nuclear installation on their territory, insofar as they are likely to be affected in the event of a radiological emergency at a nuclear installation in the vicinity, shall take the appropriate steps for the preparation and testing of emergency plans for their territory that cover the activities to be carried out in the event of such an emergency.*

## **Summary Statement for Article**

Although Lithuania is a Category 4 Contracting Party, it voluntarily reports on its fulfilment of the obligations of Article 16.

Lithuania fulfils the obligations of Article 16.

## **Article 16(1) – Emergency plans and programmes**

### **Overview of arrangements and regulatory requirements for on-site and off-site emergency preparedness**

The main laws that set and describe the general criteria for ensuring on-site and off-site emergency preparedness and response in case of nuclear and radiological emergencies are:

- the Law on Crisis Management and Civil Protection. It establishes the legal and organizational framework for the crisis management and civil protection system, the competence of state and municipal institutions and agencies, the rights and duties of other agencies, economic entities and residents in the field of civil protection. The Law on Crisis Management and Civil Protection was adopted on 8 December 2022 (updated in 2023). In connection with the adoption of the aforementioned Law, the Government of Lithuania on 29 December 2022 adopted Resolution No. 1317 on the Implementation of the Law on Crisis Management and Civil Protection, accordingly pursuant to this order many civil protection secondary legislation were reviewed.

Following the approval of a new description of the preparation of crises and emergency management plans, the existing emergency management plans of the state, state institutions,

municipalities, other institutions and economic entities need to be reviewed and updated in the near future. The plans will be updated in accordance with the results of the National Risk Analysis (2024).

- the Law on Nuclear Energy. It sets the general obligations and assigns responsibilities for licence holders and state institutions for preparedness and response to nuclear and radiological emergencies at nuclear facilities. This law sets the order of preparation and approval of the state plan for protection of population in case of a nuclear or radiological emergency (off-site plan);

- the Law on Nuclear Safety. It sets responsibilities for licence holders to ensure the preparedness for possible nuclear and radiological accidents, their prevention at nuclear facilities. This law sets the obligation for licence holders to prepare and test an on-site emergency preparedness plan.

The arrangements for ensuring the off-site preparedness and response to nuclear and radiological emergencies are established in the National Plan for Protection of Population in case of Nuclear or Radiological Emergency (hereinafter – Plan) which has been approved in 2018 (last amended in 2020). The Plan at the State level defines civil protection actions in case of nuclear or radiological emergency in Lithuania and (or) outside of Lithuania. The Plan is prepared in accordance with IAEA Requirements GSR Part 7 “Preparedness and Response for a Nuclear or Radiological emergency”, IAEA Safety Guide GS-G-2.1 “Arrangements for Preparedness for a Nuclear or Radiological Emergency”, IAEA Safety Guide GSG-11 “Arrangements for the Termination of a Nuclear or Radiological Emergency”.

### **Overview and implementation of main elements of national plan for emergency preparedness**

The civil protection and rescue system is comprised of the Government of Lithuania, the National Security Commission, the National Crisis Management Centre, the Ministry of Interior, ministries and other state institutions and agencies, the Fire and Rescue Department (PAGD) and the agencies subordinate thereto, municipal institutions and agencies, economic entities and other agencies, operations centres and forces of the civil protection system. National management of emergencies is carried out on two levels: state (governmental) and municipal. The state level comprises the Government of the Republic of Lithuania, the National Security Commission, the National Crisis Management Centre, the Emergency Operation Centres of the Ministry of Interior and other ministries, Emergency Operation Centres of the PAGD and other governmental institutions. The municipality level comprises the Mayor, the Municipal Administration, the Municipal Emergency Operations Centre, the Fire Protection Services, as well as other institutions, economic entities and their Emergency Operation Centres. Preparations for likely emergencies are carried out by means of planning related activities on each level of the civil protection system. In the case of emergency, actions of ministries and government authorities shall be coordinated by the National Crisis Management Centre.

Responsibility for development, maintenance and updates of the Plan lays on Ministry of Interior. The Plan is activated in case of nuclear or radiological emergency inside the country and provisions of the Plan foresee a possibility be activated in case of such emergencies in neighbouring countries if there is a possible threat to population of Lithuania.

In the event of a nuclear or radiological emergency at the nuclear facility inside the country, emergency is managed by organization operating the nuclear facility within sanitary protection zone. Outside the sanitary protection zone, emergency management and coordination are organized by the National Crisis Management Centre, emergency operation centres, depending on the scale of the accident and its consequences. In this situation the emergency operation centres of the competent authorities shall be activated. After assessing the circumstances, the Ministry of Health submits proposals on the application of protective measures to the population, the National Crisis Management Centre makes decisions on its application, as well as warn and inform the population. At a later stage, the radioactive waste manager (SE INPP) shall install and maintain temporary storage facilities for radioactive waste.

In case of nuclear or radiological emergency at nuclear facilities (inside or outside of territory of Lithuania), VATESI is responsible for collecting and assessing information about emergency

situation, analyzing of accident progression and predicting of possible radioactive releases and their pathways in the environment (evaluation of source terms). VATESI provides information to state institutions, and mass-media about the situation in the nuclear facilities. VATESI is responsible for notifying European Commission, IAEA, neighbouring countries in accordance with the Convention on Early Notification and bilateral agreements.

In accordance with the Plan the Radiation Protection Centre (hereinafter – RSC) is responsible for administration of early radiation warning network (RADIS) and performs prognosis of radionuclides dispersion, organizes aerial radiation survey and ground-based radiation survey, provides recommendations to the National Crisis Management Centre on urgent protective actions, early protective actions and recovery actions. RSC also organizes, coordinates and performs radiological measurements, if necessary, proposes to activate laboratories of the laboratory network, organizes and performs radiological monitoring of the public and environment, assesses the results, forecasts consequences of the emergency. RSC presents proposals to the Ministry of Health about the necessity of applying thyroid blocking and provides information to the public, within the limits of its competence, about protection actions, etc. In 2022-2024 the RADIS network has been expanded with 5 new monitoring stations.

In the event of a nuclear accident PAGD is responsible for organization of warning, fire protection and rescue and public information and together with RSC dosimetric control and radiation intelligence of the contaminated territory.

PAGD is responsible for dissemination of information on the emergency to the ministries, municipalities of cities/towns. For this purpose, it shall use prescribed procedures for notification the national managing bodies and warning system to alert the population and institutions, which includes sirens, cell broadcast, electronic and public means of communication (e-mail, phone) and direct telephone and radio communication channels additionally arranged by PAGD. In addition, the PAGD also transmits information on the emergency to state civil protection management bodies in the neighbouring countries.

Decisions on the regular use of prophylactic iodine preparations in the event of an emergency are made by the Director of the Municipal Administration or the National Crisis Management Centre or the Head of State Operations, upon receiving recommendations from the Ministry of Health. Residents in the emergency protective action planning zone and the extended planning distance are provided (distributed) with stable iodine by municipalities in accordance with the procedure established by municipalities through the elders or in other ways acceptable to the municipalities.

At the state level, the evacuation of residents in the event of a nuclear or radiological emergency is coordinated by PAGD, and evacuation is organized by municipal evacuation and reception commissions.

Evacuation might be implemented in the urgent procedure, if a territory has already been contaminated, or in the planned procedure through population collecting posts, taking into consideration a particular situation and specific features of the area. In the event of urgent evacuation from the territory contaminated with radioactive materials, the population is evacuated right from their places of residence or/and work. The population collecting points serve for evacuation of people from the territory, which, according to forecasts, might be contaminated with radioactive materials and therefore might be dangerous for work or living. Taking into consideration meteorological conditions (direction of the wind), evacuation might be carried out in three directions.

To improve implementation of the provisions of the Plan, in 2022-2024 the RSC paid particular attention to ensuring proper radiation protection in health care facilities in preparation for receiving victims in the event of a nuclear or radiological accident.

The Order No. V-71 of the Director of the Radiation Protection Centre of 29 June 2022 on the approval of radiation protection recommendations for the preparation and organization of activities of health care facilities in the event of a nuclear or radiological accident (hereinafter – recommendations) has been approved. To assist hospitals in the implementation of the recommendations, RSC specialists organized trainings and assessment of emergency management plans for health care facilities within a 100 km radius of the Belarusian NPP. Moreover, in assistance

to medical emergency preparedness and response capabilities RSC operates biological dosimetry laboratory auxiliary tool for medical triage based on assessment of accidental overexposure of public and first responders. Being a member of WHO Biological Dosimetry Network (WHO BioDoseNet) and biological dosimetry network RENEb (Running the European Network of Biological and Retrospective Physical Dosimetry) established under 7th EU framework EURATOM Fission Programme, this laboratory is involved in mutual assistance in individual dose estimation in large scale radiological and nuclear emergencies inside and outside country.

### **Implementation of emergency preparedness measures by licence holders**

To protect the personnel of SE INPP, population of the Republic of Lithuania and neighbouring Countries against potential consequences of nuclear and radiological emergencies, the SE INPP carries out emergency planning and emergency preparedness (hereinafter – EP) activities. Emergency planning process at the SE INPP consists of:

- analysis and assessment of potential emergencies and their consequences to the personnel, people and environment considering the worst consequences;
- establishment of the Emergency Preparedness Organization (hereinafter – EPO) capable to manage potential emergencies and their consequences;
- ensuring of the continuous operation of technical measures to prevent, localize and eliminate accidents;
- identification of the material and technical resources required for the EPO functioning;
- maintenance of the continuous preparedness of the Accident Management Centre (hereinafter – AMC) and training of the personnel of EPO headquarters, services and teams, and the enterprise personnel not involved in the EPO services;
- timely updates of the SE INPP Emergency Preparedness Plan (hereinafter – EPP) due to the full-scale exercises results, changes in requirements as well as results of inspections conducted by VATESI, Visaginas Fire and Rescue Service (hereinafter – FRS), and other state management and control institutions.

Director General of SE INPP is responsible for the EP and planning at enterprise through the Head of the Technology Department.

Pursuant to the Law on Nuclear Energy, the license holder shall perform and agree with VATESI the analysis of the consequences of hypothetical nuclear and radiological accidents at operating nuclear facilities. The detailed requirements for the licensee for performing of this analysis are established in the Nuclear Safety Requirements BSR-1.8.10-2021 “Analysis of the consequences of the hypothetical nuclear and radiological accidents at nuclear facility”. In order to meet these requirements, during 2019-2020 SE Ignalina NPP carried out analysis of the consequences of hypothetical nuclear and radiological accidents of very low probability at all nuclear facilities situated at Ignalina NPP site. The methodology of the analysis is based on deterministic methods and engineering judgment and encompass evaluation of accidents progression, characteristics of the release (source terms), dispersion of radionuclides in the air and projected dose assessment for the postulated accident scenarios. The most unfavorable off-site radiological consequences were obtained in case of accident at Solid Waste Management and Storage Facility. But even for such accident, even using very conservative assumptions, radiological consequences will not give rise to doses for people off-site (outside the 3 km sanitary protection zone) that would require precautionary urgent, urgent or early protective action as they are defined in the IAEA GSR Part 7 “Preparedness and Response for Nuclear or Radiological Emergency”. The analysis of the consequences of hypothetical nuclear and radiological accidents of all nuclear facilities situated at Ignalina NPP site was agreed by VATESI in 2021.

Based on the performed analysis, the former emergency preparedness categories of nuclear facilities situated at Ignalina NPP site have been reviewed. Consideration was also given to the fact that the spent nuclear is stored in spent nuclear fuel storage facilities.

### ***Classification of emergencies at Ignalina NPP***

The following emergencies classes are defined at SE INPP:

*Alert* is an unusual event at nuclear facility, during which:

- acceptable concentration of radionuclides can be exceeded in premises of the nuclear facility;
- established limits of irradiation doses of the personnel may be exceeded;
- failure of the SSC important to safety have occurred which could lead to the weakening of the system of physical barriers that prevent the release of ionizing radiation and the release of radioactive substances into the environment and/or the system of technical and organizational measures that protect and maintain the effectiveness of these barriers.

*Facility emergency* is a nuclear or radiological accident at nuclear facility, during which:

- acceptable concentrations of radionuclides in premises of nuclear facility are exceeded or the limit of the contamination by radionuclides is exceeded on-site of the nuclear facility;
- established limits of irradiation doses of the personnel are exceeded;
- the failure of SSC important to safety occurred, which may result in a weakening of the system of physical barriers that prevent the release of ionizing radiation and radioactive substances into the environment and/or the system of technical and organizational measures that protect these barriers and maintain their effectiveness;
- consequences of the accident do not spread outside the site area of nuclear facility.

*Site Area Emergency* is a nuclear or radiological accident at nuclear facility, during which:

- a spread of radioactive materials on-site of nuclear facility exceeds the permitted limit and require urgent protective actions for the personnel of the enterprise;
- the established limits of irradiation doses of the population and environment contamination may be exceeded;
- the failure of SSC important to safety occurred, at the same time potentially violating the system of physical barriers that prevent the release of ionizing radiation and radioactive substances into the environment, and/or the system of technical and organizational measures that protect these barriers and maintain their effectiveness;
- consequences of the accident may spread outside the site area of nuclear facility.

*General Emergency* is a nuclear or radiological accident at nuclear facility, during which:

- emission of radionuclides into environment is imminent or spreads outside the site area of nuclear facility. This causes environment contamination and the irradiation of population, so the urgent protective actions should be applied established by the Hygienic Standard of Republic of Lithuania HN 99:2019 “Protection of the Population in Case of Radiation or Nuclear Accident Occurrence”;
- failure of SSC important to safety occurred, at the same time breaching both the system of physical barriers that prevent the spread of ionizing radiation and radioactive materials into the environment, and the system of technical and organizational measures that protect these barriers and maintain their effectiveness.

*Other nuclear or radiological emergency* is an unusual event in case of the transportation of radioactive materials outside the boundaries of the site area of the nuclear facility, during which:

- established limits of irradiation doses of the personnel may be exceeded;
- the established limits of irradiation doses of the population and environment contamination may be exceeded.

Accidents at INPP are classified in accordance with the Accidents Classification Instruction at INPP.

### ***Main elements of the on-site and off-site emergency plans***

SE INPP EPP is the main document defining the structure of the SE INPP EPO and the principles of cooperation between the emergency preparedness structural units, including other organizations and structures responding to emergencies at the INPP. EPP is supported by series of separate instructions dedicated for different teams of EPO and different nuclear facilities. The EPP is developed in accordance with national legislation and IAEA safety requirements and is agreed with VATESI. The last review of EPP was performed in 2025.

### ***Facilities provided by the licence holder for emergency preparedness***

SE INPP EPO AMC is created at the enterprise for emergency management (in Bld. 185 basement), which is maintained in constant (round-the-clock) preparedness, has special premises for EPO headquarters and EPO services working groups operation, equipped with necessary furniture, computers, communication equipment, personal protection equipment (hereinafter – PPE), and other life-support systems. For organization of EPO TSC experts work is foreseen in the main TSC premises located at Unit D-1 in and spare TSC premises located at EPO AMC.

The SE INPP EPO applies monitoring systems, which includes automated radiation safety monitoring system (control of emissions, control of drains, control of radiation conditions on the site via stationary posts, as well as gamma background control in 30 km zone) and seismic warning and control system, which consists of an independent subsystem performing the function of the seismic alert system (hereinafter – SAS).

SAS system is intended for informing on the earthquake prior to arrival of its waves at the INPP. When a seismic wave arrives at one or several external seismic stations, the system sends alarms power unit 2 MCR, the information from SAS is also transmitted to the main TSC and reserved TSC. The information received from the seismic sensors is kept in SAS archive.

The resources, equipment, tools, accessories and technical means required for EPO services for elimination of accidents are defined and specified in instructions on emergency preparedness of EPO services.

### ***Training of personnel at State Enterprise Ignalina Nuclear Power Plant***

SE INPP Director General (if he has not appointed the authorized person regarding the enterprise EP and civil protection (hereinafter – CP)) shall undergo initial training under the programme on EP and CP for the Senior Managers of the state importance facilities in the Firefighters Training School (hereinafter – FTS).

Head of the Technology Department, as the authorized person appointed by the order of the SE INPP Director General regarding the enterprise EP and CP activities organization, is obliged to undergo initial training under the programme on EP and CP for the Senior Managers (or the authorized by them persons) of the state importance facilities in the FTS.

Head of the Technical Support Division, as the person who can act as the Director of Decommissioning Department, is obliged to undergo initial training under the programme on EP and CP for the Senior Managers (or the authorized by them persons) of the state importance facilities in the FTS.

Group Leader of the Radioactive Waste Management Division, as the Head of EPO headquarters, should undergo initial training under the programme for the permanent EP and CP staff, in the FTS.

Managers of EPO services and teams with their subordinates (that are involved and those not involved in the EPO) in compliance with the approved training schedule conduct annual theoretical practice on EP and CP for the members of all training groups. As all personnel of the EPO services and teams shall be trained to respond in the event of an emergency training of the EPO headquarters administrative board is also carried out according to the Schedule of studies, trainings and exercises on EP and CP at the SE INPP. The duration of training is not less than 2 hours – theoretical training and not less than 2 hours – practical training in group exercises or full-scale exercises.

The SE INPP Director General not less than once per 3 years organizes EP full-scale exercises, where all EPO personnel participate in the full-scale exercises, where the EP level of all personnel of EPO services and teams is checked, as well as their ability to work in complicated conditions at performance of the assigned tasks. During the full-scale exercises the actions of managers and personnel of EPO services are observed and assessed by appointed exercise controllers and supervisors. When analyzing the full-scale exercises, the supervisors report on merits and flaws in the actions of managers and personnel of EPO services as well as on the disadvantages and misjudgments made during the exercises.

After completion of full-scale exercises, the controller of the exercises together with the Head of EPO headquarters (or its assistant) prepares a report on performance of full-scale exercises. The report must be approved by the SE INPP Director General, registered, and stored in SS&QMD. Two copies of the report must be sent to the Ministry of Energy of the Republic of Lithuania and VATESI.

Based on the reports of the supervisors, participated in the exercises, the workers of the Safety Surveillance Group of SS&QMD prepare the Plan of Corrective activities for EP to eliminate the detected disadvantages, and send the report to VATESI for control.

During the period 2022–2024, three functional and one full-scale exercise were organized and conducted.

### **Regulatory review and control activities**

VATESI is performing regular inspections at INPP, spent nuclear fuel and radioactive waste management facilities to check that the emergency preparedness arrangements are implemented properly. This includes control of training and exercising of EPO staff and facility workers, review of emergency planning and response procedures and documents, inspection of equipment and functionality of EPO, inspection of personal protective equipment and tools for emergency response organization workers. Additionally inspectors of VATESI participate in training and exercising activities as observers and if necessary provides suggestions and recommendations for further emergency preparedness improvement.

### **International arrangements**

In the event of a nuclear accident in a neighbouring country, the responsible and supporting institutions of the Republic of Lithuania shall co-operate with the neighbouring country on the strategy for application of protective measures, exposure reference levels and coordination of exposure reference levels. Assistance shall be operated under the intergovernmental agreements on mutual assistance.

If, in the event of a nuclear accident, there are insufficient means, devices, medicine and other material, organizational or institutional resources to perform protective actions in Lithuania, in accordance with the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency, a request for assistance shall be made to foreign countries with which intergovernmental agreements on mutual assistance have been signed, as well as to other foreign countries, the IAEA, the World Health Organization and other international organizations.

Following the Government decision to request assistance, the Fire and Rescue Department transmits a request for assistance to neighbouring authorities and bodies, the Emergency Response and Coordination Centre (ERCC), the Euro-Atlantic Disaster Response Coordination Centre (NATO EADRCC) and the United Nations Office for the Coordination of Humanitarian Affairs (UN OCHA). The Ministry of Foreign Affairs of the Republic of Lithuania is further disseminating the request for assistance through diplomatic channels.

Support from the European institutions could be useful in case of major emergencies, especially, those having impact on more than one country/region.

Government of Republic of Lithuania has signed a number of international agreements with neighbouring countries and other States in the field of cooperation assistance in case of emergency situations:

- Agreement between the Republic of Lithuania and the Federal Republic of Germany concerning mutual assistance in natural calamity and large accident cases (signed in 1994);
- Agreement between the Government of the Republic of Lithuania and the Government of the Republic of Poland on mutual support in the event of natural calamities and large-scale accidents (signed in 2000);
- Agreement between the Republic of Lithuania and the Republic of Hungary on Co-operation and Mutual Assistance to be provided in the Event of Catastrophes and Severe Accidents (signed in 2001);
- Agreement between the Government of the Republic of Lithuania and the Cabinet of Ministers of Ukraine on Co-operation and Mutual Assistance in the Field of Prevention of Emergencies and Elimination of their Consequences (signed in 2003);
- Agreement between the Government of the Republic of Lithuania and the Government of the Kingdom of Sweden on collaboration within the field of Emergency Prevention, Preparedness and Response (signed in 2003);
- Agreement between Belarus and Lithuania on Cooperation in the Field of Prevention and Liquidation of Natural Disasters and Severe Emergencies (signed in 2003);
- Agreement between Azerbaijan and Lithuania on Cooperation and Assistance in Case of Disasters and Severe Emergencies (signed in 2012);
- Agreement between the Government of the Republic of Lithuania and the Government of Georgia on Cooperation and Mutual Assistance in the Field of Emergency Prevention and Response (signed in 2013);
- Agreement between the Government of the Republic of Lithuania and the Government of the Republic of Moldova on Cooperation and Mutual Assistance in the Field of Emergency Prevention and Response (signed in 2016);
- Agreement between the Government of the Republic of Lithuania, the Government of the Republic of Estonia and the Government of the Republic of Latvia (signed in 2017).

### **Training and exercises, evaluation activities and main results of performed exercises and lessons learned**

Civil protection training and exercises programme is coordinated by the Ministry of the Interior of the Republic of Lithuania. Exercises are conducted at entity, municipal and national levels. The plan of the national civil protection exercises (hereinafter – National exercise plan) is approved by the Minister of the Interior of the Republic of Lithuania for a period of three years. Exercises (table-top and field) encompass various scenarios according to the National Emergency Management Plan. A detailed analysis of the actions and identifying lessons after each exercise or emergency indicate necessary improvements for the plan. The emergency management plan is reviewed and updated considering recent emergencies, lessons learnt from the exercises, considering new risks, changes in civil protection legislation etc.

In 2023 PAGD organized state level civil protection functional exercise to assess the readiness of some entities of the Crisis Management and Civil Protection System of the Republic of Lithuania to carry out certain functions of the entities of the Crisis Management and Civil Protection System of the Republic of Lithuania as set out in the Plan in the event of a nuclear or radiological emergency in the context of evacuation of the population, and to test of the equipment and instruments acquired under the project No LT05-5-VRM-TF-001 "Developing the Lithuanian Early Warning System for Nuclear Dangerous Situations", which has been financed under the Norway Grants, in the context of the nuclear emergency at the nuclear power station of Belarus. More than 50 state and municipal institutions and bodies, as well as non-governmental organizations participated in the exercise.

In order to assess the readiness of the entities of the crisis management and civil protection system to carry out the functions in the event of the case of a nuclear and/or radiological accident at the Belarusian nuclear power plant as set out in the State Plan, state level civil protection complex exercise “Actions of Crisis Management and Civil Protection System Entities in the Event of a Nuclear Accident at a Nuclear Power Plant in the Territory of the Republic of Belarus” was organized

in 2024. During this exercise a lot of attention was paid to the preparedness of state, municipal and other authorities to carry out certain functions as warning the population about the accident, organizing the evacuation of the population from the area of operation of the emergency protective action and other functions which are necessary to respond to nuclear or radiological emergency.

RSC pays constant attention to the training of the civil protection system forces, primarily first responders and employees of other institutions. Between 2022 and 2024, approximately 5,400 persons were trained in emergency preparedness and response to nuclear or radiological accidents.

Based on National exercise plan the following state-level exercises were organized by the RSC:

1. In 2022, a tabletop exercise at the state level was held on organizing laboratory control of food, its raw materials, animal feed and water potentially contaminated with radioactive materials, as well as making decisions on restricting consumption in the event of a nuclear emergency at the Belarusian NPP.

Objectives of the exercise were achieved. During the presentations and discussions, the participants of the exercise informed about their willingness to carry out the tasks formulated during the exercise related to the organization of laboratory control of foodstuffs, their raw materials, feed and water potentially contaminated with radioactive substances and the adoption of decisions on restrictions of their use in the event of a nuclear accident at the Belarusian NPP. During the exercise, the interaction mechanism of the participating institutions was discussed, elements for improvement were identified, and further issues to be resolved were clarified in preparation for the state-level functional exercise on the same topic scheduled for 2023.

2. In 2023, a state-level functional exercise on the practical preparation of the crisis management and civil protection system to organize laboratory control of food products, their raw materials, feed and water potentially contaminated with radioactive substances and to make decisions on restrictions on consumption in the event of a nuclear accident at the Belarusian NPP.

Objectives of the exercise related to the practical organization of laboratory control of food products, their raw materials, feed and water potentially contaminated with radioactive substances and the adoption of decisions on restrictions on consumption in the event of a nuclear accident at the Belarusian NPP were achieved.

Additionally, together with Fire and Rescue Department specialists, RSC participated in the international exercise of response to nuclear emergency Valahia 2023 held in Romania, ECUREX-2023, organized by EC, JADE 2023, organized by the WHO European Regional Office. Under the simulated nuclear incident scenario, RSC participated in EC 2024 exercise, organized by the EC Health Security Committee and ConvEx-2c, 2024, organized by IAEA.

Every year VATESI Emergency Response Centre staff takes part in national exercises, as a competent authority coordinates and takes part IAEA's ConvEx and European Commission drills and exercises. Additionally, VATESI ERC staff is trained according internal training procedures in VATESI and on civil protection topics in the Branch of the Fire Fighters Training School of the PAGD.

## **Article 16(2) – Information of the public and neighbouring States**

### **Overview of arrangements for informing the public in the vicinity of the nuclear installations about emergency planning and emergency situations**

At the state level, public warning in the event of a nuclear or radiological accident is coordinated by National Crisis Management Centre and organized by PAGD.

At the state level, informing the population is organized by the National Crisis Management Centre, the head of the state operation. State institutions inform the population within their competence. Informing the population is coordinated by the National Crisis Management Centre. The provision of information is organized, among other things, taking into account the interests of vulnerable social groups, residents with hearing disabilities, and foreigners.

In case of an emergency State and municipality's institutions, public offices and citizens are notified using existing notification public warning and informing system, which consists of 1160

sirens and cell-broadcast messaging system. After notifying signal, the information about situation, possible consequences and process of liquidation of emergency is vocally spread through companies and institutions emergency sound systems and using national and local broadcasters.

The citizens of municipalities are notified using technical and organizational means described in each municipality's emergency management plan. In places not covered by notification network system citizens are informed by using existing communication system, cell-broadcast facilities and specialized vehicles equipped with sound amplifying systems. Also courier or local police services could be used for spreading the information.

Ministries and other national institutions are responsible for notifying their own staff. The PAGD shall notify the population, using national television and radio channels, most of commercial broadcasting companies (which work in FM radio range).

### **Arrangements to inform competent authorities in neighbouring States**

In 1994 Lithuania has joined to Convention on Early Notification of a Nuclear Accident and in 2000 to Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency. VATESI is responsible for implementation of Convention on Early Notification and PAGD is responsible for implementation of Convention on Assistance. According to IAEA's EPR-IEComm requirements, VATESI is National Warning Point, National Competent Authority for events abroad and PAGD – National Competent Authority for domestic events. VATESI is also a contact point and competent authority in ECURIE arrangements. Mutual assistance policy between Lithuania and the neighbouring countries is based on bilateral agreements:

- Agreement between the Government of the Republic of Lithuania and the Government of the Kingdom of Denmark on the exchange of information and cooperation in the fields of nuclear security and radiation safety has been signed on 16 March 1993;
- Agreement between the Government of the Republic of Lithuania and the Government of the Kingdom of Norway on early notification of nuclear accidents and on the exchange of information on nuclear facilities has been signed on 13 February 1995;
- Agreement between the Government of the Republic of Lithuania and the Government of the Republic of Poland on early notification of a nuclear accident, and co-operation in the field of nuclear safety and radiation protection has been signed on 2 June 1995;
- Agreement between Lithuania and Latvia on Early Notification of Nuclear Accidents, Exchange of Information and Cooperation in the Field of Nuclear Safety and Radiation Protection has been signed on 3 October 2003;
- Agreement on early notification of Nuclear and Radiological Emergencies between the VATESI and the Swedish Radiation Safety Authority of the Kingdom of Sweden has been signed on 1 January 2009;
- Agreement on early notification about emergencies in nuclear facilities and exchange of nuclear safety important information between VATESI and the Ministry of Emergency Situations of the Republic of Belarus has been signed on 25 May 2020.

### **Article 16(3) – Preparation and testing emergency plans with respect to nuclear installations in the vicinity of Lithuania**

Given the fact that the Belarusian nuclear power plant is in a close vicinity of the border of Lithuania (23 km) and its capital Vilnius (about 40 km) with a more than half a million people, most obligations on off-site emergency preparedness are the similar as for a Contracting Party with nuclear installations. Therefore, emergency preparedness in relation to the operation of the Belarusian nuclear power plant is addressed in the present report under Articles 16(1) and 16(2), and is organized in accordance with the National Plan for the Protection of the Population in the Event of a Nuclear or Radiological Emergency (hereinafter – Plan).

According to the provisions of this Plan, in 2025 new potassium iodide (KI) tablets were distributed to the residents of 17 municipalities within a radius of 100 km around the Belarusian NPP.

The first distribution of potassium iodide (KI) tablets to the public was organized in 2020. The RSC has prepared and distributed to the public recommendations for the use of KI tablets in 4 languages.

In 2024, RSC implemented the communication campaign "Increasing public awareness and resilience in the event of a possible accident at the Belarusian nuclear power plant". The content of the campaign consisted of 26 informative articles, 8 videos, 18 live chats with people, special tests, etc. One of the main goals of the campaign was to inform the population about the risk of a nuclear accident at the Belarusian NPP and radiological accidents in Lithuania, the readiness to deal with the possible consequences of such accidents, the risks of military actions against the Ukrainian NPPs, the need for the population to prepare for various emergency situations, etc.

To increase public understanding of radiation safety and how to prepare for and respond to a nuclear or radiological accident, the RSC conducted educational tours for students and schoolchildren from educational institutions, discussing the health hazards of ionizing radiation and the protective measures that should be taken first in the event of a nuclear or radiological accident.

Lithuania, referring to CNS Article 17 (Siting), para. iv), continues to request that the Republic of Belarus provide the information necessary to evaluate and make Lithuania's own assessment of the likely safety impact of the Belarusian NPP on the territory of Lithuania. Despite of prolonged communication since initial request in 2019, the major part of requested information is still not provided by Republic of Belarus, thus violating requirements of Article 17, para iv) and Article 16.2<sup>3</sup> of the CNS.

Lithuanian position concerning site selection and assessment as well as other important safety issues related with Belarusian NPP was raised during 7th CNS Review Meeting<sup>4</sup>. Taking into account this position and that this NPP is being operated in the close vicinity of the EU border and highly populated area, Lithuania continues in systematic way to raise questions of implementation of the modern international safety requirements<sup>5</sup> related with Belarusian NPP project in different international fora as well as during correspondence with Ministry of Emergency Situations of Republic of Belarus and its Nuclear and Radiation Safety Department<sup>6</sup>. The most important unresolved safety issues:

- Evaluation of density and distribution of Lithuanian population was not performed by Belarus during site selection for Belarusian NPP and corresponding IAEA safety standards were not taken into account;
- Belarus has not invited IAEA SEED mission modules covering a review of Belarusian NPP site selection and evaluation;
- Belarus up to now did not demonstrate the robustness of Belarusian NPP equipment against the design basis or beyond design basis earthquake;
- Belarus did not implement all the EU stress tests review team safety recommendations;
- Belarus did not perform the assessment of intentional crash of a commercial aircraft as it is stated in WENRA report "Safety of New NPP designs" (March, 2013, Position 7: Intentional crash of a commercial airplane) and is not going to implement corresponding safety measures in the design

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<sup>3</sup> Each Contracting Party shall take the appropriate steps to ensure that, insofar as they are likely to be affected by a radiological emergency, its own population and the competent authorities of the States in the vicinity of the nuclear installation are provided with appropriate information for emergency planning and response.

<sup>4</sup> Report of the President of the 7<sup>th</sup> Review Meeting, Annex VII, Lithuanian statement concerning the new NPP under construction in the Republic of Belarus.

<sup>5</sup> These latest international safety requirements should be understood as a package of Nuclear Safety and Joint conventions, Vienna Nuclear Safety Declaration, contemporary IAEA Safety Standards, both EU directives – Nuclear Safety and Radioactive Waste Management, WENRA SRLs for existing reactors and Safety Objectives for new NPPs.

<sup>6</sup> With copies for information to the President of CNS Review Meeting, IAEA Deputy Director General for Nuclear Safety, Chair of ENSREG, Deputy Director-General responsible for the coordination of EURATOM policies, Directorate-General Energy, European Commission and WENRA Chair.

of Belarusian NPP. Lithuania further encourages Belarus to evaluate all safety positions provided in this WENRA report and implement all needed safety improvements;

- Belarus did not follow requirements of IAEA safety standards regarding preparation by operating organization and review by regulatory body of final safety analysis report before authorization of routine operation at full power of Unit 1 and Unit 2 of Belarusian NPP;

- Belarus did not follow requirements of IAEA safety standards regarding independent verification of safety assessment.

- From the very beginning of the implementation of the Belarusian NPP project Lithuania is of the opinion that the whole “package” of modern safety requirements shall be urgently implemented there.

Most of the Lithuanian principal questions regarding nuclear safety issues related to the implementation of the Belarusian NPP project on the Ostrovets site remain open. Lithuania has consistently taken the position that operation of the Belarusian NPP shall be suspended until all the above-mentioned safety issues are properly addressed.

### **Article 17 Siting**

*Each Contracting Party shall take the appropriate steps to ensure that appropriate procedures are established and implemented:*

*(i) for evaluating all relevant site-related factors likely to affect the safety of a nuclear installation for its projected lifetime;*

*(ii) for evaluating the likely safety impact of a proposed nuclear installation on individuals, society and the environment;*

*(iii) for re-evaluating as necessary all relevant factors referred to in sub-paragraphs (i) and (ii) so as to ensure the continued safety acceptability of the nuclear installation;*

*(iv) for consulting Contracting Parties in the vicinity of a proposed nuclear installation, insofar as they are likely to be affected by that installation and, upon request providing the necessary information to such Contracting Parties, in order to enable them to evaluate and make their own assessment of the likely safety impact on their own territory of the nuclear installation.*

### **Summary Statement for Article**

Article 17 does not apply to Lithuania, as a Category 4 Contracting Party.

### **Article 18 Design and Construction**

*Each Contracting Party shall take the appropriate steps to ensure that:*

*(i) the design and construction of a nuclear installation provides for several reliable levels and methods of protection (defence in depth) against the release of radioactive materials, with a view to preventing the occurrence of accidents and to mitigating their radiological consequences should they occur;*

*(ii) the technologies incorporated in the design and construction of a nuclear installation are proven by experience or qualified by testing or analysis;*

*(iii) the design of a nuclear installation allows for reliable, stable and easily manageable operation, with specific consideration of human factors and the man-machine interface.*

### **Summary Statement for Article**

Article 18 does not apply to Lithuania, as a Category 4 Contracting Party.

## Article 19 Operation

### **ARTICLE 19. OPERATION**

*Each Contracting Party shall take the appropriate steps to ensure that:*

- (i) the initial authorization to operate a nuclear installation is based upon an appropriate safety analysis and a commissioning programme demonstrating that the installation, as constructed, is consistent with design and safety requirements;*
- (ii) operational limits and conditions derived from the safety analysis, tests and operational experience are defined and revised as necessary for identifying safe boundaries for operation;*
- (iii) operation, maintenance, inspection and testing of a nuclear installation are conducted in accordance with approved procedures;*
- (iv) procedures are established for responding to anticipated operational occurrences and to accidents;*
- (v) necessary engineering and technical support in all safety-related fields is available throughout the lifetime of a nuclear installation;*
- (vi) incidents significant to safety are reported in a timely manner by the holder of the relevant licence to the regulatory body;*
- (vii) programmes to collect and analyse operating experience are established, the results obtained and the conclusions drawn are acted upon and that existing mechanisms are used to share important experience with international bodies and with other operating organizations and regulatory bodies;*
- (viii) the generation of radioactive waste resulting from the operation of a nuclear installation is kept to the minimum practicable for the process concerned, both in activity and in volume, and any necessary treatment and storage of spent fuel and waste directly related to the operation and on the same site as that of the nuclear installation take into consideration conditioning and disposal.*

### **Summary Statement for Article**

Article 19 does not apply to Lithuania, as a Category 4 Contracting Party.

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