Nuclear Legislation in OECD and NEA Countries

Regulatory and Institutional Framework for Nuclear Activities

Slovak Republic

OECD
BETTER POLICIES FOR BETTER LIVES

NEA
NUCLEAR ENERGY AGENCY

Slovak Republic

I. General Regulatory Regime

1. Introduction

On 1 January 1993, the former Czechoslovakia was divided into the Slovak Republic and the Czech Republic. To ensure a smooth transition of legal regimes, it was agreed that all acts, regulations and decisions, *inter alia* in the field of nuclear energy and ionising radiation, would continue to apply until subsequent legislation was enacted, provided that such laws were consistent with the Constitution of the Slovak Republic. On 1 April 1998, the Parliament adopted the 1998 Atomic Act.[1] The 1998 Atomic Act came into force on 1 July 1998, providing a comprehensive framework for the regulation of nuclear activities in the Slovak Republic and it was supported by a body of 14 implementing regulations covering the area of peaceful use of nuclear energy. In regard to the accession of the Slovak Republic to the European Union in 2004, the new 2004 Atomic Act[2] was adopted and entered into force on 1 December 2004. The 2004 Atomic Act has taken into account not only changes to European Union (EU) law in the areas of nuclear material accountancy, record-keeping and control, and transport of radioactive materials through the European Community and outside the European Community but also some other important issues, *e.g.* permits for suppliers that were cancelled due to the principle of the operator's primary responsibility for nuclear safety, increased liability limits for nuclear damages for operators of nuclear installations, and elaboration of administrative provisions. Since 2004, the 2004 Atomic Act has been amended nine times; the last two amendments[3] took effect on 1 November 2011 and on 1 August 2013. These amendments introduce many changes into national legislation such as annual contributions to be paid by operators to the regulatory body, new nuclear liability limits (as of 1 January 2014) and transposition of EU legislation[4] into national legislation. The 2004 Atomic Act was complemented by a set of 13 regulations issued in 2006 by the Nuclear Regulatory Authority. These regulations were amended or partially replaced by new regulations in 2011-12. These regulations enact more detailed provisions focusing on specific areas relating to the use of nuclear energy such as detailed requirements for nuclear safety, periodic safety reviews, management of radioactive waste and spent fuel, shipment of radioactive waste and spent fuel, record-keeping and control over nuclear materials, training of nuclear installation personnel, emergency preparedness, operational events at nuclear installations and during the shipments of radioactive materials.

In the former Czechoslovakia, the principal authority regulating nuclear activities was the Czechoslovak Atomic Energy Commission (*Ceskoslovenska Komisia pre atomovu energiu* – CSAEC). Its successor in the Slovak Republic is the Nuclear Regulatory Authority of the Slovak Republic (*Úrad jadrového dozoru Slovenskej republiky* – UJD). The competency and mission of the UJD are set out in an act[5] adopted on 12 December 2001 on organisation of government activities and central State administration, which specifies its independent status from any central body with respect to nuclear safety matters. Further detailed provisions on UJD competencies as nuclear regulator are established in Section 4 of the 2004 Atomic Act.

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1. Act No. 130/1998 Coll. on the Peaceful Uses of Nuclear Energy, the "1998 Atomic Act".
2. Act No. 541/2004 Coll. on Peaceful Use of Nuclear Energy and on alterations of and amendments to some other acts, the "2004 Atomic Act".
3. Act No. 350/2011 Coll., amending and supplementing Law No. 541/2004 Z. on the Peaceful Uses of Nuclear Energy, the 2004 Atomic Act and on amendments to certain laws as amended and Act No. 143/2013 Coll., amending and supplementing Act No. 541/2004 Coll., on the peaceful use of nuclear energy, "the Atomic Act" and on the amendments and supplements to some acts as amended by later acts, and amending and supplementing Act No. 238/2006 Coll., on the National Nuclear Fund for decommissioning of nuclear facilities and for management of spent fuel and radioactive waste "the Nuclear Fund Act" and on the amendments and supplements to some acts as amended by later acts.
4. Notably, Council Directive 2006/117/EURATOM of 20 November 2006 on the supervision and control of shipments of radioactive waste and spent fuel, Council Directive 2009/71/EURATOM of 25 June 2009 establishing a Community framework for the nuclear safety of nuclear installations and Council Directive 2011/70/Euratom of 19 July 2011 establishing a Community framework for the responsible and safe management of spent fuel and radioactive waste.
5. Act No. 575/2001 Coll. on organisation of government activities and of central State administration, as amended, the "Act on Organisation".

The Slovak Republic is heavily dependent on external primary energy resources, importing more than 80% of its needs, particularly oil, gas and nuclear fuel from the Russian Federation. This makes the efficient generation of electrical power of crucial importance. In 2011, 54,8% of the total electricity generated in the Slovak Republic originated from nuclear energy.

The Slovak Republic has two sites with nuclear power plants located at Bohunice and Mochovce. At the Bohunice site, there are five nuclear reactors. The Bohunice V1 nuclear power plant operated by the State owned company JAVYS,[6] has two VVER 440 (model V230) reactors which were respectively shut down in 2006 and 2008 due to commitments adopted in the 2004 Treaty on Accession of the Slovak Republic to the European Union.[7] Two reactors of the Bohunice V1 nuclear power plant are under decommissioning licence as of July 2011. The Bohunice V2 nuclear power plant operated by the Slovenske elektrarne (66% of shares owned by ENEL[8] and 34% of shares owned by the State), has two VVER 440 (model V213) reactors that are in operation with licenses valid until 2017, and chances are that these operating licenses will be prolonged. The Bohunice A1 nuclear power plant has one model KS-150 unit with a total electricity output of 143 MW. This unit is now in the second phase of decommissioning following an operational accident in 1977.

At Mochovce, there is one nuclear power plant operated by Slovenske elektrarne with two reactors in operation. These two VVER 440 model (V213 type) reactors have a generating capacity of 440 MW each, and were commissioned in 1998 and 2000. There are another two units under construction at Mochovce nuclear power plant for which, in November 2008, the operator declared the reactivation of construction work after their interruption in the early 1990s when all buildings and installations were preserved. Slovenske elektrarne has had a valid construction permit since 1986.

There are also three radioactive waste treatment facilities and an interim spent fuel storage facility at the Bohunice site and a radioactive waste disposal facility at the Mochovce site. A near-surface repository for low-level and medium-level waste was licensed and put into operation on a trial basis. The construction of a disposal facility for high-level waste and spent fuel in deep geological formations is planned.

2. Mining Regime

There have been no uranium mining activities in the Slovak Republic since 1990. Mining legislation formerly applied to the mining of uranium is still in force and would be applicable if uranium mining were to begin again. In recent years, there have been some companies interested in uranium mining that have undertaken exploration in certain localities. The uranium mining legislation consists of the following laws:

a) Article 4 of the Constitution of the Slovak Republic provides that mineral resources (including uranium resources) are owned by the State;

6. Jadrová a vyraďovacia spoločnosť, a.s., ("JAVYS"), the Nuclear and Decommissioning Company.
7. Treaty between the Member States of the European Union and Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, the Slovak Republic and Slovenia, concerning the accession of Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, the Slovak Republic and Slovenia to the European Union, *Official Journal* C 227 E of 23 September 2003.
8. Ente Nazionale per l'Energia Elettrica "ENEL", Italian National Agency for Electricity.

b) The Mining Act[9] of 1 July 1988, classifies radioactive minerals into the category of exclusive minerals. Undertaking of exploration or mining in the deposits of exclusive minerals may be carried out by any person or private company only in compliance with the rights and obligations established by the Mining Act and the Act on Mining Activities[10] of 1 July 1988. The competent authorities involved in the licensing of mining activities are the Ministry of Economy, the District Mining Authority and the Ministry of Environment. According to Section 34(1)(b) of the Mining Act, disposal of radioactive waste beneath surface (repositories) is a particular intervention into the crust of the Earth for which the provisions of the mining regime shall be applied accordingly.

c) Section 11 of the Act on Mining Activities, establishes requirements for an application for granting a license for the disposal of radioactive waste in repositories by the District Mining Authority.

d) Sections 6(1) and (2)(e) and Annexes 9 and 10 of Regulation No. 89/1988 Coll. on Rational Use of Exclusive Minerals Deposits and on Licensing and Notification of Mining Activities, as amended.

3. Radioactive Substances and Equipment

Section 11(1) of the 2004 Atomic Act defines "nuclear materials" as materials defined by EURATOM Treaty[11] and by the Commission Regulation on the application of EURATOM safeguards.[12] Nuclear materials thus include the following "source materials": natural uranium, depleted uranium, thorium and any of these materials in the form of metal, alloy, chemical compounds or concentrates and any other substance containing one or more of the aforementioned substances in a specified minimum quantity; and the following "special fissile materials": plutonium 239, uranium 233, uranium enriched in 235 or 233 isotopes and any substances containing one or more of the aforementioned isotopes in a specified minimum quantity.

Nuclear materials may only be managed and used on the basis of an authorisation for management of nuclear materials issued by the UJD.[13] The authorisation has no time limitation. Applicants for a license in their application are required to demonstrate that they have met not only the general requirements for any authorisation including the capacity to enter into legal acts, an unblemished reputation, evidence of functional technical equipment for the requested activity and adequate permanent staffing with the required professional competency, but also that they meet the specific conditions for the authorisation of management of nuclear materials pursuant to Section 7(3) of the 2004 Atomic Act such as the approved documentation of a quality assurance system for the licensed activity, an approved plan of physical protection, an approved on-site emergency plan, and an off-site emergency plan or emergency transport order. Authorisation (license) for management of the nuclear materials in or out of the nuclear installation is granted by the UJD.

When the owner of the nuclear material is unknown, the license for management of nuclear material has expired or nuclear material was obtained in contravention of the relevant provisions of the 2004 Atomic Act, UJD shall designate another licensee to take the necessary measures in respect of such nuclear materials. Under such circumstances, the UJD will decide whether the National Nuclear Fund will provide reimbursement of expenditures incurred by the new designated licensee (see Section 7 "Radioactive Waste Management" *infra*).

9. Act No. 44/1988 Coll. on Protection and Use of Mineral Resources, as amended by Act No. 498/1991 Coll., the "Mining Act".
10. Act No. 51/1988 Coll. on Mining Activity, Explosives and the State Mining Authorities, as amended, the "Act on Mining Activities".
11. Treaty on the establishment of the European Atomic Energy Community "EURATOM treaty".
12. Commission Regulation (EURATOM) No. 302/2005, of 8 of February 2005, on the application of EURATOM safeguards.
13. Section 5(3)(g) of the 2004 Atomic Act.

The licensee for management of nuclear material, which includes the production, processing, reprocessing, transmutation, handling, use or storage thereof, is responsible for:

a) maintaining records of nuclear materials, operational records and submitting reports on inventory changes to the UJD;

b) providing the UJD with copies of documentation pursuant to Chapter 7 of the EURATOM Treaty with respect to safeguards;

c) appointment of an employee with special qualifications who shall be responsible for keeping records including accounting and operating on control of nuclear materials, and notifying the UJD and European Commission of his or her name;

d) keeping the UJD and the European Commission informed on non-compliance with the obligations pursuant to the Chapter 7 of the EURATOM Treaty with respect to safeguards;

e) transferring management of nuclear material only to another licensee for the management thereof;

f) granting the UJD inspectors, persons invited by the UJD as well as authorised persons from international organisations carrying out inspections in accordance with international commitments, access to the premises and places at nuclear installations in which nuclear materials are located and to render them necessary assistance.

Under section 12 of the 2004 Atomic Act, any person who identifies the loss or theft of nuclear material or other radioactive material or suspects or has knowledge of damage to nuclear material or other radioactive material, to monitoring equipment or to seals controlling the status and flows of nuclear materials, shall notify, without delay, the UJD, the Police or Chief Hygienist and the European Commission.

Details concerning requirements regarding the management of nuclear materials, operating records keeping, the preparation and submission of reports on inventory changes and the method of notification and reporting of events connected with control equipment and nuclear material are laid down by two regulations.[14]

The UJD also grants licenses for the import and export of nuclear material and export of special material and equipment (also known as dual-use goods) with respect to which Ministry of Economy is the primary licensing authority.

14. Regulation of the UJD No. 30/2012 Coll. on detailed requirements for management of nuclear materials, radioactive waste and spent fuel (the Regulation on detailed requirements for management of nuclear materials, radioactive waste and spent fuel) and Regulation of the UJD No. 54/2006 Coll. on record-keeping and control of nuclear materials and on Notification of Selected Activities.

4. Nuclear Installations

a) Licensing and Inspection, including Nuclear Safety

i) Licensing

Under Section 2(f) of the 2004 Atomic Act, "nuclear installation" means a set of civilian structures and the necessary technological equipment in a configuration specified by the design, intended for:

1. generation of electric energy or for research in the field of nuclear energy, part of which is a nuclear reactor or nuclear reactors, which will use, is using or had been using a controlled fission chain reaction,

2. management of nuclear material in quantities greater than one effective kilogram except in areas for storage of containers and shields, in which nuclear material is used as material for radioactive sources, facilities for treatment of uranium ore and storage of uranium concentrate,

3. spent nuclear fuel management,

4. radioactive waste management, or

5. uranium enrichment or production of nuclear fuel.

The general principle of peaceful use of nuclear energy under the 2004 Atomic Act is that any use of nuclear energy requires an authorisation (license) issued by the UJD.[15] In accordance with the 2004 Atomic Act, the UJD is responsible for issuing licenses for:

- the siting, construction, commissioning and operation of nuclear installations and their decommissioning stages;
- closure of repository;
- institutional control and management of nuclear material within or outside a nuclear installation;
- management of radioactive waste or spent fuel;
- imports and exports of nuclear material;
- exports of dual use goods in the nuclear field;
- shipment of radioactive material; and
- the professional training of licensees' employees at specialised institutions.

The general requirements of the applicant for a license, the content of applications and the issuance of the UJD´s decision with respect to a license are set out in Sections 6, 7 and 8 of the 2004 Atomic Act.

The siting of a nuclear installation is governed by the general provisions of the Construction Code[16] and by special provisions of the 2004 Atomic Act (Section 17). During the siting stage, the

15. Section 3(6) of the 2004 Atomic Act.
16. Implemented by the Act N° 50/1976 Coll. on Spatial Planning and Construction Order, as amended, the "Construction Act".

District Construction Authority is the licensing body, although the UJD plays a role with the other authorities involved in the proceedings. Permission for the siting of a nuclear installation must be issued by UJD and based upon the statement of the European Commission.[17]

Once the siting of the nuclear installation has been approved, UJD serves as the main building authority for granting the permit to build the nuclear installation.[18] General provisions on construction permit proceedings are laid down in the Construction Code and Section 18 of the 2004 Atomic Act. The construction of a nuclear installation may only be carried out by a holder of a valid building permission. The holder of a building permission is referred to as the "builder". The UJD grants a building permission for the construction of a nuclear installation on the basis of the builder's written application with the required documentation attached pursuant to the Construction Code and Annex 1 of the 2004 Atomic Act. Such documentation includes the preliminary safety report, design documentation, a preliminary plan for management of radioactive waste and spent fuel, categorisation of classified equipment into safety classes, a preliminary plan for physical protection, quality system documentation, a preliminary on-site emergency plan, the preliminary limits and conditions of safe operations, a pre-operation preliminary inspection programme for the nuclear installation, and a preliminary estimate of the area of the emergency planning zone for the proposed nuclear installation.

Concerning the construction of a nuclear installation, the Regional Civil Construction Office issues a decision on the proposed site plan for the nuclear installation based upon the approval granted by UJD and statements from other authorities such as the Public Health Authority and the Labour Inspection Authority. During the site plan development and the construction process or when granting a license for any significant change to an existing nuclear installation, environmental impact assessment requirements and procedures must be undertaken in accordance with the Act on Environmental Impact Assessment basis,[19] which provides for public participation, transparency and free access to information during the decision-making process.

UJD issues construction permissions for nuclear installations as well as official construction approvals within its competence as a construction authority. UJD is also the licensing authority for the commissioning, operation and decommissioning of nuclear installations, including modifications thereto and closure of repository. UJD applies its competence as a construction authority and as a nuclear safety authority simultaneously. Its decisions are based on partial decisions made by UJD itself as well as on statements made by authorities competent in radiation protection, labour safety inspection, fire protection and civil protection. The detailed licensing requirements, procedure and requirements are laid down by:

- the Civil Construction Code;[20]
- the 2004 Atomic Act;
- the Regulation on Nuclear Safety Requirements;[21]
- the Act on EIA procedure;[22]
- the Regulation implementing some provisions of the Construction Code;[23]

17. Article 41 of the EURATOM Treaty.
18. This permit is also known as a construction license or permission to build.
19. Act No. 24/2006 Coll. on Environmental Impacts Assessment and amending some other Laws, as amended, the "Act on Environmental Impact Assessment".
20. Instituted by the "Construction Act".
21. Regulation of the UJD No. 430/2011 Coll. on nuclear safety requirements "Regulation on nuclear safety requirements".
22. Act on Environmental Impact Assessment.
23. Regulation of the Ministry of Environment of the Slovak Republic No. 453/2000 Coll. implementing certain provisions of the Construction Act.

- the Regulation on territorial planning and territorial planning documentation;[24]
- the Act on Protection, Support and Development of Public Health;[25]
- the Act on Health Safety and Protection of the Workers;[26]
- the Act on Labour Inspection;[27] and
- the Regulation on the Safety Measures related to the Electrical and Gas Equipment.[28]

Only the authorisation holder for the commissioning and operation of a nuclear installation is authorised to commission and operate nuclear installation. In order to obtain authorisation for the commissioning of a nuclear installation, the operator must submit an application with the safety documentation required in Annex 1(C) of the 2004 Atomic Act. This safety documentation falls into two categories. One set that has been submitted to UJD for prior approval and one set that is submitted for review. Commissioning is usually divided into several phases, each requiring approval. UJD grants permission to advance to the next phase of the commissioning process after having reviewed the evaluation report of the preceding phase of the commissioning process. The operation of a nuclear installation is divided into trial operation and operation phases. UJD issues a permit for trial operation upon the basis of a written application with an evaluation report of the nuclear installation commissioning attached. A permit for trial operation is part of the permit for temporary use of a nuclear installation pursuant to the Civil Construction Code. Authorisation for operation is granted based upon a written application with safety documentation attached in accordance with the Annex 1(C) of the 2004 Atomic Act and a subsequent affirmative evaluation of the trial operation pursuant to the Civil Construction Code as part of the official construction approval and decision-making proceedings.

UJD may make any of its decisions subject to the fulfilment of conditions relating to nuclear safety, physical protection, quality assurance or emergency preparedness. UJD may modify such conditions when the conditions under which the original decision was issued change and/or when new scientific and technological knowledge becomes available, or upon the justified application of the licensed operator. The operator must adhere to the terms of the assessed or approved safety documentation and authorisation granted, and any deviations from these terms and conditions are allowed only with the prior permission of the UJD.

UJD may modify or cancel any license or authorisation issued to the licensee who violates his obligations under the 2004 Atomic Act, generally binding regulations or conditions specified in the license. UJD may decide to cancel or modify a license if the licensee fails to remediate any deficiencies that have been identified within the established deadlines or, if the licensee itself applies for cancellation or modification of the license. A license extinguishes upon the death of the natural person concerned, upon the date of the dissolution of the legal person concerned, upon the expiration of the period for which the license was issued or upon a UJD decision to cancel the license. When there is a risk in delay of, or, upon a serious occurrence related to nuclear safety, physical protection or emergency preparedness, UJD may decide to restrict the scope or the validity of the license, may order the licensee to take the necessary measures or may order the suspension of the operation of a nuclear installation.

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24. Regulation of the Ministry of Environment of the Slovak Republic No. 55/2001 Coll. on Territorial Planning Materials and Territorial Planning Documentation.
25. Act No. 355/2007 Coll. on Protection, Support and Development of Public Health and on Amendments and Supplements to Certain Acts, “Act on Protection, Support and Development of Public Health”.
26. Act No. 124/2006 Coll. on Health Safety and Protection of the Workers as amended, the “Act on Health Safety and Protection of the Workers”.
27. Act No. 125/2006 Coll. on Labour Inspection.
28. Regulation of the Ministry of Labour, Social Matters and Family of the Slovak Republic No. 508/2009 Coll. on the Safety Measures related to the Electrical and Gas Equipments.

As with the construction of a nuclear installation, in addition to the provisions of the 2004 Atomic Act, there is also the detailed Regulation on Nuclear Safety Requirements to be observed. The UJD issues a license without time limitation. If there are serious reasons to do so, UJD may indicate a time limit or technical restrictions for which the license is issued.[29]

ii) Inspection

The UJD is empowered under Section 31 of the 2004 Atomic Act to perform state supervision of:

- nuclear safety at nuclear installations;
- management of radioactive waste and spent nuclear fuel;
- nuclear materials, special materials and equipment;
- physical protection of nuclear installations; and
- emergency planning.

In carrying out state supervision, the UJD is required under the 2004 Atomic Act to:

a) conduct inspections of workplaces, operations and facilities at nuclear installations, to determine whether obligations are being fulfilled and whether operating limits, conditions and quality assurance systems are being adhered to;

b) determine whether obligations arising out of international agreements relating to nuclear safety and the management of nuclear materials and radioactive waste (including spent fuel) are being fulfilled;

c) investigate accidents, incidents and selected failures and events during shipment of radioactive material at their places of occurrence;

d) verify the conduct of obligatory reviews, surveys, revisions, operational checks and tests of classified equipment important to nuclear safety at nuclear installations;

e) order the elimination of deficiencies or implementation of corrective actions related to nuclear safety, physical protection or, emergency preparedness;

f) assess nuclear safety, physical protection and emergency preparedness at nuclear installations independently from their operators;

g) evaluate the system of professional training of employees and the training programmes of employees who have professional competence, and evaluate the professional competence of the operator's employees; and

h) evaluate the content and practices of emergency plans.

There is an obligation on the part of the holders of authorisations or other persons responsible for handling nuclear materials to submit all materials, documentation information and expert analysis required for state supervision. They must also co-operate with the UJD to enable it to carry out such state supervision, and, thereafter, apply the results of UJD's findings to their activities.

29. Section 8(1)(d) of the 2004 Atomic Act.

Inspectors appointed by the UJD must have the required qualifications and must have passed an inspector's examination. During the performance of a state-sponsored inspection, each inspector is required to prove his or her identity using the identification card issued by the UJD.

Under the 2004 Atomic Act, an inspector is authorised:

a) to enter at any time and without any restrictions the premises of authorisation holders, as well as the premises where nuclear materials, special materials and equipment are kept or where radioactive waste or spent fuel are managed, to carry out inspection activities;

b) to verify at any time that licensees' employees with professional competency have adequate knowledge of relevant regulations;

c) to check the status of emergency preparedness measures and to participate in investigation of operational events including shipment of radioactive materials;

d) to carry out inspections, participate in tests and carry out acts designed to check whether requirements under the 2004 Atomic Act and regulations and conditions laid down in the UJD's decisions and inspection protocols are complied with;

e) to require the submission of relevant documentation, records and other documents necessary for the performance of inspection activities and request copies thereof, as well as provision of information and explanation;

f) to take samples of materials or media used, in quantities necessary for analysis, or to take environmental samples,

g) to use technical means to create photo, video and audio documentation necessary for performance of inspection activities;

h) to order to keep equipment, workplaces, buildings and structure or their parts in original condition until completion of investigation or in order to record the status as of the time of the performance of inspection activities;

i) to order the measurements, controls, tests and other acts necessary for the performance of inspection activities;

j) after negotiation with an operator, to order measures to eliminate any identified deficiencies within established deadlines; and

k) to withdraw a license of special professional competence.

As a means of enforcement, the UJD may impose various penalties for violations under the 2004 Atomic Act.[30] The UJD may impose an additional penalty up to twice the amount of an initial fine upon the person who failed to remedy insufficiencies for which a fine has been imposed previously. Proceedings on the imposition of fines may be opened within one year of the date on which the UJD has identified a violation of responsibilities but no later than three years after the date on which the violation of responsibilities occurred. The criminal liability of authorisation holders or natural persons and legal persons, as well as criminal liability of their employees is not prejudiced by the imposition of an administrative penalty. The sums received from imposition of administrative penalties shall be added to the revenues of the National Nuclear Fund.[31]

30. Section 34 of the 2004 Atomic Act.
31. Section 34(11) of the 2004 Atomic Act, (see also Section 4(a) iii) "Decommissioning" *supra*).

iii) Decommissioning

Under the 2004 Atomic Act, the operator is made responsible for the decommissioning of a nuclear installation and must ensure that the necessary financial means are available for this purpose. The Nuclear Fund Act and an ordinance of the Government[32] establish the National Nuclear Fund for the Decommissioning of Nuclear Installations and the Management of Spent Fuel and Radioactive Waste arising from their decommissioning. The Ministry of Economy manages the Fund established by law as a separate legal entity. The National Nuclear Fund's main bodies are the Board of Trustees, Board of Supervisors, the Fund Director, Trustees of Sub-Accounts and the Comptroller General. The Board of Trustees, which is the National Nuclear Fund's highest organ, is the statutory body. It consists of seven members – the Chairman, two Vice-Chairman and four Trustees of Sub-Accounts. The Nuclear Fund itself is comprised of several sub-accounts as follows:

- for decommissioning of each nuclear power plant at the Jaslovske Bohunice nuclear installation;
- for decommissioning of the nuclear installations in the Mochovce region;
- for decommissioning of new nuclear installations;
- for management of those nuclear materials and radioactive wastes whose origin is unknown;
- for research and exploration of a new site for a repository, preparation, design, construction, commissioning and operation and closure of a repository for radioactive waste and spent fuel;
- for institutional control of repositories;
- for storage of spent fuel; and
- for the National Nuclear Fund's operational expenditures.

The Government, upon the proposal of the Ministry of Economy, designates the Chairman and four members of the Board of Trustees; the first Vice-Chairman is designated upon the proposal of the Ministry of Finance and the second Vice-Chairman upon the proposal of UJD. Candidates must be chosen from among the experts in the field of nuclear energy or nuclear research with a minimum of ten years of relevant experience in construction, management, economics or law.

Prior to beginning work on any phase of decommissioning, the operator is obliged to submit an updated conceptual plan for decommissioning together with an environmental impact statement.[33] Decommissioning may be initiated only upon the basis of the terms stated in the decommissioning authorisation. The issuance of a decommissioning authorisation by UJD is conditional upon the approval of a written application attached with safety documentation relating to decommissioning activities. If a nuclear installation is planned to be decommissioned in several phases, a license is required for each phase of the process.

32. Government Ordinance No. 312/2007 Coll. laying down details on the collection and payment of obligatory contributions to the National Nuclear Fund, the "Ordinance on the collection and payment of obligatory contributions to the National Nuclear Fund".
33. Pursuant to the Act on Environmental Impacts Assessment.

The safety documentation for the decommissioning of nuclear installations is governed by a regulation detailing the required documentation for individual decisions relating to nuclear facilities.[34]

iv) Nuclear Safety

Nuclear safety and quality management system are dealt with in Part 6 of the Atomic Act. "Nuclear safety" is defined as the technical status and the capability of the nuclear installation or transport equipment, as well as their operating personnel to prevent the unauthorised release of radioactive substances or ionizing radiation to the working environment or to the environment and the ability to prevent events and to mitigate consequences of any such event at a nuclear installation or during the shipment of radioactive materials. The operator (holder of license) is responsible for nuclear safety and must provide adequate funds and human resources to ensure nuclear safety, including the necessary engineering and technical support activities.[35]

During the construction and commissioning of a nuclear installation and throughout its operating life, the builder and operator must perform comprehensive and systematic evaluations of nuclear safety and take steps to remediate any identified deficiencies. The frequency and scope of the evaluations are to be set out in regulations issued by the UJD. The operator must ensure that exposure of employees and other persons to ionising radiation caused by the operation of a nuclear installation is kept below the set limits and at the lowest reasonably achievable level.

In addition to governing the safety aspects of radioactive waste management (see Section 7 "Radioactive Waste Management" *infra*), the regulation stating the details concerning the requirements for provision of physical protection[36] establishes requirements governing the safe management of radioactive waste and spent fuel.

The 2004 Atomic Act contains detailed provisions on the professional competency of employees at nuclear installations.[37] The same act entitles UJD inspectors to withdraw license of special professional competency if certain deficiencies or activities occur.[38]

Regarding quality assurance, the operator is responsible for the establishment of the appropriate organisational structure, procedures and resources necessary to assure the quality of a nuclear installation.[39]

In addition to the 2004 Atomic Act, there are regulations issued by UJD that regulate in detail the following:

- nuclear safety requirements;[40]
- quality management system;[41]
- professional competence;[42]

34. Regulation of the UJD No. 58/2006 Coll., laying down details on the scope, contents and manner of preparation of documentation for nuclear facilities needed for individual decisions as amended by Regulation of the UJD No. 31/2012 Coll..
35. Section 23(1) of the 2004 Atomic Act.
36. Regulation No. 51/2006 Coll. on details concerning requirements for provision of physical protection, ("Regulation on requirements for provisions of physical protection"), and Regulation on requirements for the management of nuclear materials, nuclear waste and spent nuclear fuel.
37. Section 24 of the 2004 Atomic Act.
38. Section 31(11) of the 2004 Atomic Act.
39. Section 25(1) of the 2004 Atomic Act.
40. Regulation on Nuclear Safety Requirements.
41. Regulation of the UJD No. 431/2011 Coll. on a quality management system.

- requirements for management of nuclear materials, radioactive waste and spent fuel.[43]

The Slovak Republic ratified the 1994 Convention on Nuclear Safety on 7 March 1995.

b) Emergency Response

The emergency response system is governed by the 2004 Atomic Act and its implementing regulations.[44] Under the terms of the 2004 Atomic Act, an "operational event at a nuclear installation" means an event during which there was a threat to or breach of nuclear safety during the commissioning of a nuclear installation, during its operation, during the decommissioning phase or during the closure of the repository.[45]

An "event during the shipment" means an event during the shipment of radioactive materials which caused non-compliance with the requirements on nuclear safety during the shipment of radioactive materials.[46] Operational events and events during the shipment are divided into:

a) failure, which caused:

- a threat to nuclear safety without direct threat to fulfilment of safety functions,
- a disruption of safety barriers or other safety measures without direct consequences,
- entering into limits and conditions for safe operation and safe decommissioning,
- a breach of the limits and conditions for safe operation and safe decommissioning without direct consequences on the fulfilment of safety functions,
- actuation of safety systems or their actuation due to real causes, but without direct consequences,
- a breach of technical conditions or transport regulations during transport without direct consequences,
- other disruption of equipment reliability requiring corrective action to mitigate consequences,
- a release of radioactive substances or ionizing radiation not exceeding the radiation limits,

b) incident, which caused:

- a threat or disturbance of compliance with safety requirements,

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42. Regulation of the UJD No. 52/2006 Coll. on professional qualification as amended by Regulation of the UJD No. 34/2012 Coll..
43. Regulation on requirements for the management of nuclear materials, radioactive waste and spent nuclear fuel.
44. Regulation of the UJD No. 55/2006 Coll. on Emergency Planning in the Event of a Nuclear Incident or Accident as amended by Regulation of the UJD No. 35/2012 Coll., the "Regulation on Emergency Planning as amended" and Regulation of the UJD No. 48/2006 Coll. on Notification of Operational Events and Events during the Shipment and on Identification of their Causes as amended by the Regulation of the UJD No. 32/2012 Coll., the "Regulation on Notification of Operational Events as amended".
45. Section 27(1) of the 2004 Atomic Act.
46. Section 27(2) of the 2004 Atomic Act.

- a failure of the safety systems or actuation of safety systems due to real causes, which requires actions to remove the consequences,
- A serious disruption or failure of safety barriers,
- a release of radioactive substances or ionizing radiation exceeding the radiation limits,

c) an accident which caused a release of radioactive substances requiring actions to protect the population.

An operator is required to implement preventive and corrective measures in a timely manner and to eliminate, without delay, conditions that might jeopardise nuclear safety or human life or health. An operator is required to notify the UJD of deficiencies identified during operation, maintenance or control, which may result in the events described in Section 27(3), as well as the Ministry of the Interior, in the case of accidents or emergency situations. The operator is also obliged to identify the causes of such events and take corrective action or remedial measures, to take measures in the operation of the nuclear installation to prevent their recurrence and to inform the public of the occurrence of any incident or accident and measures to protect health and activities required to be taken upon such incident or accident. Details concerning the notification of operational events and events during the shipment and details concerning the investigation of their reasons are laid down by UJD regulation.[47]

In the event of a hazard arising or if serious circumstances arise which are of significance for nuclear safety, physical protection or emergency preparedness, the UJD may order the licensee to take certain measures or to suspend the operation of a nuclear installation.

Under the Act, the UJD investigates *in situ* the status, causes and consequences of selected failures, incidents and accidents at nuclear installations and events during the shipment of radioactive material.

"Emergency planning", as defined in the 2004 Atomic Act, means a set of measures and procedures to identify and cope with incidents and accidents at nuclear installations, and to identify, mitigate and eliminate consequences of a release of radioactive substances into the environment during the management of radioactive materials, radioactive waste or spent fuel, and during the shipment of radioactive materials.[48]

An emergency plan consists of a set of technical and organisational measures required to bring events under control or to mitigate their consequences. Emergency plans are distinguished as follows:

a) the preliminary on-site emergency plan, which contains scheduled measures on the site of a nuclear installation during its construction;

b) the on-site emergency plan, which contains scheduled measures to be taken on the site of a nuclear installation or several nuclear installations, operated by a single authorisation holder, and links to the off-site emergency plan;

c) the off-site emergency plan, which contains measures for the protection of the population within the emergency planning zone during the release of radioactive substances into the environment, as well as links to the on-site emergency plan; and

d) the emergency transport order, which contains measures to be taken in case of an incident or of an accident during the shipment of nuclear materials.

47. Regulation on Notification of Operational Events as amended.
48. Section 28(1) of the 2004 Atomic Act.

The operator is responsible for the preparation of the on-site emergency plan, which must be submitted to the UJD for approval after being reviewed by the Ministry of Health at least eight months prior to the scheduled start of the commissioning of a nuclear installation. There is an obligation to re-submit the on-site emergency plan every five years for re-approval. Regional offices are obligated to submit to the UJD the off-site emergency plans of the areas within the emergency planning zone for review at least eight months prior to the scheduled start of the commissioning of a nuclear installation and subsequently every five years for repeated review. Those plans must be approved by the Ministry of Interior which is responsible for the protection of the public and for its co-ordination. The Ministry of the Interior is responsible for civil protection during radiological accidents and for assistance in the event of a nuclear accident or radiological emergency.[49]

Prior to the commissioning of a nuclear installation, emergency plans must be practised. During the operation of a nuclear installation, certain parts of its emergency plans must be practised and evaluated at set intervals.

There is a general obligation on the part of operators and state authorities to make available to the UJD data required to evaluate accidents and to predict accidents. The data might consist of technological data from the nuclear installation, radiation monitoring data, meteorological data and any other data requested by the UJD.

Details on the content of the on-site and off-site emergency plans and emergency transport order are set out in UJD Regulation on Emergency Planning as amended. There are three emergency levels: alert, site area emergency and general emergency,[50] which call for different measures to be taken depending on the emergency level.[51] Measures include notification of the authorities concerned, public warnings, and public protection measures such as issuing recommendations to shelter indoors or to evacuate and continuous monitoring of the radiological situation.

The Slovak Republic succeeded to the 1986 Convention on Early Notification of a Nuclear Accident and to the 1986 Convention on Assistance in Case of a Nuclear Accident or Radiological Emergency on 10 February 1993.

5. Trade in Nuclear Materials and Equipment

A special license for the import and export of nuclear materials and export of special materials and equipment is required. The Ministry of Economy issues licenses for dual-use goods and technologies based upon the authorisation of the authority concerned.[52] For dual-use goods and technologies that are used in the nuclear industry, the UJD is the authority empowered to grant authorisation. Such authorisation is a requirement for receiving a license from the Ministry of Economy. For authorisation of import or export of nuclear material, the application must be supported by the European Commission's approval of the relevant business contract, and, when nuclear material is imported, the applicant or the person for whom the nuclear material in question is to be imported or exported, must be holder of an authorisation for management of nuclear material.[53] Sections 12 and 13 of the 2004 Atomic Act cover requirements relating to the management of nuclear materials including production, processing, reprocessing, transmutation, handling, use and storage and the record-keeping system and control of nuclear materials.

49. Act No. 42/1994 on the Civil Protection of the Public, as amended.
50. Section 5 of the Regulation on Emergency Planning as amended.
51. Sections 14-16 of the Regulation on Emergency Planning as amended.
52. Act No. 39/2011 on Dual Use Good.
53. Section 7(15) of the 2004 Atomic Act.

6. Radiological Protection

The Act No. 355/2007 Coll. on Protection, Support and Development of Public Health[54] lays down the basic provisions regarding radiological protection based on the International Commission for Radiological Protection (ICRP) recommendations and the relevant IAEA standards. A set of regulations dealing with the detailed requirements for radiological protection of workers, of the public and of the environment also exists (use of ionizing radiation sources). As a matter of general principle, the main objective for radiological protection is to keep the radiological exposure related to the use of ionising radiation as low as reasonably achievable, also known as the "ALARA principle".

The issue of radiological protection is addressed twice in the Act on Protection, Support and Development of Public Health: first, in Section 2(2), which provides for definitions applicable to the radiation protection area and, second, in Part 6 of the same act. The above-mentioned act establishes licensing requirements relating to activities that could lead to exposure and activities that require protection from radiation exposure. With respect to the latter, the licensee must ensure that exposure of employees and other persons to ionising radiation is kept below the set limits during all operational states and activities, and, generally, at the lowest reasonably achievable level. Detailed provisions are laid down in the Regulation issued by the Slovak Ministry of Health on detailed requirements on the assurance of radiological protection.[55] A Government ordinance on the basic safety requirements on the health protection of the workers and the public against ionising radiation[56] fully implements the Council Directive 96/29/EURATOM[57] into the national legislation.

Generally, the Ministry of Health is the regulatory authority responsible for the oversight of radiological protection measures at nuclear installations, medical installations and other workplaces where ionising radiation is used. The Ministry of Health delegates responsibility for such matters to the Public Health Authority.

The Slovak Republic acceded to the 1960 Convention concerning the Protection of Workers against Ionising Radiation on 1 January 1993. As an EU Member State, the applicable EU regulations, directives and decisions dealing with radiation protection are fully implemented in national legislation of the Slovak Republic, including Directive 96/29/EURATOM.[58]

7. Radioactive Waste Management

Under the 2004 Atomic Act, the safe disposal of radioactive waste and spent fuel within the territory of the Slovak Republic is the responsibility of a legal person appointed or entrusted for this purpose by the Ministry of the Economy. The designated legal entity must be a holder of a licence for the operation of a repository and the Slovak Republic must hold a 100% stake in the entity. At the same time, this entity may not be the holder of a licence for the operation of a nuclear facility for generation of electric energy or for research.[59] A radioactive waste repository may be located only on land owned by the State.[60] With respect to supervision of radioactive waste management, the responsibilities are divided between the UJD and the Ministry of Health.

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54. Act No. 355/2007 Coll. on Protection, Support and Development of Public Health, the "Act on Protection, Support and Development of Public Health".
55. Regulation of the Slovak Ministry of Health No. 545/2007 Coll. stipulating the details about requirements to ensure radiological protection during activities leading to radiation and activities important in terms of radiation protection.
56. Ordinance of the Slovak Government No. 345/2006 Coll. on elementary safety requirements for employees' and public' health protection against ionising radiation, the "Ordinance on elementary safety requirements for employees' and public' health protection against ionising radiation".
57. Council Directive 96/29/EURATOM of 13 May 1996 laying down basic safety standards for the protection of the health of workers and the general public against the dangers arising from ionizing radiation.
58. *Ibid.*
59. Section 3(10) of the 2004 Atomic Act.
60. Section 6(2)(d) of the 2004 Atomic Act.

The UJD is responsible for the supervision of the management of radioactive waste originating from nuclear installations and their transport as well as for the transport of institutional radioactive waste (originating from medical or industrial use) from its place of treatment to the repository and to its disposal in repositories.

The Ministry of Health (and its subordinated Public Health Authority) is designated as the authority responsible for the supervising of the management of institutional radioactive waste (originating from medical or industrial use).[61]

The regulation on detailed requirements for the management of nuclear materials, radioactive waste and spent fuel[62] lays down the basic technical and organisational requirements for ensuring nuclear safety and the prevention of releases of radioactivity into the environment in the course of radioactive waste management. These regulations also set out the basic safety requirements for all steps in the radioactive waste management process including collection, sorting, storage, treatment, conditioning, handling and disposal of radioactive waste.

"Radioactive waste" is defined under the 2004 Atomic Act as any unusable radioactive material in gaseous, liquid or solid form, which due to of the presence of radionuclides or due to the level of its contamination with radionuclides cannot be released to the environment.[63] Such levels are laid down by the Government ordinance on the basic safety standards for the health protection of workers and public against ionising radiation.[64] "Spent nuclear fuel" means nuclear fuel which has been irradiated in an active zone of a nuclear reactor and has been permanently removed from it; spent fuel may be considered as a usable resource which may be reprocessed or destined for disposal regarded as radioactive waste.[65]

The originator of radioactive waste shall manage its waste in a manner such that the quantity and activity of such waste are kept to the lowest reasonably achievable level.[66]

Authorisation for the management of radioactive waste and spent nuclear fuel is issued by the UJD.[67] "Management of radioactive waste" means the collection, sorting, storage, treatment, conditioning, handling and disposal of radioactive waste from a nuclear installation, institutional radioactive waste, orphan sources, radioactive waste of unknown origin, and/or disused sources, if these activities take place at a single installation in parallel with activities involving radioactive waste from nuclear installations.[68] "Management of spent nuclear fuel" means its storage, reprocessing, transmutation, handling and disposal.[69] "Storage of radioactive waste or spent nuclear fuel" means placement of radioactive waste or spent fuel into areas, premises or facilities allowing its isolation, control and environmental protection, with the intent of its subsequent retrieval.[70] "Disposal of radioactive waste or spent nuclear fuel" means permanent emplacement of radioactive waste or of spent nuclear fuel into a radioactive waste repository or spent fuel repository without the intent of its retrieval.[71]

61. Act on Protection, Support and Development of Public Health.
62. Regulation on requirements for the management of nuclear materials, nuclear waste and spent nuclear fuel.
63. Section 2(k) of the 2004 Atomic Act.
64. Ordinance on elementary safety requirements for employees' and residents' health protection against ionising radiation.
65. Section 2(s) of the 2004 Atomic Act.
66. Section 21(4) of the 2004 Atomic Act.
67. Section 4(1)(d) of the 2004 Atomic Act.
68. Section 2(h)(ii) of the 2004 Atomic Act.
69. Section 2(h)(iii) of the 2004 Atomic Act.
70. Section 2(l) of the 2004 Atomic Act.
71. Section 2(o) of the 2004 Atomic Act.

The originator of the radioactive waste is responsible for assurance of its safe management in compliance with the National Programme prior to their acceptance to the repository and the licence holder for management of radioactive waste is responsible for the safety of the radioactive waste management facilities. The licence holder for commissioning, operation or decommissioning of nuclear installation is responsible for the safety aspects of nuclear installation, including the radioactive waste managed therein. If the licence holder pursuant to the second sentence is managing the radioactive waste in the nuclear installation and if such radioactive waste is originating in the nuclear installation where another person is the licence holder thereof, then, for each step of management of radioactive waste, there must be clearly set liability for the respective radioactive waste between those licence holders as managed in the relevant nuclear installation.[72]

Similarly, the licensee that has produced the spent fuel is responsible for its safe management until its delivery and receipt at a repository. "Repository" means a nuclear installation which serves for the disposal of radioactive waste or spent nuclear fuel, the main purpose of which is to store radioactive waste or spent nuclear fuel allowing for its isolation, monitoring and protection of the environment.[73]

The provisions applying to the management of radioactive waste apply also to the management of spent nuclear fuel.[74] Detailed requirements for the management of radioactive waste and spent fuel management are set out in Regulation No. 53/2006 Coll. as amended by Regulation No. 30/2012 Coll.[75]

The costs associated with the management of radioactive waste and spent nuclear fuel, including the monitoring of repositories after they have been sealed and any related research and development, are to be reimbursed by the originator of the waste. Where the originator of the radioactive waste is unknown or is not capable of managing the waste safely, the UJD shall appoint another licensee for purposes of management of this radioactive waste. In its decision, the UJD must define the scope of such management. The costs of management where the generator is not known are to be reimbursed by the National Nuclear Fund. If the originator is identified at a later point in time, he is responsible for reimbursing the National Nuclear Fund for the costs incurred related to the management of this radioactive waste.[76]

The National Nuclear Fund was established by the Act on Nuclear Fund and by the Government Ordinance on the collection and payment of obligatory contributions to the National Nuclear Fund (for details on the management of the National Nuclear Fund, see Section 4(a)(iii) *supra* in relation to "Nuclear Installations – Decommissioning"). Regular contributions from nuclear power plant operators, transfer payments from electricity grid operators and electricity distributors that collect payments from customers to reimburse historical debt, monetary penalties imposed by the UJD, and revenues from bank deposits and public grants all contribute to the financial resources of the National Nuclear Fund. In the Slovak Republic it is only possible to dispose of radioactive waste which has been produced on its own territory, unless otherwise stipulated by international treaty, subject to ratification, by which the Slovak Republic is bound. Such international contract must take into account the safety standards of the International Atomic Energy Agency.

72. Section 21(1) of the 2004 Atomic Act.
73. Section 2(q) of the 2004 Atomic Act.
74. Section 21(14) of the 2004 Atomic Act.
75. Regulation on requirements for the management of nuclear materials, nuclear waste and spent nuclear fuel.
76. Section 21(9) of the 2004 Atomic Act.

Imports of radioactive waste into the territory of the Slovak Republic are prohibited except in cases of:

- shipments of radioactive waste and spent fuel through the Slovak Republic in accordance with the relevant provisions of the 2004 Atomic Act,[77]
- imports of radioactive waste permitted by the Authority:
  - produced by reprocessing and conditioning of radioactive materials exported for this purpose and their re-import was permitted by the Authority in advance,
  - for the purpose of treatment or conditioning in the Slovak Republic, if the export of material with aliquot activity is contractually covered and permitted by the Authority.[78]

If radioactive waste or spent fuel produced in the Slovak Republic is shipped for conditioning or reprocessing to a member state or third country, the ultimate responsibility for the safe and responsible disposal of such materials, including waste which arises as a by-product, is still borne by the Slovak Republic, unless otherwise stipulated by international treaty, subject to ratification, by which the Slovak Republic is bound.

The disposal of radioactive waste in another member state or third country, which has been produced in the Slovak Republic, is only possible on the basis of an international treaty between the Slovak Republic and that other member state or third country, which shall enter into force no later than at the time of shipment of the radioactive waste concerned, and, which takes into account the recommendations of the European Atomic Energy Community, and, only with accordance with the provisions of Articles 16 to 16l. If radioactive waste is disposed of in a third country, the Authority shall inform the European Commission regarding the conclusion of an international contract on such radioactive waste disposal prior to the performance of the shipment, and:

- the third country, where the radioactive waste is due to be disposed of, must be a contracting party of an international contract by which the Slovak Republic is bound by 3a) or it shall have concluded an agreement with the European Atomic Energy Community covering the management of spent fuel or radioactive waste,
- the objectives of the programmes of a third country where radioactive waste is due to be disposed of, concerning the management of radioactive waste, must be equivalent to the requirements under this Act in terms of high safety levels,
- a repository in a third country where radioactive waste is due to be disposed of shall be in operation before shipment is carried out and the repository operator shall have a licence for the acceptance of the shipped radioactive waste.

The Slovak Republic ratified the 1997 Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management on 6 October 1998.

8. Non-Proliferation and Physical Protection

Following the breakup of Czechoslovakia, the Slovak Republic acceded to the 1968 Treaty on the Non-Proliferation of Nuclear Weapons on 1 January 1993 and to the 1979 Convention on the Physical Protection of Nuclear Material on 10 February 1993. It also ratified the 1996 Comprehensive Nuclear Test Ban Treaty on 3 March 1998. The UJD is the official point of contact for international bodies

77. Section 16 to 16l of the 2004 Atomic Act, on “Shipment of radioactive waste between Member States and from and to the Community”.
78. Section 21(11) of the 2004 Atomic Act.

dealing with non-proliferation regimes such as the Nuclear Suppliers Group or the Zangger Committee.

For details of the system of accountancy and monitoring of nuclear materials, see *supra* Section 3 "Radioactive Substances and Equipment".

The physical protection of nuclear installations and nuclear materials is dealt with in Section 26 of the 2004 Atomic Act. "Physical protection" is defined as a set of technical, administrative and organisational measures needed to prevent and identify unauthorised handling of nuclear installations, nuclear material, and special material and equipment, management of radioactive waste and spent nuclear fuel, and shipment of radioactive material, as well as the unauthorised entering into a nuclear installation and sabotage.[79] The licensee is responsible for physical protection within the scope of its authorised activities.

In case of trespassing on the site of a nuclear installation or unauthorised activities at a nuclear installation or unauthorised activities during the shipment of nuclear materials or a threat of such activities, the Police Corps and the Railroad Police shall provide assistance within the scope of their powers upon request from the licensee.[80] Immediately upon establishing the facts pursuant to paragraph 6 the authorisation holder is required to take the necessary measures and to inform the Police Corps or the Railway Police and the UJD.[81]

In addition to the provisions in the 2004 Atomic Act, a regulation[82] sets out criteria to categorise the premises of nuclear facilities, nuclear material and radioactive waste, and, provides for various and differentiated requirements for their management in accordance with their categorisation. Entry into protected areas is limited and regulated by the licensees themselves on the basis of granting a permit.

9. Transport

Transport of radioactive materials including nuclear materials, radioactive waste and spent nuclear fuel by road, rail, water and air is governed by both the 2004 Atomic Act and by a regulation[83] based on the IAEA Safety Standards.[84]

Nuclear materials may be transported only on the basis of an authorisation for shipment issued by the UJD to the consignor.[85] The scope and content of the documentation required to receive license for such shipment is established in Annex No. 2 of the 2004 Atomic Act. Shipment of radioactive materials may be performed only by means of transport equipment which type was approved by the UJD.[86] Each shipment of radioactive materials requires a separate authorisation for shipment, unless the shipment is of the same type of radioactive materials, using the same type of shipment by the same consignor. In such cases, authorisation for shipment may be issued for a one-year period at maximum for the shipment of nuclear material or spent fuel or for up to three years for the shipment of radioactive waste.[87]

For the obligations of the consignor when radioactive materials are being transported, see Section 8 "Non-Proliferation and Physical Protection" *supra*. The consignor as licensee is

79. Section 2(b) of the 2004 Atomic Act.
80. Section 26(8) of the 2004 Atomic Act.
81. Section 26(9) of the 2004 Atomic Act.
82. Regulation on requirements for provisions of physical protection.
83. Regulation of the UJD No. 57/2006 Coll. on details concerning the requirements for shipment of radioactive material, the "Regulation on requirements for shipment of radioactive materials".
84. IAEA Safety Standards Series No. TS-R-1 – Regulations for the Safe Transport of Radioactive Material (2003 Edition).
85. Section 15 of the 2004 Atomic Act.
86. Section 15(4) of the 2004 Atomic Act.
87. Section 15(10) of the 2004 Atomic Act.

responsible for ensuring that persons who participate in the shipment of radioactive materials with his permission observe all requirements with respect to physical protection as prescribed by the 2004 Atomic Act[88] and by Section 6 of the Regulation on requirements for shipment of radioactive materials.

There are specific provisions in the 2004 Atomic Act dealing with events during the shipment of radioactive material. Thus, an event during shipment is defined as an event during the shipment of radioactive materials, which caused non-compliance with the requirements for nuclear safety during the shipment of radioactive materials.[89] The consignor is responsible for taking preventive measures, as well as measures to mitigate or eliminate any consequences of incidents and accidents during the shipment of radioactive materials. The consignor is responsible for notifying the UJD, the Ministry of Interior, the Ministry of Transport and the Ministry of Health in case of incident or accident during the shipment.[90]

Radioactive materials may not be shipped without an approved emergency transport order. As part of the emergency planning requirements under the 2004 Atomic Act, applicants for authorisation for shipment of radioactive material are obliged to submit an emergency transport order to the UJD for approval. The emergency transport order must be submitted for consideration by the UJD at least six months prior to the first scheduled shipment of radioactive materials and subsequently every five years for re-assessment.[91] The emergency transport order is to be approved by the Ministry of Transport.[92] Details on the emergency planning proceedings and documentation are provided in the Regulation on emergency planning.

The consignor as licensee is required to notify the Ministry of Interior about the schedule of shipments no later than ten days prior to the shipment of radioactive materials. The consignor is required to make the persons involved in transport of radioactive materials familiar with the emergency transport order and to train the designated persons according to the emergency transport order. The consignor must instruct all other persons involved in the transport of radioactive materials about their duties in case an incident or accident occurs during the transport of radioactive materials.

10. Nuclear Third Party Liability

The Slovak Republic acceded to the 1963 Vienna Convention[93] and the 1988 Joint Protocol on the Application of the Vienna Convention and the Paris Convention[94] on 7 March 1995. Liability for nuclear damage and financial coverage thereof is settled within the 2004 Atomic Act.[95] Compensation for nuclear damage is covered by the provisions of international treaties, to which the Slovak Republic is bound; thus, the 1963 Vienna Convention and the 1988 Joint Protocol shall be applied in case of occurrence of nuclear damage. Unless an international treaty or the 2004 Atomic Act establishes otherwise, the general provisions on liability for damage are applied as laid down in the provisions of the Civil Code.[96] In fact, the 2004 Atomic Act contains detailed provisions on third party liability for nuclear damage, which largely reflect the provisions of the 1963 Vienna Convention.

The definition of “nuclear damage”, as laid down by the 1963 Vienna Convention, is extended by the 2004 Atomic Act that deems damage occurred by spending funds on necessary measures to avert or reduce irradiation or to recover initial or equivalent condition of the environment as

88. Section 26(4) of the 2004 Atomic Act.
89. Section 27(2) of the 2004 Atomic Act.
90. Section 27(5) of the 2004 Atomic Act.
91. Section 28(10) of the 2004 Atomic Act.
92. Section 28(12)(c) of the 2004 Atomic Act.
93. The 1963 Vienna Convention on Civil Liability for Nuclear Damage, 1063 UNTS 266, the “1963 Vienna Convention”.
94. The 1988 Joint Protocol Relating to the Application of the Vienna Convention and the Paris Convention, 1672 UNTS 293, the “1988 Joint Protocol”.
95. Sections 29-30 of the 2004 Atomic Act.
96. Provisions of Sections 415-450 of the Civil Code, Act No. 40/1964 Coll., as amended.

nuclear damage, provided that such measures were prompted by a nuclear event and the nature of the matters allows it.[97]

The licensee for the commissioning of a nuclear installation, operation of a nuclear installation (except repositories), the decommissioning phase of a nuclear installation, or shipment of radioactive material is liable for nuclear damage. Liability for nuclear damage caused by a nuclear incident is generally channelled to the operator, except operators of repositories.[98] If a single person is a licensee for several nuclear installations located at the same site for which a mutual on-site emergency plan was approved, such nuclear installations are deemed as a single nuclear installation for purposes of liability for nuclear damage. Several nuclear installations located at the same site but operated by different licensees are not considered to be a single nuclear installation even if those installations are technologically linked to each other.

The amount of liability of the licensee with respect to nuclear damage caused by each single nuclear event is limited to EUR 75 million if a nuclear power plant is involved or to EUR 50 million if other nuclear installations or shipments of radioactive material are involved. As of 1 January 2014, the higher limits of liability for nuclear damage are going to be applied:

a) for a nuclear installation with a nuclear reactor or nuclear reactors for energy purposes, during their commissioning and operation, up to EUR 300 million,

b) for other nuclear installations during their commissioning and operation, shipments of radioactive materials and all nuclear installation in the decommissioning stage, up to EUR 185 million.

Under the 1963 Vienna Convention, the liability for nuclear damage is strict liability.

The licensee must ensure that liability for nuclear damage is secured through insurance or another type of financial security (not specified by law) up to the total amount of liability. Insurance or another form of financial security must be established for each nuclear installation or shipment of radioactive material separately and must be maintained during the whole period of validity of the license and for at least 20 years after a nuclear incident. Events are not covered by the liability regime for nuclear damage if they are caused by small quantities of nuclear material or radioactive waste, in respect of which no nuclear damage is expected. A UJD regulation[99] lays down details concerning the maximum limits of such quantities of material.

97. Section 29(5) of the 2004 Atomic Act.
98. Section 29(2) of the 2004 Atomic Act.
99. Regulation No. 47/2006 Coll. on maximum limits of small quantities of nuclear material and radioactive waste in respect of which no nuclear damage is expected and therefore subject to exclusion from the third party liability regime.

II. Institutional Framework

1. Regulatory and Supervisory Authorities

a) Nuclear Regulatory Authority of the Slovak Republic (UJD)

The Nuclear Regulatory Authority of the Slovak Republic (*Úrad jadrového dozoru Slovenskej republiky* – UJD) was established on 1 January 1993 as the successor to the former Czechoslovak Atomic Energy Commission. Its status, mission and competences are laid down in a provision of the Act on Organisation.[100] UJD is a central governmental body independent of any of the ministries. This status allows it to act as an independent regulatory body reporting its activities directly to the Government. A Chairperson, appointed by the Government, heads the UJD.

In addition to the Chairperson, the UJD is comprised of two departments, the Department of Safety Evaluation and Inspection Activities located in Trnava (near the Bohunice site) and the Department of Regulatory Activities and International Co-operation located in Bratislava. There are also two inspection units located at these sites with two local inspectors each. The UJD has also established an Information Centre in Bratislava to disseminate and provide the public and the media with information about its activities and the status of nuclear safety in the Slovak Republic.

The UJD is responsible for the regulation and supervision of the peaceful use of nuclear energy within the territory of the Slovak Republic in compliance with the 2004 Atomic Act. Its regulatory and supervisory competencies cover the following areas:

- safety of nuclear installations;
- radioactive waste management, including supervision of radioactive waste originating from nuclear installations and the safety of repositories for all types of radioactive waste;
- safeguards and control over nuclear materials and dual-use goods;
- quality assurance programmes of nuclear installations;
- physical protection;
- emergency preparedness;
- training and evaluating the competency of the licensee's employees;
- shipment of nuclear materials, radioactive waste and spent fuel;
- early notification of nuclear accidents and mutual international co-operation activities; and
- international agreements and obligations in the field of nuclear safety and nuclear materials.

Details of the tasks of the UJD relating to each of these areas are set out in Sections 3, 4, 5 and 6 of the 2004 Atomic Act. Of particular importance are the inspection competences of the UJD [see Section 4(b) "Nuclear Installations – Inspection" *supra*].

100. Section 29 of the Act on Organisation.

b) Ministry of Health

The Ministry of Health is the competent central body responsible for radiation protection of workers and the public, but officially it has delegated supervisory competencies on the Public Health Authority (PHA), which is its subordinated body.

Radiation protection law is based upon the Act on Protection, Support and Development of Public Health and regulations laying down detailed provisions on radiation protection of workers and the public, as well as of individuals requiring medical use of radiation.

The Public Health Authority grants licenses for the use of radiation sources in medical industries and research. However, the Public Health Authority supervises radioactive waste management that has originated from such activities (*i.e.*, other than waste from nuclear power plants) when as of the moment that radioactive waste from non-nuclear installations is treated for final disposal and shipped for final disposal, it falls under the competency of UJD. Radiation protection measures inside nuclear installations, as well as off-site is the Public Health Authority's responsibility.

c) Ministry of the Environment

The Ministry of the Environment is responsible for environmental impact assessment issues in compliance with the Act on Environmental Impact Assessment (EIA).[101] This law requires holding environmental impact assessment proceedings for the construction of or significant changes to a nuclear installation or for significant changes to the activity performed at a nuclear installation, which could have an adverse impact on the environment.

The Ministry of the Environment operates the online environmental radiation-monitoring network that monitors and collects radiation situation data within the territory of the Slovak Republic at all times. Its subordinated bodies and the Regional Environmental Offices provide the UJD with their comments and opinions regarding environmental protection in all licensing proceedings.

The Minister of the Environment also chairs the Government Commission for Radiological Emergencies.

d) Ministry of the Interior

The Ministry of the Interior is responsible for fire protection, the maintenance of physical protection of nuclear materials and nuclear installations in emergency situations and civil protection measures during the threat or occurrence of a radiological incident and for providing the public with assistance in the event of a nuclear accident or radiological emergency.[102] In the event of a nuclear incident or accident, the operator must immediately notify the Ministry of the Interior.[103]

e) Ministry of Economy

The Ministry of Economy is responsible for the promotion and development of nuclear energy use, establishing nuclear energy policy for the Slovak Republic and for preparing related legislation. It also issues licenses for the export of dual-use goods, equipment and technology, which are subject to prior UJD approval.

The Ministry of Economy nominates the Chairperson and four other members for the Board of Trustees of the National Nuclear Fund. In addition, the Ministry has competencies regarding the strategic, financial and conceptual documents adopted and implemented by the National Nuclear Fund.

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101. Act on Environmental Impacts Assessment.
102. Act No. 42/1994 on the Civil Protection of the Public, as amended.
103. Section 27(4)(d) of the 2004 Atomic Act.

The Ministry of Economy is obliged to establish, found or authorise a legal entity, the Agency for Disposal of Radioactive Waste and Spent Fuel, as the agency responsible for disposal activities within the territory of the Slovak Republic on the basis of a licence issued by the Authority. The referred legal entity must be a holder of a licence for the operation of a repository and the Slovak Republic must hold a 100% stake in the entity. At the same time, this entity may not be the holder of a licence for the operation of a nuclear facility for energetic purposes or for research.[104]

Disposal of radioactive waste or spent nuclear fuel in the Slovak Republic is prohibited by persons other than the specified agency.[105]

f) Ministry of Labour and National Labour Inspectorate

The responsibilities of the Ministry of Labour are set out in two acts: one on health and safety at work[106] and the other on work inspection activities. The National Labour Inspectorate is a part of the Ministry of Labour responsible for the adoption of working conditions standards and for the supervision of the compliance with such standards at places of work. The National Labour Inspectorate also has responsibilities in the area of industrial safety, especially with regard to the technical safety of technologies and installations used.

2. Public and Semi-Public Agencies

There are no public or semi-public agencies in the nuclear sector, but there are some commercial companies providing the UJD with support on contractual basis. The most important one among them is *Vyskumny ustav jadrovych elektrarni* (VUJE) – The Nuclear Power Plant Research Institute. VUJE undertakes research and development in the field of nuclear safety and usually provides the UJD with independent safety analysis and technical support. The VUJE also conducts training for employees of nuclear power plants at Trnava. The final training of operating personnel at the Mochovce plant is also carried out with a full-scale simulator, which is located on-site.

104. JAVYS is now authorised by the Ministry of Economy to play the role of the Agency.
105. Section 3(9) and (10) of the 2004 Atomic Act.
106. Act on Health Safety and Protection of the Workers.