NUCLEAR
REGULATORY AUTHORITY
OF THE SLOVAK REPUBLIC

ANNUAL REPORT 2023

Foreword

Dear readers,

Allow me to present to you the Annual Report of the Nuclear Regulatory Authority of the Slovak Republic for the year 2023, providing comprehensive information on the activities of the Authority under the Competence and Atomic Act. In it you will find an assessment of the nuclear safety of nuclear installations under construction, in the commissioning phase, in operation and in decommissioning in the Slovak Republic, as well as the fulfilment of the Slovak Republic's international obligations in the field of peaceful uses of nuclear energy and safeguards in this area. The Annual Report also includes information on the Authority's other activities such as emergency planning and preparedness, the Authority's international activities, communication and public information, economic data, human resources management, staff training, the development of its supervisory activities, the Authority's quality management system and cybersecurity.

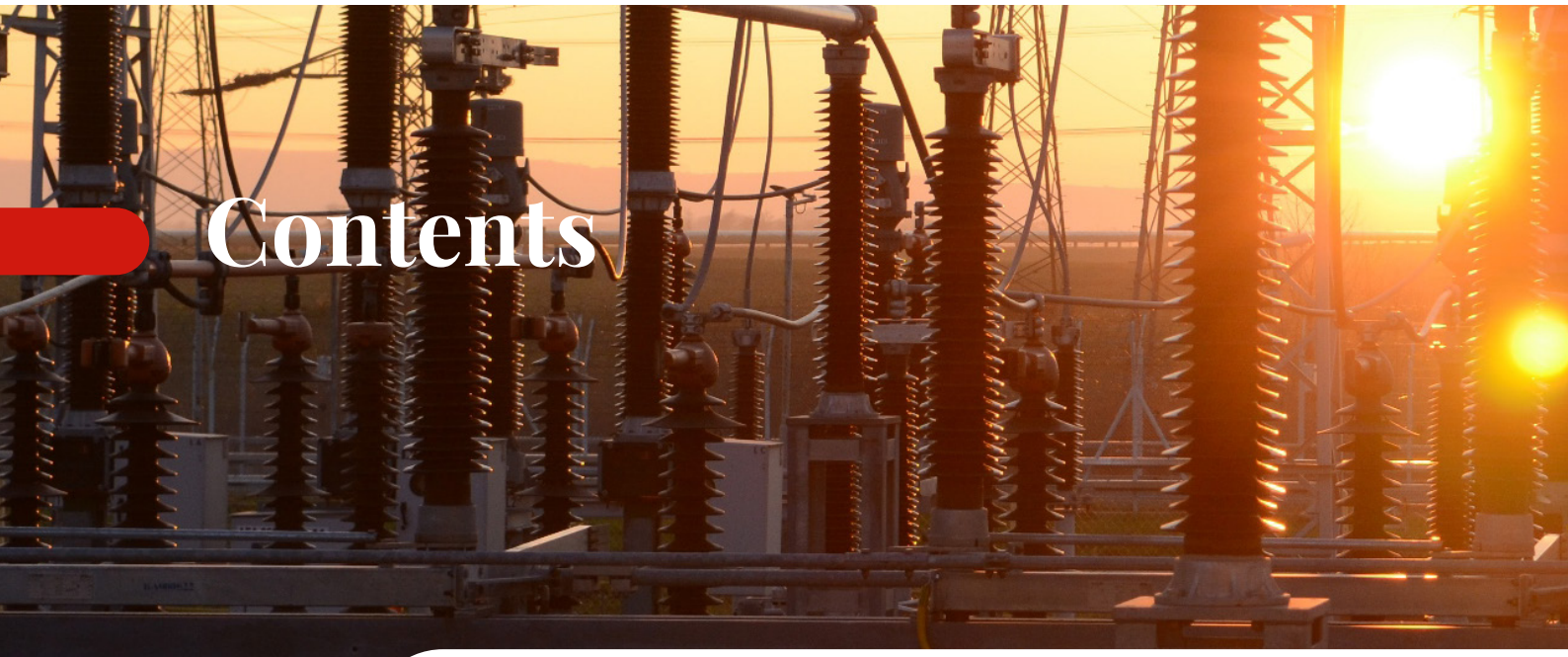
An evaluation of these activities is included in the Annual Report each year. But the year 2023 was exceptional for the Nuclear Regulatory Authority of the Slovak Republic. We commemorated the 30th anniversary of the establishment of the Authority and we reminisced together at the ceremonial conference. The beginnings of the Authority were not easy. After the dissolution of the Czechoslovak Atomic Energy Commission, most of the federal experts stayed on to work in our partner organization, the State Office for Nuclear Safety (Státní úřad pro jadernou bezpečnost) in the Czech Republic. The common history and the very similar nuclear programme have also provided the basis for the main features of the two regulators and have contributed in a considerable way to the development of a superior relationship leading to extremely close and fruitful cooperation and an ever deepening exchange of information and experience at both official and informal levels.

During these 30 years of activity, the Nuclear Regulatory Authority of the Slovak Republic has grown. At home and abroad, it has established itself as a highly professional, independent and respected regulatory body covering, among other things, nuclear safety of nuclear installations, management of radioactive waste and nuclear materials, physical protection and also ensuring the fulfilment of the Slovak Republic's obligations under international treaties in these areas. All this was only possible thanks to the high expertise and professionalism of our employees and their continuous efforts to continue learning and gaining experience, as well as their willingness to continuously share good practice and the latest knowledge with each other, as well as in international forums.

In moments like this, we look back with both esteem and a sense of a job well done, but at the same time, we do not stop and take our eyes off the road ahead in pursuit of the goals and milestones we have set. I am confident that we are on the right track and with the support of the expertise of the staff of the Nuclear Regulatory Authority of the Slovak Republic and also in cooperation with our partner organizations, we will reach and exceed the set goals.

Ing. Marta Žiaková, CSc.

Chairperson



Contents

1. Identification of the Organisation

1.1 Basic Information

The Nuclear Regulatory Authority of the Slovak Republic („ÚJD SR", „the Authority") is the central authority of the State Administration of the Slovak Republic (SR) in the field of nuclear supervision, with its seat in Bratislava. In addition to its offices in Bratislava, it has an office in Trnava and site inspectors in Jaslovské Bohunice and Mochovce.

Originally, with effect from 1 January 1993, the UJD SR was established by Act of the National Council of the Slovak Republic No. 2/1993 Coll., amending and supplementing Act of the Slovak National Council No. 347/1990 Coll. on the organisation of ministries and other central state administration bodies of the Slovak Republic, as amended. Section 21 stipulated that the UJD SR is the central authority of the state administration of the Slovak Republic in the field of nuclear supervision. At present, the UJD SR operates on the basis of Act No 575/2001 Coll. on the Organisation of Government Activities and the Organisation of the Central State Administration, as amended, and Act No 541/2004 Coll. on the Peaceful Uses of Nuclear Energy (the Atomic Act) and on amendments to certain laws, as amended, and other generally binding legal regulations. According to the Atomic Act, the Authority performs state supervision in the field of peaceful uses of nuclear energy and safe management of spent nuclear fuel (SNF) and radioactive waste (RAW), in the physical protection of nuclear materials (NMs), in emergency planning in the Slovak Republic in the event of a radiological emergency and ensures the fulfilment of obligations arising from international treaties and agreements in the field of peaceful uses of nuclear energy.

The Authority also exercises the powers of the building authority pursuant to Act No. 50/1976 Coll. on spatial planning and building regulations (Building Act), as amended, in the case of construction of nuclear installations (NIs), constructions related to NIs and located within the area delimited by the boundaries of the NIs.
The Authority is headed by a Chairperson, a Vice-Chairperson and a Secretary-General of the Service Office, who are appointed by the Government of the Slovak Republic.

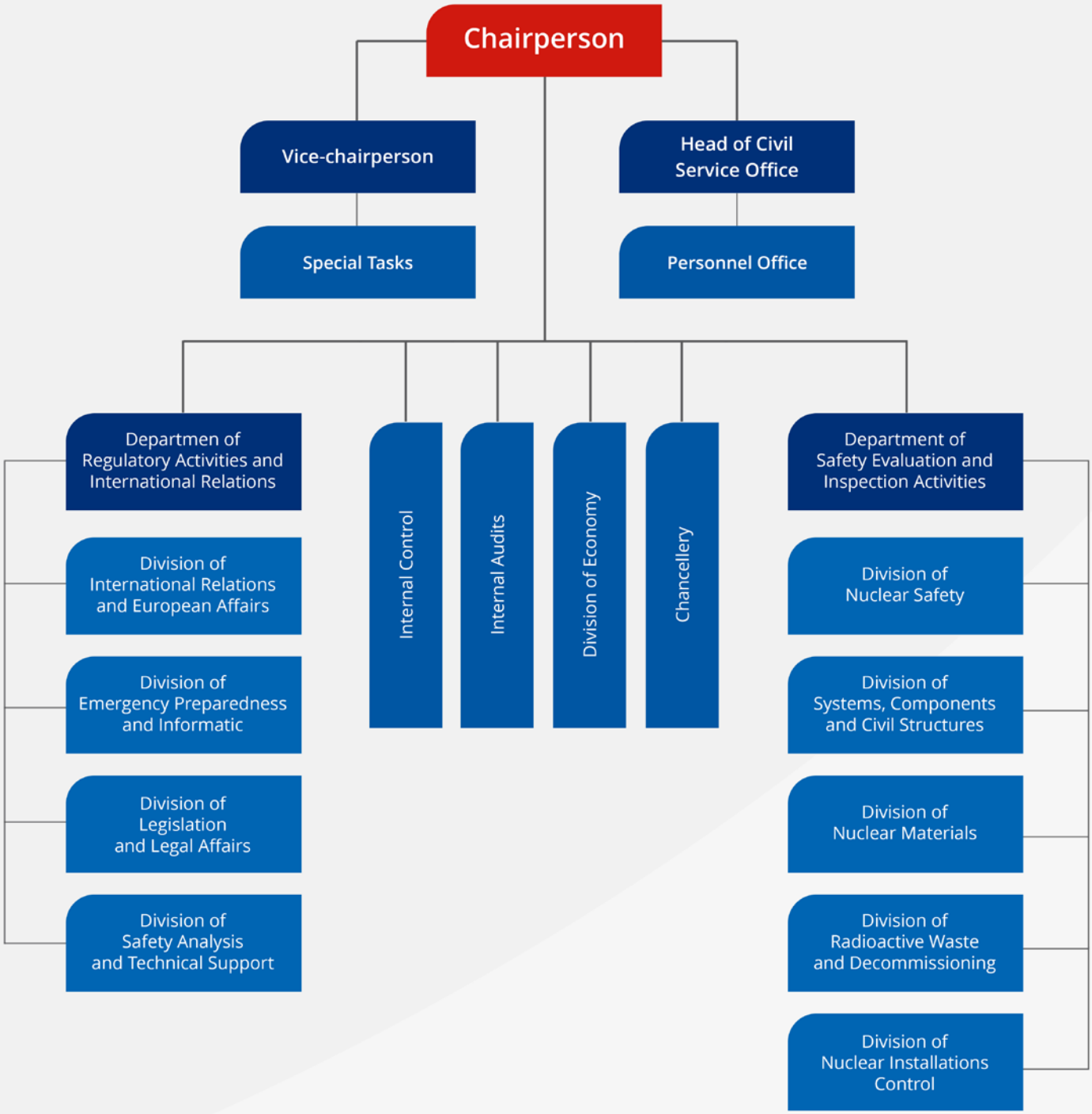
1.2 Management of the ÚJD SR

Ing. Marta Žiaková, CSc.
Chairperson

Ing. Eduard Metke, CSc.
Vice-Chairperson

Mgr. Zuzana Pišteková
Secretary General of the Service Office

1.3 Organisational Structure



1.4 30 years of the Authority

In 2023, we marked the 30th anniversary of the establishment of the Nuclear Regulatory Authority of the Slovak Republic. During its existence, the Authority has witnessed several key moments. Whether it is major changes in legislation, the appointment of new representatives of the Authority or successes in international institutions. The timeline clearly shows the most important events during the Authority's existence so far.

On 18 May 2023, ÚJD SR organised a ceremonial conference on the occasion of the 30th anniversary of its establishment. The invited guests included former and current employees of the Authority, guests from the field of science and education, representatives of licence holders and other regulators.

The festive programme included a discussion between the chairpersons of the Authority, during which many funny and interesting stories from the life of the Authority were mentioned.

The most important events
during the Authority's existence so far:

1993

Ing. Jozef Mišák, CSc.
Chairman

Act No. 2/1993 Coll. established the ÚJD SR

Accession to the IAEA

1996

Control and Crisis Centre (CCC)

2004

New Atomic Act

2006

Shutdown of V-1, Unit 1

2008

Shutdown of V-2, Unit 2

2009

Authorisation for phase II, A-1 decommissioning

2010

Authorisation for the interim storage facility

2011

Authorisation of Stage I of V-1 decommissioning

1997

First emergency exercise in the SR

Ing. Miroslav Lipár
Chairman

1998

The first atomic law in the SR

Authorisation for EMO Unit 1

1999

Authorisation for EMO Unit 2

2001

RAO RAO authorisation for commissioning

2002

Ing. Marta Žiaková, CSc.
Chairperson

Accession to the OECD/NEA

2016

Authorisation of Stages III and IV of A-1 decommissioning

2022 – 2023

Authorisation to place for the commissioning of EMO Unit 3

2. Main Activities

2.1 Legislative Activity

As part of its legislative activities in 2023, the ÚJD SR issued Decree No. 355/2023 amending ÚJD SR Decree No. 52/2006 on professional competence, as amended, which entered into force on 1 January 2024. The Decree responds to Act No. 310/2021 Coll., amending Act No. 177/2018 Coll. on certain measures to reduce the administrative burden through the use of public administration information systems and on amending and supplementing certain acts (Red-tape Act), as amended by Act No. 221/2019 Coll.

Preparatory work continued on the new Atomic Act, the preparation of accompanying documentation and the elaboration of impact analyses in accordance with the new Unified Methodology for the Assessment of Selected Impacts, and the incorporation of comments submitted by the relevant departments continued.

The ÚJD SR actively participated in the inter-ministerial coordination group for the representation of the Slovak Republic before the courts of the European Union (EU) at the Ministry of Justice of the Slovak Republic (MoJ SR) and in the inter-ministerial coordination group in the proceedings before the European Commission (EC) in the pre-trial phase at the Ministry of Foreign and European Affairs of the Slovak Republic (MoFEA SR).

In the course of 2023, ÚJD SR continued to coordinate the cooperation of the entities concerned within the inter-ministerial working group on civil liability for nuclear damages (MRPS OBPZJŠ). Two meetings were held in 2023. The spring meeting was held on 24 April 2023 and the autumn meeting was held on 9 October 2023. The subject of the meetings was to inform the members of the MRPS OBPZJŠ on the developments in the membership of the international conventions in the field of civil liability for nuclear damage and to evaluate the implementation of the tasks.

In connection with inter-ministerial comment procedures, both legislative and non-legislative documents (almost 800) were reviewed, on which the UJD SR made regular or substantial comments, many of which were subsequently discussed in disagreement procedures with the relevant ministries.

The most important legislative materials reviewed in 2023 included the legislative process on the bill on transformation of commercial companies and cooperatives and on amendments of certain laws (LP/2023/14), the bill on measures to increase the security and trustworthiness of platforms in the online environment and on amendments of certain laws (LP/2023/129), the draft decree of the Ministry of the Environment of the Slovak Republic (MoE SR) on the monitoring of emissions from stationary sources of air pollution and the quality of air in their surroundings (LP/2023/17), draft decree of the MoE SR on requirements for stationary sources of air pollution (LP/2023/19), draft decree of the MoE SR,

implementing certain provisions of the Air Protection Act (LP/2023/20), on the bill amending the Civil Service Act (LP/2023/111), draft decree of the Ministry of Investments, Regional Development and Informatisation of SR (MIRRI SR) on the project management and change requirements in the operation of public administration IT (LP/2023/96), draft decree of the National Security Authority (NBÚ), amending and supplementing NBÚ Decree No. 362/2018, establishing the content of the security measures, the content and structure of the security documentation and the scope of the general security measures (LP/2023/136), the proposal of the Members of the National Council to issue an Act to amend and supplement certain Acts in connection with the reform of the building legislation (LP/2023/205), draft decree of the Ministry of Interior of SR (MV SR), amending Decree of the Ministry of the Interior of the SR No. 410/2015 on the details of the administration of the registry of public authorities and on the creation of a file, as amended by Decree No. 49/2019 (LP/2023/366), draft Decree of the Ministry of the Interior of the SR amending Decree of the Ministry of the Interior of the SR No. 628/2002 Coll., implementing certain provisions of the Act on Archives and Registers (LP/2023/367), the proposal for the abolition of certain tasks resulting from the resolutions of the Slovak Government (LP/2023/305), Principles and Rules for Public Participation in Public Policy-Making (LP/2023/491), Draft Open Government Initiative Action Plan for the years 2024 – 2026 (LP/2023/492).

In 2023, Act No. 205/2023 Coll. on Amendments to Certain Acts in connection with the Reform of the Construction Legislation (the so-called Collection Act) was adopted, where in Article XXXIV it enters into the Atomic Act due to the fact that, according to the new legislation, the UJD SR is to be a special building authority for the construction of NIs and structures related to NIs.

In 2022, the Chairperson of the Authority established a Working Group (WG) for the development of a new Building Atomic Act, where all relevant technical disciplines are represented. In 2023, a total of two papers on the above issue were submitted to the meeting of the Chairperson of the UJD SR. "Further action on construction procedures - Proposal for the preparation of a new construction law for NIs and NI-related constructions" was approved by the meeting of the Chairperson of the UJD SR on 9 February 2023 and „Proposal for further action on construction procedures at the UJD SR and information on the status and development of the legislation on construction laws as of 31 August 2023" was approved on 3 October 2023. The WG held several meetings also on the new nuclear source (Jadrová energetická spoločnosť Slovenska, a. s. /Nuclear Energy Company of Slovakia - JESS, a. s.).

In the course of 2023, ÚJD SR issued the following Safety Guides (BN):

- BN 1/2023 – Reporting, detection of causes and assessment of operational events at nuclear installations,
- BN 2/2023 – Ageing management and long-term operation of nuclear power plants (3rd edition - revised and supplemented).

In connection with the ongoing application of Act No. 305/2013 Coll. on the electronic form of exercising the powers of public authorities and on amending and supplementing certain acts (E-Government Act), the project team headed by the Vice-Chairman of the UJD SR continued to work, whose task is to identify tasks, propose their solution in the conditions of the UJD SR and to ensure the practical application of Act No. 305/2013 Coll. to the daily processes affected by this Act.

In 2023, a litigation with the Austrian environmental organisation Global 2000 was brought to an end. Global 2000 sought a review of the ÚJD SR Decision No. 387/2017 dated 16 October 2017. ÚJD SR as an obliged person did not partially disclose the information required under Act No. 211/2000 Coll. as amended contained in the documentation submitted to ÚJD SR in the framework of the authorisation for the commissioning of the Mochovce Unit 3 NPP due to the fact that it was sensitive information. The Regional Court in Bratislava dismissed the action by a judgment which became final on 23 March 2023.

2.2 Methods of Regulatory Activities

Nuclear safety oversight is carried out in the following areas:

- Licensing,
- Review and assessment of safety documentation,
- Inspection activities in NIs,
- Law enforcement.

2.2.1 Licensing

In order to obtain a licence for activities in the field of peaceful uses of nuclear energy, whether it is a new activity or a change to an existing one, the applicant must demonstrate its ability to comply with and fulfil all the requirements laid down by the laws and decrees in force in the Slovak Republic, in particular the requirements of the Atomic Act and the Authority's implementing decrees to this Act. Furthermore, the applicant must demonstrate that the NI will be or is operated safely.

In addition to the licence holders, which are SE, a. s., and JAVYS, a. s., the ÚJD SR also supervises and issues licences for other legal entities and organisations that do not operate power NIs, but carry out other activities related to the peaceful use of nuclear energy in accordance with the Atomic Act. Representatives of these licence holders include VUJE, a. s., providing professional training of NPP personnel, and DMS, s. r. o., implementing activities related to the transport of RAM.

2.2.2 Review and Assessment Activity

Nuclear safety of the NIs is demonstrated by documentation that proves that the systems, components and technological equipment, including the capability of their operators, are capable of operating safely and reliably, both during normal, abnormal and emergency operation, and that the impact of the NI on employees, the population, the environment and on property is at an acceptable level within the meaning of Slovak legislation and recognised international standards.

In connection with the completion of Units 3 and 4 of NPP MO 3&4, the Authority carried out a number of post-installation conformity checks aimed at verifying the compliance of the installed technological equipment with the design and the approved quality requirements. The Authority also inspected the progress of selected tests and works related to the commissioning of Unit 3. The assessment of the quality management system documentation and quality requirements for classified equipment continued in accordance with the relevant ÚJD SR decrees. The number of decisions issued by the ÚJD SR in 2023 is presented in Table 1.

In 2023, ÚJD SR reviewed, assessed and approved documentation for:

- Design modifications on classified equipment (VZ) of NIs in operation,
- Implementation of works to complete NPP MO 3&4, including Basic Design modifications,
- Pre-operational and in-service inspections of VZ,
- Building proceedings relating to NI,
- Changes to documentation reviewed or approved by the ÚJD SR,
- Quality assurance of VZ and NIs,
- The quality management systems of license holders under the Atomic Act and their contractors,
- Organisational changes of license holders.

Decision type	No. of Decisions issued
Atomic Act	356
Building Authority	13
Suspension of administrative proceedings	71
Discontinuance of admin. proceedings	8
Imposition of a fine	1
Appeal proceeding	0
Total	**449**

Table 1: Number of ÚJD SR Decisions issued in 2023

2.2.3 Inspections

Inspection activity means the process of checking compliance with the requirements and fulfilment of the obligations laid down in the Atomic Act and its implementing legislation, the Building Act and its implementing legislation, fulfilment of the obligations resulting from the ÚJD SR Decisions, as well as fulfilment of the measures for elimination of the deficiencies contained in the Inspection Reports. Inspections are carried out by nuclear safety inspectors of the ÚJD SR. The schedule of planned inspections is set out in the Inspection Plan, which is designed to enable continuous and systematic assessment of compliance with legislative requirements. The Authority prepares a Preliminary Inspection Plan for three years and an Inspection Plan for the relevant year. In addition to planned inspections, inspectors also carry out unscheduled inspections triggered by the status of the NI (e.g. construction and installation, commissioning phases) or operational events (OEs). Unscheduled inspections also include inspections by the International Atomic Energy Agency (IAEA) in the field of nuclear material accounting and control, the date of which is not announced to the ÚJD SR and the relevant licence holder until immediately before the inspection itself.

165 inspections were scheduled for 2023, of which 14 were cancelled for objective reasons. There were 34 unscheduled inspections in 2023. A total of 185 inspections were carried out, with 57 inspections still in progress as of 25 January 2024, and 128 inspections completed. Of the completed inspections, 5 have been closed in the form of an Inspection Report and the remainder are closed by a record. An overview of inspections is shown in Table 2.

NI/other	Team	Special	Routine	Routine	Total
NPP Bohunice V-2	9	16	4	1	**30**
NPP Mochovce 1, 2	11	20	4	0	**35**
NPP Mochovce 3, 4	1	10	1	3	**15**
JAVYS, a. s.	3	20	8	2	**33**
VUJE, a. s.	0	3	0	0	**3**
NM and RAW shipments	0	9	0	9	**18**
NM accounting and register	0	29	0	17	**46**
Other inspections	0	3	0	2	**5**
Total	**24**	**110**	**17**	**34**	**185**

Table 2: Overview of inspections conducted in 2023

2.2.4 Law Enforcement

In the event that the inspection reveals deficiencies in any of the supervised areas, the inspection report shall order the license holder to remedy the deficiencies with binding deadlines for their fulfilment. The license holder is then obliged to notify the ÚJD SR of the manner and date of rectification of the deficiency. If the supervised entity fails to comply with the measures, as well as in the event of a serious violation of the provisions of the Atomic Act or the requirements of its implementing decrees, the ÚJD SR may initiate administrative proceedings, which may result in:

- Imposition of a fine,
- Limitation of the scope or validity of the license,
- Ordering the implementation of necessary measures,
- Ordering the implementation of necessary measures,
- Permanent withdrawal of a special competence certificate or a professional competence certificate.

In 2023, the Authority did not withdraw any Special Professional Competence Certificates for selected staff or Lecturers' Licences for licence holders.

In 2023, based on the findings of the UJD SR inspection No 333/2022, the subject of which was the inspection of the testing of safety systems at EMO Unit 1, the Authority imposed a fine of EUR 200,000 on the licence holder SE, a. s. for repeated violation of the Atomic Act.

2.2.5 Development of Supervisory Activities

Maintaining a high level of expertise and professionalism of the regulator´s staff is facilitated by the application of the results of science and research at the UJD SR and the exchange of experience and knowledge within the framework of the active participation of the UJD SR in various international expert teams.

The ÚJD SR is involved in the US Nuclear Regulatory Commission's research project on severe accidents. Thanks to the participation in the project, the UJD SR has at its disposal the American MELCOR (MELting CORe) computational programme and its complementary tool MACCS (MELCOR Accident Consequence Code System). It uses them for verification calculations of severe accident analyses submitted by license holders to the ÚJD SR in the framework of administrative proceedings. During the working meetings on the project, its members exchange experience and knowledge in the field of severe accident modelling and evaluation of reactions of NIs to accidents.

The ÚJD SR also gains experience and technical information by participating in international projects and OECD/NEA working groups. In the framework of joint projects of the WGAMA (WG on the Analysis and Management of Accidents), the ÚJD SR has been involved since November 2020 in the experimental project THEMIS, i.e. THAI Experiments on Mitigation Measures, and source term issues to support analysis and further improvement of Severe Accident Management measures. Its objective is the experimental and analytical investigation of processes and phenomena in the late phase of severe accidents, focusing on the behaviour of typical flammable/explosive gases and fission products in reactor containment areas. In July 2023, the administrative, organisational and financial issues for the project were discussed and the draft for the remaining timetable and content of the final experiment and the analytical

programme were approved. The ÚJD SR is also actively involved in the activities of the WGLSC (WG on Leadership and Safety Culture). In 2023, two working meetings were held to document the results of the self-assessment of the safety culture and safety leadership of the licence holders and to elaborate the assessment report. Both reports of the WGLSC, "The impact of the regulatory bodies on the organisations they oversee (and vice versa) from a safety culture perspective" and "Leadership for Safety", were subsequently endorsed by the CNRA NEA committee.

Within the framework of international cooperation in the field of nuclear safety, the UJD SR also assists in the development of nuclear regulatory authorities of other countries. The aim of these projects is to enhance the nuclear and radiation safety capabilities of third country regulators by exchanging experience and promoting the use of international best practices. Examples of such assistance are EC projects in support of Iranian Nuclear Regulatory Authority (INRA) and Regulatory Authority of Ghana. In the projects supporting INRA, the ÚJD SR is participating in a consortium with ENCO and partner regulators from the Czech Republic, Hungary and Slovenia They are aimed at supporting INRA to prepare for the IRRS mission to Iran, the development of a nuclear safety oversight framework and the development of a nuclear safety culture oversight. In 2023, the ÚJD SR participated in the preparation and implementation of a seminar on peer review of stress tests. The purpose of the seminar was to exchange experiences from peer review of NPP stress tests, development of National Action Plans and their implementation among European countries, Armenia and representatives of Iranian regulator, Bushehr NPP and its technical support organisation. In the project to support the development of Ghana's Nuclear Regulatory Authority, the UJD SR is participating in a consortium with ENCO and the partner regulatory authorities of Hungary and Slovenia. A new EC project to support the Turkish Nuclear Regulatory Authority and its Technical Support Organisations (TSOs) in the commissioning of a new NPP was launched in autumn 2023. In this new project, the ÚJD SR is involved in a broad consortium with ENCO, partner regulators and their TSOs from Hungary and Slovenia, as well as TSOs from the Czech Republic (ÚJV, SÚRO), Finland (STUK International) and Germany (TUEV-Nord).

Experts of the UJD SR are actively participating in addressing key tasks in terms of WENRA priorities within two WENRA Working Groups (WGs) - WG on Harmonisation of Requirements for the

Safety of Radioactive Waste Management and Decommissioning of NIs (WGWD).

In 2023, activities continued to consolidate existing Safety Reference Levels and to set aside generic SRLs that would be common to all three WENRA working groups (RHWG, WGWD and WGRR - Research Reactor Group). Drafts were completed for items A - Safety Policy and B - Operating Organisation. A proposal for item C - Management System is under

2.3 Areas under Supervision

2.3.1 Nuclear Installations

The main supervised entities in the Slovak Republic are the holders of authorisations for the construction, commissioning, operation and decommissioning phases of the NIs. Holder of such authorisations are: Slovenské elektrárne, a. s. (SE, a. s.), and Nuclear and Decommissioning Company (JAVYS, a. s.). NIs of these companies are nuclear power plants (NPPs) and other NIs.

Nuclear Power Plants:

- NPP Bohunice V-2 (NPP Bohunice V-2/EBO V-2), two Units in operation,
- NPP Mochovce 1, 2 (NPP Mochovce 1, 2/EMO1, 2), two Units in operation,
- NPP Mochovce 3, 4 (NPP Mochovce 3, 4/MO 34), Unit 3 in commissioning phase, Unit 4 under construction,
- NPP Bohunice V-1 (NPP Bohunice V-1/EBO V-1), two Units in phase II of decommissioning,
- NPP Bohunice A-1, (NPP Bohunice A-1/EBO A-1), one Unit in phase III and IV of decommissioning.

Other Nuclear Installations:

- Interim Spent Fuel Storage facility (ISFS),
- Technology for treatment and conditioning of radioactive waste (TSÚ RAO),
- National Radwaste Repository (RÚ RAO),
- Final Treatment of Liquid Radioactive Waste (FS KRAO),
- Integral Radwaste Storage facility (IS RAO).

2.3.1.1 Nuclear Power Plants in Operation

Assessment of Safety Indicators of Operating NPPs

The assessment of the NPP operation by safety indicators is carried out by the ÚJD SR on an ongoing basis and assessed annually. The four NPP units in operation (Bohunice V-2 NPP, Mochovce 1, 2 NPP) and one NPP unit being commissioned (Mochovce 3 NPP) are assessed by indicators in four specific areas of operation: significant incidents, human factors (HF), operation of safety systems and barrier leak-tightness.

Significant Incidents and Human Factor:

The following main indicators are monitored in these areas:

- The number of reactor scrams (AO1),
- The number of violations of Limits and Conditions (L&Cs) of safe operation (L&Cs is a document that specifies the requirements for the permissible values of the NI parameters, the readiness of the safety systems and the verification of their readiness, any deviation from the specified values and requirements is recorded as a violation of the L&Cs),
- The number of equipment and system failures that the operator of the NPP is obliged to report to the ÚJD SR according to the established criteria,
- The share of HF on OEs reported to the ÚJD SR,
- Number of incidents at NIs classified under INES scale as INES 1.

Results recorded in 2023 are shown in Tables 3 and 4.

In 2023, AO1 protections were activated in one case at EMO1 and in one case at EMO3. There were no violations of L&Cs. These facts testify the operational reliability of nuclear units of NPP Bohunice V-2 and NPP Mochovce 1, 2 and 3.

The number of reported OEs is low and indicates stable operation of the NIs in the Slovak Republic. The numbers of OE with a contribution of HF and their share in the total number of reported failures refer only to incidents reported to the Authority. The contribution of the human factor to these events has been reassessed (confirmed) by the Incident Analysis Group of the UJD SR.

Indicator	EB03	EB04	EM01	EM02	EM03
Number of AO1	0	0	1	0	1
Violations of L&Cs	0	0	0	0	0

Table 3: Number of AO1 and violations of L&Cs on NI Units operated in SR in 2023

Indicator	EBO3	EBO4	EBO34	EMO1	EMO2	EMO3
OEs reported to ÚJD SR	0	3	0	4	4	5
OEs with HF	0	2	0	0	0	3
Share of OEs with HF contribution [%]	0	67	0	0	0	60
OEs classified as INES 1	0	0	1	0	0	0

Tab. 4 OE statistics

Operation of Safety Systems:

The operation of safety systems is assessed by means of unavailability factors. The unavailability factor is defined as the ratio of the total unavailability time of a given system to the total time when its availability is required. Unavailability is generally caused by the repair of failures detected during the periodic testing of systems.

No safety system failures occurred in Bohunice V-2 NPP or in Mochovce 1, 2 and 3 NPP during 2023.

Table 5 shows the calculated unavailability factors of the following safety systems:

- the unavailability of diesel generators (DG), which provide power to other safety systems in the event of the loss of other internal and external sources of power supply,
- the unavailability of the primary circuit high-pressure (HP) emergency make-up pumps - these pumps are designed to cool the reactor core in the event of coolant leaks from the primary circuit,

Safety systems	EB03	EB04	EM01	EM02	EM03
DG unavailability	0	0.00011	0	0.000132	0
HP unavailability	0	0	0.00000012	0	0.0001
SHNČ+HNČ unavailability	0.00121	0.0000567	0.00095	0.000738	0.00203

Table 5: Unavailability factors of selected safety systems for NI units

Unavailability factors are low, evidencing high readiness of safety systems to be activated when needed (i.e. in the event of failure or emergency).

Leak-tightness of Barriers:

This indicator monitors the leak tightness of the fuel cell cladding in the reactor and the leak tightness of the hermetic compartments that form a barrier against the release of radioactive materials during potential accidents. The values of these indicators are good, stable and meet the L&C criteria.

The evaluation of nuclear safety indicators for 2023 together with the results of the inspections allow us to conclude that the nuclear safety of the NPPs in operation in the Slovak Republic is at a high level.

a) Nuclear Power Plant Bohunice V-2

At both operating units of Bohunice V-2 NPP (Unit 3 - EBO3, Unit 4 - EBO4) in 2023, the standard performance of inspection and assessment activities related to the operation of the NI was carried out. Within the scope of its activities, the UJD SR inspected the condition of the operated equipment and its maintenance, the fulfilment of the tasks resulting from the ageing management programmes and design changes with the aim of increasing the level of safety of the NI:

- Unit 3 (EBO3) from 14 June to 9 July 2023 - the general overhaul (GO) with refuelling lasted 23.5 days and was reduced by 1.5 days compared to the original plan. The shortened outage was due to a higher success rate of NDT inspections against the assumptions. During the GO, foreign objects were found in the open technology as rust clusters at the bottom of the fuel pool, pieces of graphite gasket and adhesive tape in the shell of the main circulation pump (HCČ), at the same time, a foreign object has fallen into the open technology (dropping the seal of the neck of the jerrycan into the emergency storage tank). All foreign objects were subsequently removed from the technology,

- Unit 4 (EBO4) from 6 May to 27 June 2023 – the outage lasted 21.5 days, including an extension compared to the plan of 0.5 day. During the GO, a foreign object fell into the open technology (a mobile phone fell into the low pressure heater when taking photos). The foreign object was removed from the technology.

The ÚJD SR has approved several changes to quality documentation and design changes with the intention of increasing the level of safety of the NI.

In-service inspections were carried out in accordance with the annual plans of in-service inspections of classified equipment, submitted by the operator for approval to the ÚJD SR. The results showed a satisfactory condition at both units. Inspections were carried out during Unit GOs, aimed at carrying out conformity checks after repairs of classified equipment.

The operator also provides fatigue life assessment of major components and piping systems, as well as assessment of the resistance of reactor pressure vessel materials to brittle fracture. The evaluation of the monitored fatigue life of the major components and important piping systems, as well as the assessment of the resistance of the reactor pressure vessel materials to brittle fracture provided by the operator shows that neither the fatigue life nor the results of the analyses in the area of reactor pressure vessel embrittlement limit the lifetime of the NI and thus create a prerequisite for the long-term operation of both units. The hermetic zone tightness tests carried out have shown that the tightness of the hermetic compartments is in accordance with the requirements of the L&Cs and the operating procedures.

Operational Events

The number and nature of OEs was within normal range of operational faults in 2023. The Authority recorded three OEs reportable to the Authority. All reported incidents were without significant impact on nuclear safety. During the year, there was no activation of reactor scram (AO1).

Based on the summary assessment of safety indicators and after summarising the results of inspections, the ÚJD SR concludes that it is necessary to pay increased attention to preventive maintenance of systems, equipment and structures. Corrective actions have been imposed by the ÚJD SR inspectors on the deficiencies identified during the inspections in order to improve the operator's processes and approaches in the given area.

b) Nuclear Power Plant Mochovce 1, 2

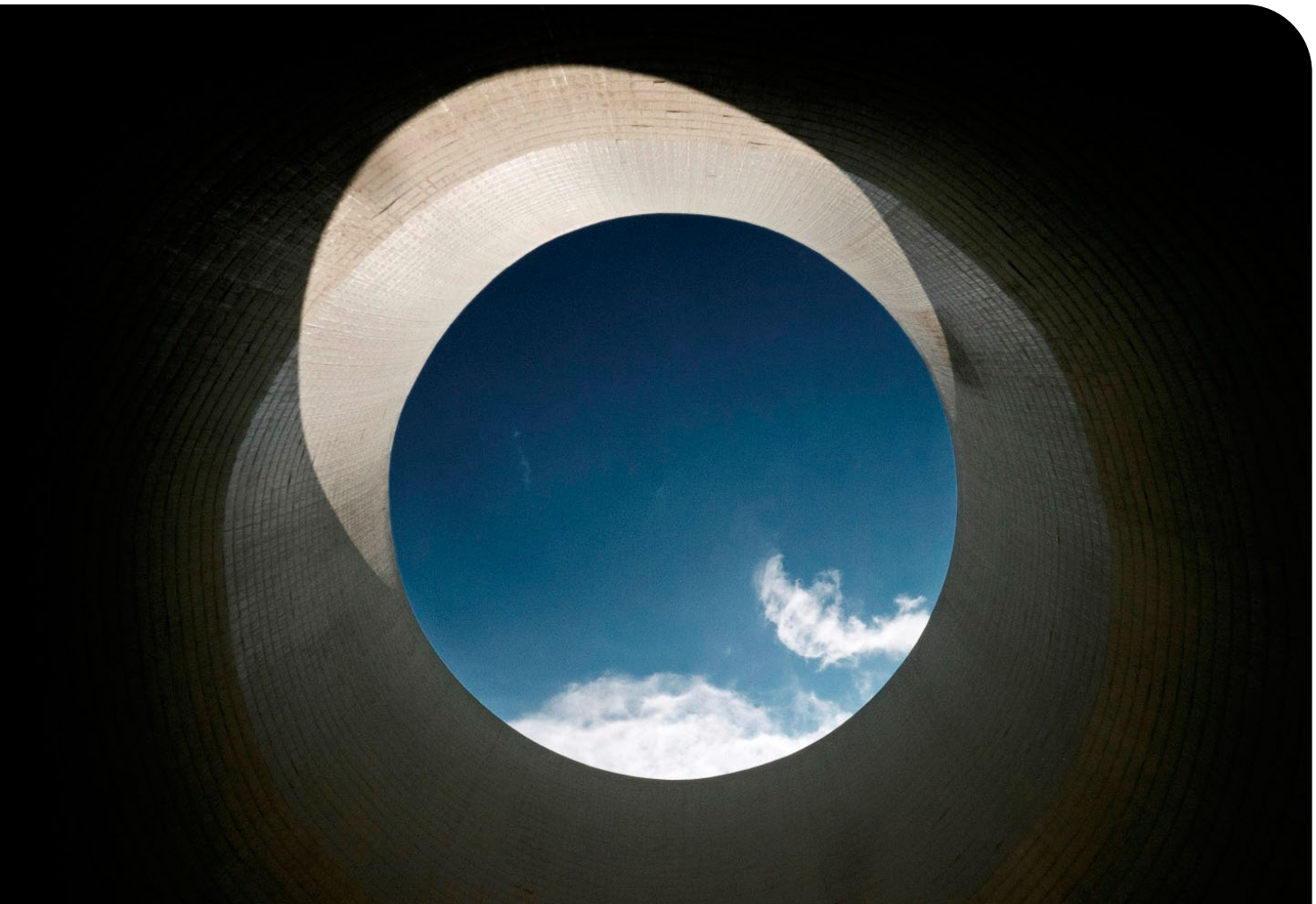
In 2023, the standard inspection and assessment activities associated with daily operation were performed at both operating units of Mochovce NPP 1, 2.

Within the scope of its activities, the ÚJD SR monitored the fulfilment of the tasks resulting from the ageing management programme, seismic reinforcement and a number of design changes were approved with the aim of increasing the safety level of the NI.

At EMO1, 2, planned outages for refuelling were implemented:

- Unit 1, from 8 April to 29 April 2023 - the outage lasted 21.04 days and was extended compared to plan by 53.98 hours due to failed pressure test at 13.7 MPa,

- Unit 2, from 9 September to 27 September 2023 – the outage lasted 18.05 days, the plan was 17.7 days, and the extension compared to plan was 7.35 hours due to extended maintenance works.



The Authority approved a number of changes to the quality documentation and design modifications related to increasing the safety level of the NI and seismic reinforcement of NPP equipment and structures.

In-service inspections were carried out on Units 1 and 2 of the Mochovce NPP, in accordance with the annual plans for in-service inspections of classified equipment, submitted by the operator to the ÚJD SR. The results of the in-service inspections confirmed the satisfactory condition of both units.

During Unit GOs, inspections were carried out focusing on conformity checks after repairs of classified equipment. The operator submits annual assessment reports on the fatigue life of major components and selected important piping routes to the ÚJD SR.

The reports submitted by the operator show that the monitored parameter limits of all assessed classified equipment, as well as the condition of the reactor pressure vessel materials, have not been exceeded.

Hermetic zone tightness tests have shown that the tightness of the hermetic compartments complies with the requirements of the L&Cs and the operating procedures.

Operational Events

The number and nature of OEs in 2023 at EMO1, 2 did not exceed the normal rate of operational failures. Eight incidents reportable to the regulatory authority were recorded by the UJD SR, but they did not have a significant impact on nuclear safety. In the course of 2023, there was one reactor scram by activation of AO1 protection during Unit start-up due to an early activation of protections for technological reasons in mode 5.

Based on the results of the inspections and assessment activities of the ÚJD SR, the operation of Mochovce NPP 1, 2 was assessed as safe in 2023. The identified operational faults were of no particular significance from the nuclear safety point of view and corrective actions were taken to minimise the likelihood of their recurrence.

2.3.1.2 Nuclear Power Plants in the Commissioning Phase

Nuclear Power Plant Mochovce 3

At Mochovce NPP Unit 3, which was in the commissioning phase, all tests according to the approved staged physical start-up programme were completed in 2023. On 13 January 2023, after the assessment of the preliminary evaluation of the physical start-up phase, the ÚJD SR issued an approval for the transition to the power testing phase of Unit 3. Sequentially, all prescribed tests and trials were performed at defined power levels of 5%, 20%, 35%, 55%, 75%, 90% and 100% Nnom.

The results achieved confirmed that all safety and design requirements were met. Parameterization, tuning of the block controllers and verification of their mutual cooperation were also carried out. During this phase, the ÚJD SR monitored the activities carried out by the license holder and continuously assessed the submitted logs and reports and, in case of any discrepancies or incompleteness, required the licence holder to ensure that corrections were made.

The power testing of Unit 3 was completed on 14 October 2023 with a 144-hour trial run and the Unit entered the pre-operational test phase. In 2023, the licence holder applied to the ÚJD SR for the issue of an operating licence and consent for the trial operation of Unit 3.

Operational Events

In 2023, the ÚJD SR recorded one reportable event to the supervisory authority that had an impact on nuclear safety. During the Unit 3 power testing, it was identified that the control devices controlling the steam generator relief valves were disconnected from the technology, rendering them inoperable. The event was assessed according to the INES Scale as a level 1, which means a deviation from normal operation.

According to the preliminary assessment of the ÚJD SR, the power testing of Unit 3 verified all safety and design criteria, which was a prerequisite for the safe and reliable operation of the nuclear facility. The supervision of the Unit 3 start-up tests by the UJD SR was carried out continuously with significant technical support from external specialists. The final comprehensive assessment of the Unit 3 commissioning by the ÚJD SR is still ongoing.

2.3.1.3 Nuclear Power Plants under Construction

Nuclear Power Plant Mochovce 4

The construction of Unit 4 of the Mochovce NPP continued in 2023. The energisation of the NPP's own technological equipment was completed. Several HVAC systems and electrical fire alarm systems were put into operation. Post-assembly cleaning operations, pressure testing and transfer of process systems to inactive testing continued. Signal transmission testing of measurement chains and individual tests on equipment were underway. Extensive additional verification of austenitic pipe welds and the quality of pipe part materials has been completed. The ÚJD SR regularly inspected and assessed the condition of the NI under construction, the quality of the installation of the classified equipment, the implementation of post-assembly inspections of assembled technological units and their parts, as well as the course and results of individual inactive tests.

Activities were carried out at EMO Unit 4 towards the integral cold hydro test, which the licence holder plans to start in 2024.

The inspectors of the ÚJD SR carried out inspections according to the approved inspection plan. Special reactive inspections were carried out for unexpected events and areas of concern.

2.3.1.4 Nuclear Power Plants under Decommissioning

a) Nuclear Power Plant Bohunice A-1

In 2023, the implementation of Stage 3 and Stage 4 decommissioning continued in accordance with the ÚJD SR Decision No. 369/2016, which issued an authorisation for both stages simultaneously under one permitting procedure. The work associated with these decommissioning stages is planned until the end of 2024 and focuses on the continued treatment of liquid RAW, sludge from the long-term storage facility and the long-term storage casings for SNF. The licence holder continued in the decommissioning of the original, non-functional and unused technological systems of the external objects and technological equipment of the main production unit of the reactor hall and the intermediate plant. During 2023, this mainly involved the decommissioning of cooling loops and section valves of the primary circuit, decommissioning of the main gas pipeline, decommissioning of turbo-compressors and steam generators 3 and 4, decommissioning of tanks N1/1, N1/2 and N1/4, monitoring and sorting of contaminated soils and concretes. The work will be immediately followed by the final Stage 5 of decommissioning, which is planned to be completed in 2033.

During 2023, the Authority reviewed documentation related to the commissioning and use of the facilities of the upgraded carbon sewer system in Building 30 and the use of the P-12a and O-12a air handling systems. In addition, the Authority reviewed changes to the operating procedures for the vitrification of the chrompics, the handling of abnormal operating conditions at NPP A-1, and the Limits & Conditions for the Safe Decommissioning of NPP A-1. The planned inspections were aimed at checking the compliance of decommissioning with the status described in the Stage 3 and Stage 4 decommissioning plan, at checking the compliance with nuclear safety conditions and regulatory requirements during decommissioning of the plant and in the RAW management from decommissioning. The inspection included a check of measures to prevent/minimise the occurrence of fire during the implementation of the project for the

the refurbishment of the HVAC system of the main generating unit of NPP A-1.

The decommissioning of NPP A-1 in 2023 followed the plan for Stages 3 and 4 of decommissioning. After summarising the results of the inspections and based on the summary assessment of safety indicators, the UJD SR concludes that the activities at NPP A-1 were carried out without any serious deficiencies in the field of nuclear safety.

b) Nuclear Power Plant Bohunice V-1

By Decision No. 900/2014, the Authority granted JAVYS, a. s., a permit for Stage 2 of the decommissioning of the NPP and also a permit for the RAW management and for the management of NM during Stage 2 of the decommissioning. Stage 2 mainly includes the decommissioning of the main generating unit, the auxiliary plant building and the remaining auxiliary buildings. In 2023, demobilization activities were underway - demolition of the structural portion of the temporary wet cutting worksites and removal of activated concrete from the shafts of both reactors. Dismantling and fragmentation of equipment at the RCA sites, their decontamination and radiation control continued. Concrete blocks handling and dismantling materials handling activities were carried out.

In 2023, the Authority reviewed the documentation related to the commissioning and use of a new mobile evaporation plant needed for the treatment of wastewater from the decommissioning of NPP V-1.

The Authority also reviewed changes to the operating procedures of the L&Cs for the safe decommissioning of the V1 NPP, the Stage 2 decommissioning plan, the plan for the management and transport of RAW from Stage 2 decommissioning, and the plan for the management of other waste and hazardous waste. The reason for the changes in these documents is the change of the end date of NPP V-1 decommissioning from the originally planned December 2025 to the end of 2027 due to the completion of the demolition activities and the subsequent exemption from administrative control after 2027.

The final status of the site at the end of Stage 2 will be to release the site for limited use. Upon final inspection, the site will be exempted from the Atomic Act.

The planned inspections were aimed at checking compliance of decommissioning with the status described in the Stage 2 decommissioning plan, at checking compliance with nuclear safety conditions and supervision requirements during dismantling and fragmentation activities in the RCA and during decommissioning materials management activities.

The decommissioning of NPP V-1 was carried out in 2023 according to the plan of the Stage 2 of decommissioning. No operational events with a particular impact on nuclear safety were recorded by the ÚJD SR.

2.3.1.5 Other Nuclear Installations

a) Interim Spent Fuel Storage facility Bohunice (MSVP)

The SNF from NPP Bohunice V-1 (production of SNF has been stopped), NPP Bohunice V-2 and NPP Mochovce 1, 2 is temporarily stored in the MSVP in Bohunice. The fuel is stored in pools filled with demineralised water. As of 31 December 2023, the MSVP was filled to approximately 95% of its total capacity. In 2021, the construction of the dry part of the MSVP was started, which will be able to store 10,115 assemblies in dry form. These assemblies will be stored in special packaging units cooled by natural air circulation. As of July 2023, the Authority has been conducting an administrative proceeding regarding a change to the MSVP to the extent of commissioning and operation of the dry part of the MSVP. At the end of 2023, the Authority issued a draft decision. During the year 2023, the inspection activity was focused on the evaluation of the status of in-service inspections of the structural and technological parts and systems of the Bohunice MSVP and the stored SNF. Two inspections of the storage of SNF at the Bohunice MSVP were carried out as part of the inspection activity. The purpose of the inspections was to check compliance with the Limits and Conditions and operating procedures for the operation of the equipment, as well as the readiness of the operating staff in the event of an undesirable event. In no instance were breaches of nuclear safety conditions or operating procedures detected. The operating staff demonstrated a high level of preparedness and knowledge and procedures in the event of abnormal operation.
Based on the results of the inspections, the operation of the TSU RAO in 2023 was assessed as safe.

b) Technology for RAW Treatment and Conditioning (TSÚ RAO)

The TSU RAO includes two bituminisation lines, the Bohunice Radioactive Waste Treatment Centre (BSC RAO), a fragmentation line, a large-capacity decontamination line, a used air filters treatment plant, a waste water treatment plant and RAW storage facilities. The BSC RAO serves as a central facility for the final conditioning of the RAW prior to its disposal at the National Radioactive Waste Repository in Mochovce (RÚ RAO).

In addition to cementation, incineration, fragmentation, high-pressure compacting and concentration enhancement by evaporation are also used to treat and condition RAW. The resulting products of the RAW treatment and conditioning are placed in a fibre concrete container (FCC) to meet the conditions for storage in the RU RAO.

In 2023, the permanent operation of the PS45 incinerator facilities and the metallic RAW remelting facility from the decommissioning of NPP A-1 and NPP V-1 continued.

The system for pool water storage and pumping of contaminated water from the MSVP was put into permanent operation.

The inspectors continuously checked the current state of the above-mentioned facilities and verified compliance with the legal regulations so that the activities carried out were aimed at ensuring their continued safe operation.

Based on the results of the inspections, the operation of the TSU RAO in 2023 was assessed as safe.

c) National RAW Repository Mochovce (RÚ RAO)

The RÚ RAO is designed for the disposal of low-level (LRW) and very low-level radioactive waste (VLRW) from the operation and decommissioning of NIs. The LRW and VLRW disposal activities were carried out in a standard way. In 2023, 392 pcs of FCCs with LRW and 3,224.33 m3 of VLRW were disposed. At the end of 2022, the Authority issued a combined decision - Building Permit for the construction of the 4th double row, as well as authorisation for the implementation of changes to the documentation reviewed or approved by the Authority, which was affected by the construction of this 4th double row. The construction of the 4th double row continued throughout 2023.

The inspection work focused on the ongoing RAW disposal activities and on the follow-up of the implementation of corrective actions and safety improvements resulting from the periodic nuclear safety assessment (PHJB) carried out in the previous period.

Based on the inspection activities in 2023, it is possible to assess the current operation of the RÚ RAO as safe, with negligible impact on the environment.

d) Final Treatment of Liquid RAW Mochovce (FS KRAO)

The purpose of the FS KRAO facility is the final treatment and conditioning of liquid

RAW (radioactive concentrates, saturated sorbents and sludge) produced in EMO1, 2, certain types of solid RAW from the operation of the units of this power plant, and conditioning of treated solid RAW from other NIs. The capacity of the process lines far exceeds the production of RAW from the Mochovce nuclear units. The FS KRAO includes technologies for treatment of radioactive concentrates by bituminisation in a film rotor evaporator and thickening in a concentration evaporator. The discontinuous bituminisation line (DBL) is used for fixation of radioactive sorbents. On the cementation line, the RAW treated in this way is subsequently loaded into the FCCs, which are then disposed in the RU RAO.

The operation of FS KRAO in 2023 consisted mainly of RAW conditioning by cementation into FCCs.

Inspections at the FS KRAO were aimed at checking compliance with the nuclear safety conditions for RAW management, checking the completeness of the data provided in the cover sheets and compliance with the L&Cs for safe operation of the FS KRAO and the operating procedures specified by the Authority for the storage of RAW.

Based on the results of inspection, in 2023 the operation of FS KRAO was evaluated as safe.

e) Integral RAW Storage Facility (IS RAO)

The facility is designed for long-term storage of RAW from NPP decommissioning. In addition, it is used for the temporary storage of intermediate RAW until the decrease in radioactivity over time allows its release into the environment. By Decision No 423/2017, the ÚJD SR issued an authorisation for the operation of the IS RAO. In 2020, the Authority issued Decision No 330/2020 authorising a change in the use of the IS RAO. This change consisted in changing the originally approved activity inventory of 8.41x1014 Bq to a design inventory of 1x1018 Bq. During 2023, the facility gradually received RAW from the decommissioning of NPP V-1 and NPP A- 1 in a total activity of 1.78x1016 Bq.

Inspections during 2023 focused on the checking of the method of RAW acceptance for storage, the checking of the RAW status records in the RAO IS. The Authority also focused on the checking of the compliance with the requirements for the safe operation of the facilities in accordance with the operational documentation.

Based on the results of inspections, the operation of IS RAO in 2023 was evaluated as safe.

f) RAW Shipments

By continuous type approval of transport equipment, issuing shipping permits and approving international shipments in accordance with Council Directive 2006/117/ on the supervision and control of shipments of RAW and spent fuel, the ÚJD SR created the conditions for maintaining a functioning and safe system to ensure the necessary shipments of RAW between technologies and NIs, as well as imports of RAW for the purpose of its treatment at the TSU RAO treatment plants and return transports of treatment products to the countries of origin of the RAW.

Specifically in 2023, based on the applications and upon reviewing the documentation submitted by JAVYS, a.s, ÚJD SR issued authorisation for road transport of RAM in transport equipment PK/SK 2, an authorisation for road and rail transport of RAM in transport equipment of 200 dm^3 MEVA drum 0488 for industrial consignment type 2 (PZ-2) conditions, an authorisation for road transport in a transport equipment of fibre-concrete container FRC AS IP 2 for industrial consignment type A conditions, a permit for road transport of RAM in shipping container PK90 for industrial consignment type B (U) conditions.

At the same time, the PKII/KALY transport equipment was type-approved for shipments of RAM for industrial consignment type B (U) conditions and shipping container ISO 20' 1CC (22U1) for industrial consignment type 2 (PZ-2).

In the field of international shipments, the Authority, applying Section A-4a of the Standard document, approved an international shipment – return shipment of RAW treatment products to Italy.
In 2023, based on application and upon reviewing submitted documentation, issued an authorization to JAVYS, a. s. for the import of Czech RAW for its treatment by high-pressure compacting at TSÚ RAO and issued an authorisation for road transport to DMS, s. r. o.
Inspections in the field of RAW shipments and imports of RAW were focused on checking the validity of authorisations, correctness of the accompanying documentation, the records on RAW shipments and the manner in which limit values for selected safety parameters of shipment were fulfilled.

Based on the results of the Authority´s inspections, in 2023 the RAW shipments area was assessed as safe. The RAW shipments were carried out in accordance with the plans of shipments and in accordance with the ÚJD SR Decree No. 57/2006. All RAW shipments were notified in advance and subsequently evaluated.

2.3.2 Nuclear Materials

2.3.2.1 Accounting for and Control of Nuclear Materials

The state body responsible for the performance of supervisory activities in the field of peaceful uses of nuclear energy in the Slovak Republic is the ÚJD SR. The NM may be used only for peaceful purposes and in accordance with the licence for activities issued by the UJD SR only to those applicants who demonstrate their ability to handle NM in accordance with the applicable legislation and the international obligations of the Slovak Republic.

The international instruments that oblige the Slovak Republic to accept NM safeguards are the Treaty on the Non-Proliferation of Nuclear Weapons and the resulting Agreement on the Implementation of Article III (1), (4), of the Treaty on the Non-Proliferation of Nuclear Weapons and its Additional Protocol. At the same time, the acceptance of the NM safeguards is the first essential step to enable the peaceful uses of nuclear energy. An important instrument in the field of NM safeguards is the State system for the registration and control of NM, which is maintained by the UJD SR in accordance with the Atomic Act.

In addition to the requirements of the NM Safeguards Implementation Agreement and its Additional Protocol, the Slovak Republic is also bound by the requirements of EU legislation stemming from the European Atomic Energy Community (Euratom) Treaty and related legislation, such as Commission Regulation (Euratom) No 302/2005 on the application of Euratom safeguards. Also, United Nations Security Council Resolution (UNSCR) 1540/2004 commits UN Member States to take transparent measures to enhance non-proliferation control in the field of nuclear energy use. The aim of these measures is to prevent illicit trafficking in NM and other nuclear items.

The purpose of the State system of registration and control of NM in the Slovak Republic is to keep records of all NMs declared in the territory of the SR, to confirm the consistency between the declared data and the actual data, to detect the loss of NM, to provide information that could lead to the recovery of missing NM, to prevent the unauthorized use of NM, to cooperate in the detection of unauthorized use of NM and to provide up-to-date information on the number and location of NM in the SR.

The accuracy of the data held in the State System for the registration of NMs shall be verified by inspections.
An effective system of NM registration and control is the basis for independent verification of NM on the territory of the SR by the inspectors of the UJD SR, IAEA and Euratom. This verification confirms that the NMs are used as declared and at the same time that they have not been diverted for non-peaceful purposes.
Since 1 September 2009, inspection activities in the area of NM registration and control have been conducted under the Integrated Safeguards regime, which is an optimal and effective combination of all safeguards implemented in accordance with the legal framework.

In 2020, the State Level Approach (SLA) for the Slovak Republic was approved. The SLA concept is the next level of the IAEA's approach, in which the IAEA considers and evaluates a wide range of information about a state's nuclear capabilities and tailors the results of that evaluation to the safeguards procedures applied in that state. Implementation of this approach will allow the IAEA to better allocate resources and focus its efforts on States with any suspicions related to NM safeguards.

Within the framework of inspections in the field of NM registration and control, in 2023, there were 47 ÚJD SR inspections. Of these, 17 inspections were conducted at the Bohunice site and 8 at the Mochovce site in the presence of international inspectors. 8 inspections together with international inspectors were conducted at the licence holders for the management of NMs outside the NI. The remaining inspections were carried out as separate inspections by the ÚJD SR.

The activities of the ÚJD SR also include the control and processing of the registration reports sent to the ÚJD SR by the holders of authorisations. These are entered into the State NM Registration System, and checked for the accuracy of the data. For a given material balance area, each month the ÚJD SR sends registration reports to Euratom.
In 2023, within the project for the completion of the storage capacity of SNF, the UJD SR actively participated in the process of future implementation of NM safeguards.

Furthermore, within the scope of its competences, the ÚJD SR is also responsible for the timely reporting to Euratom and the IAEA of the reports prepared based on the requirements of Article 2 of the Additional Protocol to the Trilateral Safeguards Agreement. In 2023, ÚJD SR sent 10 such reports. These reports are further confirmation of the fact that only activities related to the peaceful uses of nuclear energy are carried out throughout

the territory of the SR and that nuclear non-proliferation commitments are respected. Pursuant to §5(2)(n) of Act No. 541/2004 Coll. on the peaceful uses of nuclear energy and on amendments to certain acts, as amended, the ÚJD SR issues authorisations for the management of NM outside the NIs. In 2023, 11 such authorisations were issued.

Based on the results of the inspections and checks of the registration and operational records of the licence holders, it can be clearly stated that in 2023 nuclear materials in the SR were used only for peaceful purposes, the Slovak Republic is fully complying with its international obligations in the field of safeguards for nuclear materials, and the data in the State System for the registration and control of nuclear materials are fully consistent with the Euratom and IAEA data.

2.3.2.2 Shipments of Nuclear Materials

Supervisory activities to ensure nuclear safety during NM transports were carried out in accordance with the Atomic Act, Decree No. 57/2006, as amended by Decree No. 105/2016, and in accordance with international standards and recommendations. During the period under re-view, shipments of fresh nuclear fuel (FNF) from the Russian Federation to the Bohunice NPP and the Mochovce NPP took place. The FNF was transported by rail and combined (air and road) transport via the transhipment airport. In 2023, the transport of SNF from the EBO V-2 units, as well as the transport of SNF from EMO1, 2 to MSVP were also carried out. In addition to the licence holders and the Authority, other institutions were also involved in the transport, e.g. the Slovak Police Force, the Civil Protection Office of the Ministry of the Interior of the SR, the Fire and Rescue Corps, the Slovak Railways and others. Nuclear safety and physical protection were ensured during transport in accordance with the applicable legislation.

In 2023, the Authority´s inspectors conducted 17 inspections of FNF and SNF shipments. Inspectors did not find any serious deficiencies during these inspections.

2.3.2.3 Illicit Nuclear Materials and Radioactive Materials Trafficking

The fight against illicit trafficking in NM is international in nature and the various State authorities coordinate their activities aimed at preventing and detecting illicit trafficking in NM not only with each other but also in cooperation with international organisations. The illicit trafficking of NM is an international crime and international cooperation allows for its early and successful detection.

Cooperation with the U.S. within the framework of the Joint Action Plan of the Government of the Slovak Republic and the U.S. Government to Combat Illicit Management of NM, RAM and Related Technologies continues. Within the framework of this cooperation, the experts of the ÚJD SR participate in conferences, working meetings, courses and joint exercises are organised. An important part of the cooperation is the exchange of information. The Authority ensures the exchange of information at international level in the Incident and Trafficking Database operated by the IAEA. At present, 145 States from all over the world, including the Slovak Republic, contribute to this database. Timely exchange of information contributes to increasing the effectiveness of the combating of illicit trafficking in NMs.

2.3.2.4 Inspection of Storage of Fresh Nuclear Fuel and Spent Fuel

In 2023, scheduled inspections were carried out to check the storage of FNF and SNF at power plants. The FNF is stored in the fresh fuel storage facility in the main generating unit of the plant and SNF is stored in the SNF pool next to the reactor. This fuel is stored there until it can be shipped to the MSVP at Jaslovské Bohunice site, usually between 3 to 7 years.

A total of 6 inspections were carried out at the Bohunice V-2 NPP, Mochovce 1, 2 NPP and Mochovce 3, 4 NPP sites and no serious deficiencies were found and the operation of the FNF storage and SNF pools was assessed as safe in accordance with the requirements of the Atomic Act, Limits & Conditions and applicable regulations. There is no SNF yet in the storage pool at MO 3&4.

2.3.3 Security of Nuclear Installations and Nuclear Materials

Physical protection consists of a set of technical, regime or organisational measures necessary to prevent and secure unauthorised activities with the NI, NM, special materials and equipment, in the handling of RAW, SNF, in the transport of RAM, as well as unauthorised intrusion into the NI and the execution of sabotage.

Obligations of the Slovak Republic in the field of physical protection of NM result from accession to the Convention on the Physical Protection of Nuclear Material – INFCIRC 274/rev.1, which was signed by the Government of the Czechoslovak Socialist Republic on 8 February 1987.

On 8 July 2005, the Amendment to the Convention on the Physical Protection of Nuclear Material was adopted in Vienna. The National Assembly of the Slovak Republic gave its consent to the Amendment by Resolution No 522 of 19 September 2007. The President of the Slovak Republic ratified the Amendment on 19 October 2007. The instrument of ratification was deposited with the Depositary, the IAEA Director General, on 7 July 2013. The Amendment to the Convention entered into force on 8 May 2016.

According to the Amendment to the Convention on the Physical Protection of Nuclear Material, one of the fundamental principles is Principle G: „Threat". This principle states that „Physical protection by the State should be based on the State's current threat assessment". Resolution No. 229/2009 of the Slovak Government approved the „Proposal for the determination of the threat by nuclear installations and for nuclear installations and nuclear materials within the framework of the projected threat to the State". This document is the initial basis for the determination of the design-basis threat for the NI. Based on the resolution, a permanent inter-ministerial WG was established by the Chairperson of the Authority to update the determination of the threat by nuclear installations and for nuclear installations and nuclear materials within the framework of the projected threat to the State, which was actively working also in 2023. On 12 April 2023, the Security Council of the SR adopted Resolution No. 819, which took note of the update of the „Determination of the threat by nuclear installations and for nuclear installations and nuclear materials within the framework of the design-basis threat to the State". In addition to updating the document in question, the group dealt with reviewing the threat in relation to ensuring physical protection, cyber security, operational handling of scenarios arising from events either in the Slovak Republic or abroad that have an impact on the physical protection of the NM and the NIs.

The requirements for the physical protection of NM and NI for the SR are defined in the Atomic Act, in the UJD Decree No. 51/2006, laying down the details of the requirements for the physical protection and the requirements for the physical protection during the RAM shipments, in the UJD Decree No. 57/2006, which establishes the details of the requirements during the RAM shipments, as amended by the UJD Decree No.105/2016. Supervisory activities in this area were focused by the ÚJD SR on the control of the operation of

technical systems of physical protection, regime protection at EBO, EMO, JAVYS and MO3&4, as well as on the control of the physical protection during the FNF and SNF shipments. Physical protection at the EBO was provided in accordance with the approved EBO Physical Protection Plan and its Authority-approved amendments.

Physical protection at JAVYS, a. s. was provided in accordance with the approved physical protection plans for NIs at the JAVYS, a. s., Jaslovské Bohunice sites. Physical protection at the RU RAO site was also provided in 2023 in accordance with the approved „Physical Protection Plan of JAVYS, a. s. for the Mochovce RU RAO", Issue No. 3 and its amendment. In 2023, the Authority reviewed and approved a number of changes to the physical protection plans of JAVYS, a. s. at the Jaslovské Bohunice site in connection with the completion of the SNF storage capacities - part of the physical protection. Inspections in 2023 were mainly aimed, among other things, at verifying the readiness of the technical, regime and organisational measures to ensure the physical protection of the completion of the MSVP storage capacities.

The provision of physical protection at the EMO and MO3&4 site was in accordance with the approved EMO and MO3&4 physical protection plans and their Authority-approved amendments to date. At the same time, the Authority reviewed and approved the MO3&4 Physical Protection Plan, Issue 2, Revision 0', which was submitted in connection with the application by SE, a. s. for an operating license for Unit 3 of the Mochovce NPP.

Furthermore, the Authority reviewed and approved the physical protection plans for RAM transports - transport of FNF on the territory of the Slovak Republic and for the transport of SNF from the EMO to the MSVP, which took place in June 2023. Physical protection exercises were carried out at the sites with the participation of representatives of the Authority to verify the effectiveness of the physical protection system. The exercises focused on the response and coordination of the activities of all physical protection components to the scenario. The readiness of the training staff of the licence holder, the operators of the physical protection control centres, the physical protection components - private security services and the SR Police to respond to the simulated situation, as well as the verification of the system of connection and communication between the individual physical protection components was tested.

In the course of 2023, the UJD SR carried out inspections focused on the physical protection of NIs and NMs and on the physical protection during FNF and SNF shipments. Inspection activities were, in accordance with the inspection procedure of the UJD SR, focused on the regime pro-

tection, the manner of carrying out inspections of entries and vehicle entrances, the comparison of the state of the technical means of the physical protection system with the applicable legislation and with the state agreed in the documentation for each NIs. In 2023, ÚJD SR conducted 15 inspections focusing on the physical protection of NIs and NMs and also inspections focusing on ensuring security during RAM shipments. In 2023, ÚJD SR had also 4 inspections focusing on the nuclear security culture. The concept of nuclear security culture is one of the fundamental principles contained in the Amendment to the Convention on the Physical Protection of Nuclear Material stating that: All organizations involved in implementing physical protection should give due priority to the security culture, to its development and maintenance necessary to ensure its effective implementation in the entire organization.

Taking into account the obligations of the Slovak Republic arising from the Convention on the Physical Protection of Nuclear Material and its Amendment, and given the fact that cybersecurity of nuclear facilities is a part of nuclear security, cybersecurity inspections of licence holders are also performed by the Authority. In 2023, there were 2 cybersecurity inspections at licence holders. In the field of cyber security, the IAEA issues publications (in accordance of Nuclear Material and its Amendment), which are used by the UJD SR as reference documentation in the performance of its oversight activities. These publications contain best practices and requirements in the implementation and maintenance of the physical protection system of the NM and cyber security of the computer systems of the NIs.

2.3.4. Special Building Authority

The ÚJD SR exercises the competence of a building authority under Act No. 50/1976 Coll. on spatial planning and building regulations (Building Act) for constructions of NIs and constructions related to the NIs located in the area delineated by the boundaries of the NI. This means permitting constructions, alterations to constructions, maintenance works, issuing decisions on the use of structure and removal of structures.

In 2023, the most important activities within the competence of the Building Authority were the issuance of building permits and final approval permits related to the enhancement of nuclear safety of operating NPP units, modification of RAW treatment technologies, decommissioning of nuclear power plants A-1 and V-1, as well as increasing the storage capacity for RAW and SNF for JAVYS, a. s.

2.3.5 Emergency Planning and Preparedness

The Atomic Act defines emergency preparedness as the ability of the licensee and public authorities to activate and implement activities and measures that lead to the detection and effective management of incidents or accidents at the NIs or in the transport of RAM and to the effective suppression of their potential to endanger the life, health of workers or the public, their property or the environment. This capability is to be documented in emergency plans.

Thus, in addition to the operating procedures, licence holders also have emergency plans in place, the backbone of which is the on-site emergency plan, approved by the Authority, which is required by legislation for the operating NIs and NIs in decommissioning. Other emergency plans reviewed by the Authority are emergency traffic schedules and public protection plans. The preparation of an emergency traffic schedule is a prerequisite for obtaining an authorisation to transport RAM. The public protection plans address the implementation of measures to protect the life and health of the population following a radiation incident or accident and are issued by the district authorities of the regions whose territory is located in the area of threat by an NI. As for other areas, the Authority has developed an inspections plan for inspecting the NIs and RAM transport licence holders, as well as for the area of emergency preparedness. In 2023, inspections in this area focused on the inspection of equipment and resources for emergency preparedness, the inspection of the emergency response organisation of the licence holders JAVYS a.s. and SE a.s. in site emergency drills, as well as the inspection of monitoring equipment.

In order to provide for the receipt and transmission of notifications, announcements and other information in the event of a nuclear accident or radiation emergency (such as an incident or accident at a NI, during transport of radioactive materials, seizures of RAM, loss, recovery or theft of sources of ionising radiation) in the Slovak Republic or in the event of similar events abroad, the Authority has established a Point of Contact. As the UJD SR, within the framework of the Point of Contact's activities, cooperates closely with selected state administration authorities, to ensure a uniform approach, the Authority uses a common guideline for state administration authorities, which regulates the procedure of mutual information in case of occurrence or detection of an event related to sources of ionizing radiation, the obligations to inform the population and the international community about

significant events related to the use of sources of ionizing radiation, as well as the criteria for informing the Point of Contact. In 2023, the UJD SR Point of Contact was fully used to inform designated state administration bodies about events related to the NPP in Ukraine. In the event of an incident at a NI on the territory of the SR or an event abroad with a transboundary impact, the Authority is also the competent authority for requesting assistance through the IAEA and its RANET system.

Authority staff are assigned to the Emergency Staff (ES) to work in the Emergency Response Centre (ERC). This Centre has been set up for the independent assessment of incidents that may arise during the operation of the NIs or during the transport of RAM. The ERC is the Authority's technical support facility for dealing with incidents at the NIs and an advisory body to the Chairperson of the Authority, who is a member of the Security Council and the Central Crisis Staff. The activity of the ERC consists in the assessment of the course and consequences of incidents and accidents in the NI, serious in terms of their potential impact on the surrounding area, preparation of proposals and recommendations for measures to protect the population at an early stage of an incident in the NI. Based on the information received, the expert groups of the ES are able to analyse the status of the NI and prepare a forecast of the evolution of the event using the ERC software tools. These activities are described in the emergency regulations issued by the UJD SR and regularly practiced during shift-, site-, or interoperability exercises of licence holders, as well as during exercises with neighbouring countries and international organisations. In 2023, ERC was also involved in a number of domestic and international exercises, with the ES practicing its activities in site- exercises at both Bohunice and Mochovce NIs, shift exercises and exercises of RAM transport licence holders.

International exercises are primarily aimed at testing and assessing the ability of individual Member States to respond promptly to radiation incidents with transboundary effects. The Department of Emergency Planning and ERC are actively involved in the exercises organised e.g. by the IAEA (ConvEx exercises - aimed at responding to incidents that may occur in the NIs of the Member States) and by the EC (ECUREX exercises) to test the use of the early information exchange system between the EU Member States. . In addition to the exercises, communication on transboundary emergency preparedness issues takes place mainly on a multilateral basis - at the IAEA and also in the

Radiological Emergency Group of the HERCA-WENRA Regulators´ Association, of which the Authority's nominated staff members are also members. In the field of emergency preparedness, the UJD SR traditionally maintains close relations with partner organisations in neighbouring countries: Hungary, the Czech Republic, Poland and Austria.

2.4 International Cooperation

2.4.1 Cooperation with the EU and the European Atomic Energy Community

In the context of Slovakia's membership in the EU and in the European Atomic Energy Community (Euratom), in 2023, the UJD SR performed the tasks and fulfilled the obligations arising from this membership. Representatives of the UJD SR actively participated in the discussions in the working groups of the Council of the EU, as well as in the meetings of the EC working committees and groups, where they defended the interests of the Slovak Republic as experts in the areas of competence of the UJD SR, in particular the obligations and activities arising from the Treaty establishing the European Atomic Energy Community (Euratom Treaty).

One of the most important working groups of the EU Council in terms of nuclear safety is the Working Party on Atomic Questions (WPAQ). In the first half of 2023, the EU Council was chaired by Sweden (SE PRES) and in the second half of the year by Spain (ES PRES). Experts of the UJD SR participated in the meetings of the WPAQ as required, while the position of the SR was prepared for each meeting in close cooperation with the Ministry of Economy of the SR and the Permanent Representation of the SR to the EU in Brussels. The current security situation in Ukraine (UA) resonated during both the SE PRES and EC PRES meetings, in particular the report on the activities of the EC and the IAEA in relation to UA and the impact of Russia's (RU) military aggression on the UA nuclear facilities. Furthermore, the WPAQ meetings included the preparation of the Joint 8th and 9th Review Meetings of the Convention on Nuclear Safety, information from the European Supply Agency, the Joint Research Centre and the EC briefed the Member States on other topical issues (e.g. security of supply, implementation of the INSC instrument, medical radioisotopes, small modular reactors). SR reported on the results of the ARTEMIS mission and on the process of

commissioning and start-up of Unit 3 of the Mochovce NPP.

The European Nuclear Safety Regulators Group (ENSREG) has had several emergency meetings in the past period in cooperation with the Ukrainian nuclear regulator (SNRIU) in order to assess the risks arising from the military actions of the RU at and near the NPP sites in the UA. Currently, ENSREG activities are focused on the preparation of the work programme for the period 2024-2026, monitoring the implementation of the Action Plans adopted after the Fukushima events and from the 1st Topical Peer Review on the NPP ageing. At the same time, the 2nd Topical Peer Review is under preparation, for which a National Assessment Report on fire protection of the NI in the Slovak Republic has been prepared. The seventh ENSREG Conference on Nuclear Safety in Europe is planned to take place in Brussels in 2024 under the auspices of ENSREG and in cooperation with the EC. After four years of active work, Marta Žiaková, the Chairperson of the ÚJD SR, has ended her chairing of the ENSREG Plenary. At the same time, the Director General of the Regulatory Activities and International Relations of the ÚJD SR, ended his chairing of the WG1 ENSREG on nuclear safety. Under the auspices of ENSREG, a number of meetings of the Working Group on the commissioning of the Turkish Akkuyu NPP have taken place. The ÚJD SR is also represented in the working group. A visit to this NPP is currently planned, together with stress tests. In accordance with the requirements of the Council Directive 2011/70/Euratom, the ARTEMIS mission was undertaken from 12 to 22 February 2023 at the request of the Slovak Government. The aim of the ARTEMIS mission was an international assessment of the national policy and the national programme for the management of spent fuel and RAW, decommissioning of NIs and remediation. The mission was carried out as a follow-up to the Integrated Regulatory Review Service (IRRS) mission, which assessed the regulatory framework for nuclear and radiation safety in Slovakia in September 2022. The results of the mission are summarised in the Final Report, which commends the high standard of the infrastructure for the RAW management from the decommissioning of the NIs, while formulating a number of recommendations and suggestions for further improvements for the SR and the different organisations involved, in particular in the area of preparation of a deep geological repository for high-activity RAO.

In February 2023, the EC published the fourth EC Report to the European Parliament and the Council on the imple-

implementation by Member States of Council Directive 2006/117/Euratom on the supervision and control of shipments of radioactive waste and spent fuel, which the EC prepared based on the National Reports of the Member States, including Slovakia. The Report covers shipments for the period 2018-2020. In December 2023, SR sent the EC the fifth National Report of SR under Council Directive 2006/117/Euratom, covering shipments for the period 2021-2023.

In the course of 2023, the inter-ministerial coordination group for the coordination of tasks arising from the articles of the Euratom Treaty, which was established at the ÚJD SR based on the Government Resolution No. 442/2006, continued its activities. Two meetings were held during the year, in June and November 2023, discussing topical issues such as the outcome of the ARTEMIS mission, the preparation and outcome of the ENEF meeting, the establishment of the Nuclear Alliance, Horizon Europe activities, small modular reactors (PHOENIX project), as well as adopting recommendations for the implementation of the Euratom Treaty. In the coming year, the group will continue its activities and address topical issues.

2.4.2 Cooperation of European Nuclear Regulators (WENRA)

WENRA is an independent association of European national nuclear regulators dedicated to the development, implementation and dissemination of harmonised reference levels of nuclear safety. WENRA's mission is to work together with regulators to continuously improve and harmonise the safety of nuclear NIs in the EU, Switzerland and other WENRA member states. Currently, the Association has 18 full members, including the ÚJD SR. In addition to the full members, the regulators of other countries also participate in the WENRA activities (with the status of associate member or observer). The UJD SR is active in two working groups - the WG on Harmonisation of Requirements for the Safety of Nuclear Reactors and the WG on Harmonisation of Requirements for the Safety of RAW Management and Decommissioning of NIs.

2.4.3 Cooperation with the International Atomic Energy Agency (IAEA)

The IAEA, based in Vienna, plays the most important role in the field of international cooperation due to its political, technical and international importance and the wide range of possibilities within the framework of technical cooperation and assistance programmes in the field of peaceful uses of nuclear energy; use of nuclear applications for energy and non-energy purposes; building and strengthening of national expert capacities; exchange of know-how and access to technology in Slovakia. Slovakia's cooperation with the IAEA in this portfolio was cross-sectoral, particularly in the field of energy, nuclear safety and radiation protection, environment, health, science and research. In 2023, the Third Extraordinary Session of the IAEA General Conference (GC); the 67th IAEA GC (25-29 September 2023); meetings of the IAEA Board of Governors (March, June, September, November); a meeting of the Programme and Budget Committee (May); and a meeting of the Technical Assistance and Cooperation Committee (November) were held. The Slovak experts were actively involved in the work of the IAEA Expert Groups and Committees.

In terms of the transfer of scientific expertise, know-how and nuclear technologies to the national level, the cooperation of the SR with the IAEA was ensured, inter alia, through 2 national, more than 30 regional and 2 interregional projects under the IAEA's Technical Cooperation Programme (TCP). Following the preparatory phase of the IAEA TCP cycle for the period 2024-2025, in November 2023 the IAEA Board of Governors approved 3 national projects 2 regional projects proposed by the Slovak Republic.

The ÚJD SR also participates in the work of the Commission for Safety Standards (CSS), whose main task is the process of preparation and review of new or amended safety standards. For the year 2023, the regular membership contribution of the Slovak Republic to the IAEA in the amount of EUR 531,274 and USD 85,843, the contribution to the IAEA Technical Cooperation Fund in the amount of EUR 139,592 and the national participation contribution in the amount of EUR 3,340 have been paid.

At the beginning of 2023, the Slovak Republic prepared and hosted the IAEA ARTEMIS Peer Review Mission. From 12 to 22 February 2023, the ARTEMIS mission assessed the national policy and national programme for the management of SNF

and RAW, decommissioning and remediation. The mission was sponsored by the National Nuclear Fund in cooperation with the UJD SR and other ministries and state organisations. A team of international experts assessed the situation in the Slovak Republic and submitted a final report to the Slovak Republic containing also the identified good practices, as well as recommendations and suggestions for improvement, which will be taken into account in the Action Plan and in the update of the National Programme for the Management of SNF and RAW in the Slovak Republic. In November 2023, the Slovak Republic hosted another IAEA review mission, OSART, which assessed the operational safety of NPP V2 in Jaslovské Bohunice. In the course of 2023, in cooperation with other state organisations, the UJD SR participated in the preparation and implementation of action plans for the follow-up to the IRRS mission from October 2022 and ARTEMIS mission.

2.4.4 Cooperation with the Comprehensive Test-Ban Treaty Organisation (CTBTO)

On 3 March 1998 the Slovak Government ratified the Comprehensive Nuclear-Test-Ban Treaty (CTBT) and by Resolution No. 514/1997 instructed the ÚJD SR to provide for the function of the National Contact Point for the Preparatory Commission of the Comprehensive Nuclear-Test-Ban Treaty Organisation (CTBTO). Despite strong international support, the Treaty has not entered into force to date. The CTBT is now considered one of the cornerstones of global nuclear disarmament.

The UJD SR actively participates in the process of preparation for the entry into force of the CTBT, primarily through the participation of its representatives in the meetings of the CTBTO Preparatory Commission and its Working Groups, by hosting CTBTO training courses in Slovakia in the area of On-Site Inspections and by supporting the training of experts and surrogate CTBT inspectors.

Within the framework of the expert-technical and international importance of the Slovak membership in the CTBTO, the promotion of the interests of the Slovak Republic at the CTBTO in 2023 was ensured through the participation in the meetings of the Preparatory Commission of the CTBTO on the following dates: 12 - 14 June 2023 and 13-15 November 2023; meetings of Working Group A on 24-25 May 2023 and 16-18 October 2023; and meetings of Working Group B on 13-24 March 2023 and 21 August-1 September 2023.

On 24 - 30 April 2023, the 25th Regional Introductory Course for Surrogate CTBTO Inspectors - RIC-25 was held, organized by the Provisional Secretariat of the Preparatory Commission of the CTBTO in cooperation with the UJD SR, as the competent sponsor for cooperation with the CTBTO, in the premises of the special purpose facility of the Chancellery of the National Council of the SR, Častá-Papiernička, and in the adjacent forested areas. The objective of the RIC-25 exercise was to familiarize experts nominated by the States Signatories to the CTBT with the process and techniques required to conduct On-Site Inspections (OSI), to expand the pool of experts from the region of Eastern Europe, and to identify potential candidates for surrogate CTBTO inspectors. The ÚJD SR provided the organisational preparation and hosting of the RIC-25 exercise, including the necessary administrative, technical, logistical and material tasks related to its conduct (in accordance with the Implementation Protocol concluded in the form of an Exchange of Letters pursuant to Article 6 of the Agreement between the Government of the Slovak Republic and the Preparatory Commission of the CTBTO on Mutual Cooperation in Training and Implementation of the Commission's On-Site Inspections).

The Science and Technology Conference 2023 (SnT), organised under the auspices of the CTBTO, took place in Vienna from 19 to 23 June 2023. One of the main themes of the Conference was on-site inspections, an area in which the SR is also involved.

The ÚJD SR has long been supporting the training of experts and surrogate CTBTO inspectors and actively cooperates with the Faculty of Mathematics, Physics and Informatics of Comenius University in Bratislava and the Slovak Academy of Sciences.

The regular membership contribution of the SR to CTBTO for 2023 amounting USD 118,416 and EUR 85,446 was paid.

2.4.5 Cooperation with the Nuclear Energy Agency at the Organisation for Economic Co-operation and Development (OECD/NEA)

Based on the Slovak Government Resolution No. 245/2001, the ÚJD SR, as the coordinator, coordinates the cooperation between the Slovak Republic and OECD/NEA, and ensures the fulfilment of the obligations of the Slovak Republic arising from this membership. At the same time, the UJD SR is actively involved in the activities of the OECD/NEA, which is managed by the Steering Committee (SC) for Nuclear Energy.

Since 2016, the Chairperson of the UJD SR has been the chair of the SC. Comprehensive information on the evaluation of Slovakia's cooperation with the OECD/NEA for the 4Q of 2022 and the 1Q of 2023 was sent to the MZVEZ on 28 March 2023 and for the 2Q and 3Q of 2023 on 2 October 2023. In 2023, representatives of the ÚJD SR participated in the 145th and 146th OECD/NEA SC Sessions, in the OECD/NEA SC Bureau meetings, as well as in the OECD/NEA SC virtual budget meetings and the EU coordination meetings on the OECD/NEA SC 145th and 146th Session agenda.

During 2023, the representatives of the ÚJD SR also participated in the meetings of the Standing Technical Committees and OECD/NEA Working and Expert Groups. Active cooperation with the Permanent Mission of the Slovak Republic to the OECD in Paris continued (e.g. nominations of SR representatives to individual OECD/NEA departments, registrations of SR representatives to relevant meetings, organisation of OECD/NEA CoR Bureau dinners, consultations in preparation for relevant meetings).

Membership contributions for 2023 to OECD/NEA of EUR 47,963 and to NEA Data Bank of EUR 12,104.01 were paid in full and on time.

2.4.6 Compliance with Obligations under International Instruments

The Convention on Nuclear Safety

The Convention on Nuclear Safety was ratified by the Slovak Republic on 23 February 1995. In accordance with Article 5 of the Convention, the Slovak Republic has prepared its ninth National Report, which was sent to the IAEA in Vienna in August 2022. The National Report contains basic information on how the Slovak Republic is complying with the Articles of this Convention. The National Report was subsequently discussed at the Joint 8th and 9th Review Meeting, which took place from 20 to 31 March 2023 at the IAEA Headquarters in Vienna. State Party representatives commended the comprehensive and informative nature of the National Report, highly appreciating its compactness, transparency and the wealth of technical information provided (the National Report of 2022 is available on the website of ÚJD SR: www.ujd.gov.sk).

The Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management

The Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management

(Joint Convention) entered into force on 18 June 2001. In accordance with Article 30 of the Joint Convention, in the course of 2023 the Slovak Republic initiated the process of preparation of the eighth National Report of the Slovak Republic, which will be finalized and sent to the IAEA in Vienna and other States Parties for review in the autumn of 2024. This National Report will be discussed at the 8th Review Meeting of the Parties to the Joint Convention, to be held from 17 to 28 March 2025 at the IAEA Headquarters in Vienna.

The Treaty on the Non-Proliferation of Nuclear Weapons

Based on the Agreement between the Kingdom of Belgium, the Kingdom of Denmark, the Federal Republic of Germany, the Republic of Ireland, the Italian Republic, the Grand Duchy of Luxembourg, the Kingdom of the Netherlands, the European Atomic Energy Community for the implementation of Article III(1) and (4) of the Treaty on the Non-Proliferation of Nuclear Weapons and its Additional Protocol, Euratom and IAEA inspectors carried out inspections. There was no violation of Slovakia´s non-proliferation or safeguards obligations.

Following the 10th Review Meeting of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) held in New York from 1-26 August 2022, the preparatory process for the next review cycle was initiated in 2023. In the context of the preparatory process for the 11th NPT RM, the first meeting of the NPT Preparatory Committee was held in Vienna from 31 July to 11 August 2023. The next meeting of the NPT Preparatory Committee will take place in 2024 in Geneva.

2.4.7 Bilateral Cooperation

Bilateral cooperation is implemented at governmental level, in particular with neighbouring countries, and at the level of nuclear and radiation safety regulators. The UJD SR regularly organises meetings with representatives of governmental and other partner organisations of neighbouring countries.

In 2023, annual bilateral and multilateral meetings on issues of common interest in the field of nuclear and radiation safety were held. On 27 and 28 February 2023, a bilateral meeting of the delegations of the Slovak Republic and the Czech Republic on issues of common interest in the field of state supervision over nuclear and radiation safety took place in Smolenice, during which the delegations exchanged information on the institutional status of regulators, developments in legislation, operation and events at the NIs, the status of radiation protection, international cooperation, diversification of nuclear fuel

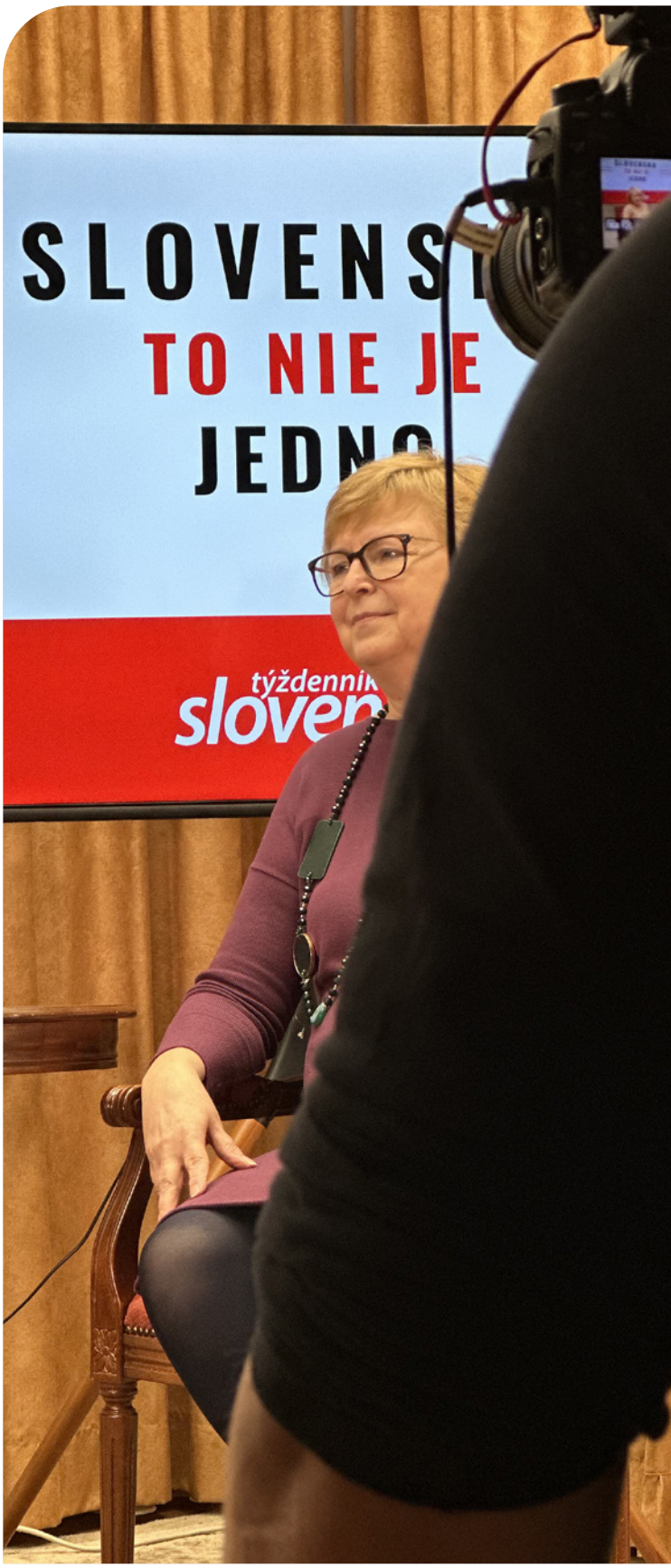
and sanctions in the field of nuclear energy in the recent period. The next bilateral meeting will take place next year in the Czech Republic.

On 14 and 15 June 2023, a quadrilateral meeting of representatives of the nuclear safety supervisory authorities of the Slovak Republic, the Czech Republic, the Republic of Hungary and the Republic of Slovenia was held in Oponice, to which - for the first time - representatives from the Finnish regulatory authority (STUK) were also invited. The meeting agreed to extend its format to include the Finnish Regulatory Authority as a new permanent member. The participants of the meeting informed each other of the latest developments in the activities of the regulators and the most important activities carried out since the previous quadrilateral meeting. They also discussed current issues related to the safety of NIs in their countries, regulatory and legislative frameworks, developments in international affairs (including EU/Euratom), the new ENSREG instrument to support regulators in the face of new challenges, and international projects, in which regulators from the five countries are involved. A quadrilateral meeting in an expanded format was further held on 27 September 2023 during the 67th IAEA GC meeting in Vienna in the framework of a joint luncheon of all five regulators, and the next meeting in this expanded format is planned to take place on 14 and 15 May 2024 in Balatonfüred, Hungary.

On 28 and 29 June 2023, the 30th bilateral meeting of the delegations of the Slovak Republic and the Republic of Austria on issues of common interest related to nuclear safety and radiation protection took place in St. Pölten, Lower Austria. The two delegations briefed each other on the latest developments in the nuclear and radiation safety portfolio, activities of regulatory authorities and other relevant organisations and institutions, operation of NIs, amendments to legislation, international peer reviews and missions, as well as developments in radiation monitoring in both countries. The topics discussed also included emergency preparedness, decommissioning of NIs, RAW management and the new nuclear source in the Slovak Republic. The next bilateral meeting will take place in 2024 in the Slovak Republic. Communication with other partners continued at a high level in 2023. Information was exchanged on the state of nuclear safety in national territories and issues of common interest were consulted and common positions adopted.

On 25 September 2023, during the 67th IAEA GC meeting in Vienna, a Memoran-

dum of Understanding was signed between the UJD SR and the Atomic Energy Regulatory Board of the Republic of India on the exchange of technical information and cooperation in the field of supervision of the safe use of nuclear energy for peaceful purposes.



2.5 Public Relations

Communication and informing the public by all available means and channels is one of the main priorities of the ÚJD SR, which results from its status and competence.

Also in 2023, the Authority's outward communication was carried out in accordance with the methodological guidance contained in the Strategy for the Communication of the UJD SR to the Public until 2023. The document defines the Authority's public communication objective, the strategy and means to achieve the objective, the target groups and the principles of communication with the public. The document is directly reflected in the Action Plan of the ÚJD SR for communication with the public and the media for 2022-2023, containing the tasks, deadlines and responsibilities leading to the achievement of the set objective.

At the end of 2023, the Strategy for Communication with the Public until 2028 and the UJD SR Action Plan for Communication with the Public and the Media for 2024-2025 were updated and approved, containing the methodology and activities in the field of communication of the UJD SR for the following period.

The primary objective of communication with the public is to inform the domestic and foreign public about the developments in the scope of activities of the UJD SR and to build public confidence in the activities of the UJD SR through up-to-date, objective and comprehensible information and two-way open communication. The Authority, as an objective and independent regulator, continuously creates conditions to ensure proactive information to the public and the me-dia through press releases and news published on the Authority's website, as well as through profiles on the social network Facebook and LinkedIn. For the foreign public, the website is also available in English.

The website is the main channel of communication with the public, which is why, among other things, laws and regulations in the field of nuclear safety, related legislation, full texts of the Safety Guides, the ÚJD SR Decisions, as well as the pending administrative proceedings of the Authority are published and continuously updated on the website. The ÚJD SR makes available on its website - and also through the open data portal, data.slovensko.sk - selected open data files, so-called datasets, such as all purchase orders, contracts, invoices and the list of license holders.

The website, which was made available to the public in 2021 in a new format that meets the requirements of the applicable legislation on standards for public administration information systems, provides visitors with efficient and clear access to the required information. During the year 2023, the ÚJD SR continuously worked on improving the accessibility and functionalities of the new website and on supplementing its content in both language versions so that the public could easily obtain comprehensive and up-to-date information on the activities of the regulator. As communication and information is one of the priorities of the Authority, the Authority allows the public and the media to contact it directly via a special e-mail address: info@ujd.gov.sk.

In 2023, the ÚJD SR responded to questions from domestic and foreign media, which were mainly related to the completion and commissioning of

Units 3 and 4 of the Mochovce NPP, and nuclear safety in Ukraine. In addition, the Authority issued press releases throughout the year not only on the above issues. The Chairperson of the ÚJD SR gave interviews on topics closely related to the Authority's activities. In connection with the completion and commissioning of Units 3&4 of the Mochovce NPP, the Authority regularly informed about individual steps not only through administrative proceedings, press releases and answers to media questions, but also by regularly updating the website sub-page dedicated to completion and commissioning.

As the Authority celebrated its 30th anniversary in 2023, a video report was prepared on this topic in cooperation with Levice Television, mapping the entire history of the Authority up to the present day. The public can view this documentary on the Levice Television broadcast, as well as on the website of the ÚJD SR.

An opportunity to commemorate important milestones in history and also to summarize the main challenges for the future was also the Ceremonial Conference on the 30th Anniversary of the ÚJD SR, which took place on 18 May 2023, with the participation of current and former employees and a number of leaders of cooperating ministries, organizations and institutions. The IAEA and OECD/NEA DGs, as well as the Chairpersons of the US, Finnish, Hungarian, Polish, Bulgarian and Slovenian foreign partner regulators, also greeted the conference participants by means of video messages. Traditionally, the President of the Czech regulatory authority greeted the assembly in person. An interesting part of the programme was a discussion between the current Chairperson and two former Chairmen of the ÚJD SR, which brought personal insights on the early days of the Authority, important decisions and events during the Chairperson's term of office.

During the year, the Authority, as a central body of state administration, also responded to requests for information pursuant to Act No. 211/2000 Coll. on Free Access to Information and on amendments to certain acts (Freedom of Information Act), as amended. In 2023, in total, 17 requests for access to information under the Freedom of Information Act were registered by the ÚJD SR. Of these, 16 requests were cleared in full and 1 request was dealt with by partial disclosure, partial referral and a decision not to disclose information in part.
The touch-screen information kiosk, which the Authority has been operating since 2016, also serves a communication

and information function for the public. The kiosk is located at the entrance to the building of the headquarters of the ÚJD SR in Bratislava and is accessible to the public 24 hours a day. In addition to the fact that the kiosk serves as an electronic official noticeboard of the ÚJD SR, where the current administrative proceedings and all decisions issued by the Authority are clearly displayed, the public also has full access to the website. For greater clarity and easier access to information on the Authority's decision-making activities, a section ‚Official noticeboard of the ÚJD SR' has been created on the website, where pending administrative proceedings and decisions issued by the ÚJD SR are clearly displayed.

The ÚJD SR enhances public awareness of its activities and mission in order to build and increase trust in a professional and reliable regulatory authority, which is a credible source of information, also through the preparation and publication of information materials, in particular through the annual publication of its Annual Report. Continued attention is paid to clear information to the public and to the fairness of the information published, including inter-ministerial cooperation in the fight against the spread of disinformation.

At the same time, in 2023, the ÚJD SR also sought to educate the public on the peaceful and safe use of nuclear energy through the professional journal Nuclear Energy, on the editorial board of which it is directly represented and which it distributes free of charge to selected schools, libraries and institutions.

The planning and implementation of the activities of the ÚJD SR towards informing the public is also largely influenced by the results of public opinion surveys, which the Authority conducts on a regular basis at two levels. At annual intervals, a nationwide public opinion survey alternates with a local survey, where respondents answer questions on perceptions of nuclear safety, the provision of information by the licensee and state regulator, and the level of trust in stakeholders. In 2023, a nationwide opinion poll was conducted by FOCUS in June. Among other things, the survey also asked about the public's awareness of how to behave in the event of a nuclear accident. Only 5% of respondents answered that they know exactly how to behave in the event of a nuclear accident and up to 32% of respondents said they were completely uninformed about what to do in such an event. A positive message for the assessment of the Authority's

public communication activities is the high credibility of the Authority in terms of providing information on nuclear energy and nuclear safety as declared by the survey respondents. Compared to the previous survey in 2021, the credibility of the national regulatory authority has increased from 56% to the current 63%. The full results of the current survey, as well as the results of previous surveys, are available on the Authority's website.

In 2023, representatives of the ÚJD SR continued to maintain communication with Members of Parliament, representatives of the central government, local government bodies and municipalities. They actively participated in the meetings of the Civic Information Commissions (CICs) in the Bohunice and Mochovce NPP regions, as well as in the meetings of the Association of Towns and Municipalities, Jaslovské Bohunice NPP Region and the Interest-Based Regional Association of Towns and Municipalities of Slovakia, Mochovce NPP Region. The meetings presented information on current issues in the field of nuclear safety in Slovakia and abroad, as well as on the activities of the UJD SR. On request, information was also continuously provided to representatives of local authorities to be able to provide correct and up-to-date information to the population.

3. Internal Activities

3.1 Management System

For an organisation to be successfully managed and run, it must be guided and managed in a systematic and transparent way. Success can come from implementing and maintaining a management system that is designed to sustainably improve the performance and effectiveness of the organisation while addressing the needs of all stakeholders. The management system of the Authority is built in accordance with the requirements of EN ISO 9001:2015 and supplemented with specific IAEA requirements in the field of nuclear safety assurance. The Management System Council is an advisory body to the Chairperson, which reviews the concept of development of the management system, issues of its development and application, the need for audits, their conditions and requirements, reports from audits, assessments and comparative studies, issues of cooperation, exchange of experience and good practice in the implementation of the management system in the state administration of the Slovak Republic and abroad, proposes procedures for its improvement and increasing the efficiency and effectiveness of the individual activities of the UJD SR.

Risk is an omnipresent and characteristic accompanying phenomenon of the functioning of organisations. Risk management is the continuous activity of interrelated activities designed to reduce the likelihood of risks occurring, or to reduce their impact where there are threats, or to exploit opportunities to enhance the organisation's performance, thereby increasing the likelihood that the organisation will achieve its objectives and be able to ensure customer satisfaction. Risk management was integrated into the management system of the UJD SR in 2016 by developing the Risk Register. The Risk Register defines and classifies potential or occurring risks related to the activities of the UJD SR in a classified manner and includes all other information necessary for risk management. The Risk Register shall be regularly updated, monitoring identified risks and implementing measures to eliminate or mitigate the most serious risks identified.

In accordance with the annual plan of internal audits of the management system, in 2023, 4 targeted partial internal audits were conducted. The internal audits con-

firmed that the activities carried out in the UJD SR are governed by the applicable directives and procedures of the management system. However, the internal audits also resulted in a number of measures to eliminate the identified non-conformities and also set out proposals for improving the quality management system.

Safety standards issued by the IAEA emphasize the integration of safety as a wide-ranging phenomenon into the management system of organizations operating in the field of nuclear energy. The safety culture in the UJD SR is based on the high professionalism of its staff, on a responsible approach to work, which is supported by the management of the UJD SR. An important prerequisite for a strong safety culture is independence. Independence is achieved by the autonomy of the UJD SR as a legal entity, sufficient resources and strong personalities in the leadership of the UJD SR. As a result of these facts, appropriate working conditions and environment are created for staff, with strong support for staff development and improvement of working practices.

The annual review of the quality management system by the organisation's management, in the evaluation of which all process owners participate, is assessed by the Management System Council of the UJD SR. The output document is an integral assessment of the status of compliance with the quality policy and objectives, results of audits, periodic review of quality guidelines, compliance with related requirements, describes process performance, product compliance, description of the status of preventive and corrective actions and changes with potential impact on the management system, while also providing recommendations for process, activity and product improvements related to legitimate stakeholder requirements and necessary resources.

3.2 Information Security and Cybersecurity

Pursuant to Act No. 69/2018 Coll. on cybersecurity, the ÚJD SR as the operator of basic service is obliged, inter alia, to adopt and implement tasks, processes, roles and technology in the organisational, personnel and technical areas aimed at ensuring cybersecurity, security of information systems and minimising the impact of cybersecurity incidents.
In 2023, the UJD SR completed the project Improving the level of information and cyber security of the UJD SR (ZUIaKB). The project was implemented using the EU funds - Priority Axis 7 (PA7)/Operational Programme - Integrated Infrastructure 2014-2020 (OPII), its implementation lasted 12 months and was completed on 30 October 2023. The project delivered a total of 14 relatively stand-alone solutions in the following areas:

- implementation of cyber protection system, detection of malicious activities and management of security incidents,
- implementation of a data protection system,
- implementation of a system to protect data transmissions and communication.

The key objective that was met was to increase the overall level of protection of the internal IT environment and the information assets of the ÚJD SR against existing and ever-increasing cyber and security threats from both the external and internal environments.

The secondary objectives of the project, which were fulfilled by the implementation, were also based on the existing state and scope of the security infrastructure, its key components and the nature of the implemented solutions.

The technological levels of the existing security solutions were upgraded. Areas of the security infrastructure not currently covered by the implementation of new tools were added. High availability of the implemented solutions and protection of their data has been ensured and supporting operation of the implemented solutions.

No major cyber incident was recorded by the ÚJD SR in 2023. The ÚJD SR developed new security documentation in the area of organisational measures focusing on the protection of the information assets of the Authority. At the end of 2023, the ÚJD SR conducted a cybersecurity audit, which showed a very important increase in the validation of the compliance of the operator of the basic service with the requirements of Act No. 69/2018 Coll. on Cybersecurity (hereinafter referred to as the „Cybersecurity Act") and the NBU Decree 362/2018, establishing the content of security measures, which is the result of all the above-mentioned activities in the field of cybersecurity.

3.3 Human Resources

Quality HR management is one of the basic prerequisites for achieving the strategic goals and objectives of the UJD SR and the implementation of the approved national nuclear safety policy. HR management focuses in particular on transparent selection procedures, flexible remuneration of employees, as well as training of employees in order to develop human potential and create an atmosphere motivating employees to fulfil the objectives and challenging tasks of the UJD SR as a regulatory body.

For 2023, the total number of posts in the budget of the ÚJD SR was set at 134, of which 120 were civil servant posts and 14 were public service posts. Of the above number, one civil servant post was temporarily allocated to the Ministry of Foreign Affairs of the SR for secondment abroad (Vienna) to support cooperation in the field of peaceful uses of nuclear energy.

The process of filling civil servant positions in the ÚJD SR follows the Act No. 55/2017 Coll. on the Civil Service and on

Amendments to Certain Acts, as amended, and Decree of the Government Office of the SR No. 507/2019 amending and supplementing Decree of the Government Office of the SR No. 127/2017 laying down details of selection procedures.

The process of filling vacancies in public service is governed by Act No 552/2003 Coll. on the performance of public service, as amended, and Act No 311/2001 Coll. on the Labour Code, as amended.

The announcement of selection procedures to fill vacant civil servant positions was done by the ÚJD SR by publication in the register of selection procedures on www.slovensko.sk portal. The Authority also publishes the selection procedures for filling civil servant posts and public service posts on its website. In the case of filling temporary civil service posts, for which the interest is the lowest and in the case of filling public service posts, the Authority also publishes the selection procedures via job vacancies portal.

In 2023, the ÚJD SR announced 19 selection procedures to fill vacant or temporarily vacant civil servant posts and 2 selection procedures to fill vacant posts. One selection procedure to fill a temporarily vacant civil servant post, which was announced in 2022, was held in January 2023.

Of the 21 selection procedures announced, 13 were implemented in 2023, five were not implemented because no candidates applied and for one procedure one candidate applied but did not participate. The two selection procedures announced in 2023 will not be implemented until 2024.

The 14 selection procedures filled 10 vacant or temporarily vacant civil servant posts and 2 public service posts.

In 2023, a total of 9 staff members were recruited to civil service posts, 7 staff members changed their civil servant status by transfer, 2 staff members returned from parental leave, and 1 employee took 6 months' sabbatical leave.

In 2023, 5 civil servants terminated their civil service and 1 employee ended public service employment. 1 civil servant ended his employment with an agreement, 1 civil service was terminated because according

to the medical opinion, that the civil servant was no longer fit to perform civil service at the given civil servant post and 3 civil servants terminated their employment due to retirement. An employee in public service post terminated his employment due to starting a civil service employment.

In terms of the actual number of employees, as of 31 December 2023, the UJD SR recorded a total of 124 employees, including 110 civil servants and 14 employees in the performance of public service.

As at 31 December 2023, the Authority had 10 vacant civil service posts.
As at 31 December 2023, there were 65 women (52 women in civil service and 13 women in public service) and 59 posts were taken by men (58 men in civil service and 1 man in public service). The total share of women employed by the ÚJD SR was 52.42 %.

In terms of the systematisation of civil servant posts, the ÚJD SR has a total of 81 civil servant posts in the civil service branch 2.05 Nuclear Oversight, of which 75 were occupied as of 31 December 2023. The Chairman of the Authority and the Vice-Chairman of the Authority become nuclear safety inspectors on the date of their appointment.

The educational structure of the employees has a direct impact on the professional performance of the individual departments of the ÚJD SR. The analysis of the educational structure shows that 91.94 % of the employees of the ÚJD SR have completed at least a university education of the second degree. This percentage of university-educated employees reflects the demanding nature of the work at the UJD SR and far exceeds the educational level of the population of the SR.

Civil Service Branch	Total	Women	Men
2.05 Nuclear oversight	75	28	47

Table 6: Civil Service posts in civil service branch 2.05 Nuclear Oversight as of 31 December 2023

Gender	Higher edu. III degree	Higher edu. II degree	Higher edu. I degree	Complete secondary ed.	Total
Women	5	51	1	8	65
Men	6	52	0	1	59
Total	**11**	**103**	**1**	**9**	**124**

Table 7: Educational structure of staff as of 31 December 2023

In terms of age structure of staff, the group aged 61 plus represents 12.10 % of the total number of staff, employees aged 46 – 60 years represent 50 % of the total number, employees aged 36 – 45 years represent 20.97 % of the total number, and employees aged 18 – 35 years represent 16.93 % of the total number of 124 staff members as at 31 December 2023. The age structure of the ÚJD SR employees confirms the long-term trend that the performance of state supervision was provided also in 2023 by employees with many years of professional experience.

In the framework of the systematisation, the ÚJD SR holds 17 senior civil servant posts, which represents 12.69 % of the total number of 134 budgeted posts as of 31 December 2023.

Acquiring, deepening and maintaining the professional competences of the UJD SR staff is yet another prerequisite for mastering the new challenges of the current legal, economic and highly demanding technical environment, of which nuclear power is a part. Education is one of the fundamental goals, but also one of the requirements of modern society. The requirements for knowledge, skills, abilities and experience of an employee in a modern company are constantly changing, and in order to function as a highly professional workforce, an employee needs to continuously deepen and broaden his or her knowledge and skills. The computerisation of public administration and transparency in the performance of the regulatory activities, which require the active involvement of staff in addressing the new challenges

posed by these areas, constitute a separate chapter of training. To this end, it is necessary to learn about the new requirements and obligations of public authorities which staff must meet.

Employee training was elaborated in the UJD SR Continuous Education Plan for 2023, with a year-round content focusing on the training needs of all organisational units. As part of the training process, employees were also offered ad hoc trainings organised by external training institutions. The training was oriented to all expert areas provided by the ÚJD SR. The staff used various forms of individual and collective training, such as e-learning, self-study, online conferences, etc. Senior staff took advantage of the offer of the Centre for Training and Assessment of the Office of the Government of the SR and participated in training courses aimed at supporting the development of managerial skills.

The ÚJD SR staff regularly participate in workshops and training events organised by international organisations such as the IAEA in Vienna and the OECD/NEA in Paris. Training and the development of working skills and competences is becoming a lifelong process also for the UJD SR, as it is necessary to constantly take into account the current needs caused by the reality of changes.

Training costs for the UJD SR staff was budgeted at EUR 180,000 in the Continuous Training Plan of the UJD SR for 2023. More than 70 % of the funds spent in 2023 on training of the UJD SR staff were allocated to vocational training, mainly in the field of nuclear oversight. It is evident from the above that in training, the ÚJD SR places great emphasis on highly specialised training of staff in the area of the Authority's competence, through which, in particular, inspectors and inspectors-in-waiting acquire the necessary knowledge and skills to perform inspection activities. Separate funding has also been earmarked for training in computer science and cybersecurity. The same emphasis is placed on the training of civil servants in other branches of the civil service and on the training of staff in the public service, to ensure that their training is continuous and up-to-date in the light of ongoing changes in legislation and in the civil service.

The adaptation of newly recruited civil servants was provided for through adaptation training and mentoring, i.e. through an assigned mentor. Nine civil servants completed this process in 2023.

The adaptation training provided the newly recruited staff with the basic skills and information necessary to perform the civil service in the relevant branch. Due attention was paid to language training, in particular to foreign language teaching, namely English and French.

The Service Office has introduced systematic training of the staff of the Authority in the field of linguistic culture and this has had a highly positive impact on the linguistic quality of documents and materials produced in the activities of the Service Office.

The UJD SR as the other central state administration body has achieved a state with the quality of work of its staff that is highly valued in the domestic environment, but also abroad, which proves the high level of expertise and professionalism of the supervisory authority's staff.

3.4 Economic Data

As a budget chapter, the UJD SR is linked to the state budget in terms of its revenues and expenditures. The Atomic Act introduced annual contributions for the state nuclear safety oversight as of 1 January 2008, obliging licence holders to pay annual contributions for the exercise of the state nuclear safety oversight.

The revenue for 2023 was budgeted for the ÚJD SR at EUR 9,946,000, the revenue budget was not adjusted by a budget measure during the year. The actual revenue amounted to EUR 10,043, 899, of which administrative charges amounted to EUR 10,014,597 and other non-tax revenue to EUR 29,302.

The expenditure limit for the year 2023 was approved for the ÚJD SR in the amount of EUR 11,793,821. Following budgetary measures, the expenditure limit was adjusted to EUR 13,254,423. The total amount of expenditure on the activities of the ÚJD SR as at 31 December 2023 amounted to EUR 12,394,078. Of this, expenditure of EUR 10,401,129 was incurred for the financing of current activities and EUR 1,992,949 for the acquisition of capital assets.

Current Expenditures

From the current expenditure, a significant share is accounted for by the foreign transfers, totalling EUR 1,433,621. These funds represent the payment of contributions for membership in international organisations.

Regular contributions are two current foreign transfers to the IAEA, namely the regular membership contribution of EUR 655,424 and the contribution to the Technical Cooperation Fund of EUR 282,632. Another contribution to the IAEA was the participation contribution in the amount of EUR 17,342. In 2023, the ÚJD SR also paid the SR contribution to the CTBTO in the amount of EUR 391,726. Furthermore, the SR contributions to the OECD/NEA - to the PARt II programme in the amount of EUR 51,887, the contribution to the OECD/NEA/DATABANK - to the PARt II programme in the amount of EUR 12,967 were also paid.

Within contributions to S&T cooperation programmes, the contribution to the OECD/NEA project PKL3 (Themis) was paid in the amount of EUR 21,643.

Item	Amount (EUR)
Limit on revenues	9,946,000
Actual revenues, total	**10,043,899**
Of which:	
Administrative charges	10,014,597
Other non-tax revenues	29,302
Limit on expenditures	11,793,821
Actual expenditures, total	**12,394,078**
Of which:	
Current expenditures	10,401,129
Capital expenditures	1,992,949

Table 8: Economic results in 2023

Financial contributions to international organisations	Amount (EUR)
IAEA – Membership fee	655,424
IAEA – Technical Cooperation Fund	282,632
IAEA – Participation contribution	17,342
CTBTO – Membership contribution	391,726
OECD/NEA - PART II program	51,887
OECD/NEA - Databank - PART II program	12,967
OECD/NEA – PKL3 Themis project	21,643
Total	**1,433,621**

Table 9: Foreign transfers to international organisations in 2023

Domestic transfers amounted to EUR 201,029 and were used to pay the membership fee of the non-profit organisation Slovak Nuclear Society (SNUS), to compensate staff for temporary incapacity for work, for a financial contribution to meals, for severance pay, for redundancy payments and for allowances and contributions (sickness supplement).

Necessary support for the decision-making, licensing and inspection activities of the UJD SR is provided by expert opinions and analyses, for which EUR 880,666 was spent in 2023.

EUR 4,736,977 was spent on payroll expenses for 120 employees and EUR 1,840,610 was spent on health insurance and social security contributions.

Funds amounting to EUR 1,220,149 were spent on the procurement of goods and services necessary for the operation of the UJD SR. The basic breakdown of this expenditure follows from the economic budget classification of expenditure and its use was as follows:

Item	Amount (EUR)
Foreign transfers	1,433,621
Expert opinions, analyses	880,666
Payroll (120 employees)	4,736,977
Mandatory insurance of employees	1,840,610
Domestic transfers	201,029
Goods and services	1,220,149
Total	**10,313,052**

Table10: Current expenditures (state budget funds) in 2023

Item	Amount (EUR)
Travel expenditures	159,952
Telecom and energy	93,786
Materials	121,134
Car fleet	45,819
Routine and standard maintenance of building and operat. Equipment	164,121
Rent for office space, garages, meeting rooms and equipment	64,813
Services (printing, cleaning, translations, information, revisions of equipment, training, advertising, meal vouchers, bank fees, allocations to Social Fund, compensations – recreation, entertainment and other)	570,525
Total	**1,220,149**

Table 11: Breakdown of expenditures – Goods and Services in 2023

Capital expenditures

In the category of capital expenditure, the UJD SR used budgetary appropriations totalling EUR 84,805 for the acquisition of capital assets as follows:

Item	Amount (EUR)
Purchase of photocopiers	6,720
Purchase of SW licences	7,050
SW upgrade (registry IS)	23,062
SW upgrade (IS in CHO)	12,780
Telecom infrastructure (cabling)	6,873
Purchase of SW (Administrative IS - licences)	16,560
Upgrade of Administrative IS	11,760
Total	**84,805**

Table 12: Use of capital expenditures in 2023 (expenditure account 1)

In 2023, the UJD SR also used a non-repayable grant (sources - European Regional Development Fund) for the financial support of the project No. 311071AHX1 UJD SR „Enhancing the level of information security and cyber security of the UJD SR" in the total amount of EUR 1,908,144, which represented capital expenditure and was spent on the purchase of software of EUR 1,092,049 and the purchase of HW (communication infrastructure components) in the amount of EUR 816,095.

Appropriations from the Separate Account Donations and Grants

Expenditure used from the separate account Donations and grants in 2023 amounted to EUR 88,077. The foreign grants used consisted of funds received from the CTBTO - a financial contribution of EUR 88,077 intended for the organisational support of the RIC-25 exercise.

Item	Amount (EUR)
Purchase of SW (OPII project)	1,092,049
Purchase of HW (communication infrastructure components, project OPII)	816,095
Total	**1,908,144**

Table 13: Use of capital expenditure in 2023 (expenditure account 2 – Grant)

Type of expenditure	Expenditure account 1 (SB funds)	Expenditure account 2 (EU funds)	Donations and grants account	Total
Current expenditures	10,313,052	0	88,077	10,401,129
Capital expenditures	84,805	1,908,144	-	1,992,949
Expenditures total	**10,397,857**	**1,908,144**	**88,077**	**12,394,078**

Table 14: Use of funds in 2023 (EUR)

NUCLEAR
REGULATORY AUTHORITY
OF THE SLOVAK REPUBLIC

4. Abbreviations used

AO1	Reactor scram
BN	Safety Guide
SRLs	Safety reference levels
BSC RAO	Bohunice RAW Treatment Centre
ERC	Emergency Response Centre
CSS	Commission on Safety Standards, IAEA
CTBT	Comprehensive Nuclear-Test-Ban Treaty
CTBTO	Comprehensive Nuclear-Test-Ban Treaty Organisation
FNF	Fresh nuclear fuel
DBL	Discontinuous bituminisation plant
DG	Diesel generator
EBO	Bohunice NPP
EC	European Commission
EMO	Mochovce NPP
ENSREG	European Nuclear Safety Regulators Group
ES PRES	Spanish Presidency of the Council of the EU
EU	European Union
Euratom	European Atomic Energy Community
FS KRAO	Final Treatment of liquid RAW
IAEA GC	IAEA General Conference
GO	General overhaul
HCČ	Main circulation water pumps
NPT	Non-Proliferation Treaty

HNČ	Pumps of the emergency supply system for steam generators
ES	Emergency Staff
IEA	International Energy Agency
INES	International Nuclear and Radiological Event Scale
INRA	Iranian Nuclear Regulatory Authority
IRRS	Integrated Regulatory Review Service
IS RAO	Integral RAW storage facility
JAVYS, a. s.	Nuclear and Decommissioning Company
NPP	Nuclear power plant
JESS, a. s.	Nuclear Energy Company of Slovakia
NM	Nuclear materials
NI	Nuclear Installation
L&Cs	Limits and Conditions
HF	Human factor
IAEA	International Atomic Energy Agency
MH SR	Ministry of Economy of SR
MIRRI SR	Ministry of Investments, Regional Development and Informatisation of SR
MO3&4	Mochovce Units 3, 4 NPP
MRPS OBPZJŠ	Inter-departmental WG on civil liability for nuclear damage
MS SR	Ministry of Justice of SR
MSVP	Interim Spent Fuel Storage Facility
MV SR	Ministry of Interior of SR
MZVEZ SR	Ministry of Foreign and European Affairs of SR
MŽP SR	Ministry of Environment of SR
NBÚ	National Security Authority

LRAW	Low level RAW
NR SR	National Council of SR
OECD/NEA	Nuclear Energy Agency at the Organisation for Economic Cooperation and Development
OIK	Civil Information Commission
UN	United Nations Organisation
SG	Steam generator
PHJB	Periodic nuclear safety assessment
PSA	Probabilistic Safety Assessment
AQ WP	Atomic questions Working party within the EC
OE	Operational event
RAM	Radioactive material
RAW	Radioactive waste
RHWG	WG for Harmonization of requirements for the safety of nuclear reactors
RU	Russia
RÚ RAO	National RAW Repository
SC	Steering Committee
SAV	Slovak Academy of vied
SE, a. s.	Slovenské elektrárne, a. s.
SE PRES	Swedish Presidency in the Council of the EU
SHNČ	Pumps for super-emergency supply system for steam generators
SNRIU	State Nuclear Regulatory Inspectorate of Ukraine
SNUS	Slovenská nukleárna spoločnosť – Slovak Nuclear Society
SR	Slovak Republic

PR	Permanent representation
TSÚ RAO	Technology for RAW Treatment and Conditioning
UA	Ukraine
ÚJD SR, úrad	Nuclear Regulatory Authority of the SR, the Authority
FCC	Fibre-concrete container
SNF	Spent Nuclear Fuel
VLRAW	Very low level RAW
VT	High pressure emergency make-up system
VUJE, a. s.	VUJE, a. s., Trnava – Engineering, design and research organisation
VZ	Classified equipment
WGWD	WG for harmonization of requirements for the safety of RAW management and decommissioning of NIs

NUCLEAR
REGULATORY AUTHORITY
OF THE SLOVAK REPUBLIC

We are open to your ideas, questions, suggestions and messages.

+421 2/58 221 111
info@ujd.gov.sk
www.ujd.gov.sk

So you don’t miss anything, follow us on

Used photos: ÚJD SR, SE, a. s., JAVYS, a. s., Canva