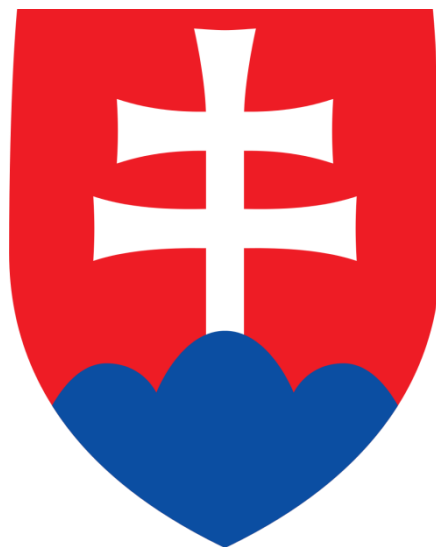


# **NATIONAL REPORT OF THE SLOVAK REPUBLIC**



**COMPILED IN TERMS OF THE JOINT CONVENTION ON THE SAFETY OF SPENT FUEL  
MANAGEMENT AND ON THE SAFETY OF RADIOACTIVE WASTE MANAGEMENT**

## **QUESTIONS AND ANSWERS**

February 2025

National Report can be downloaded from: [https://www.ujd.gov.sk/wp-content/uploads/2024/12/National-Report\\_JC-Slovakia\\_2024.pdf](https://www.ujd.gov.sk/wp-content/uploads/2024/12/National-Report_JC-Slovakia_2024.pdf)

Id	Posted By	No.	Article	Reference	Question and Comment	Answer
31513	United States of America	1	General	Section A, D.2.5. p. 13	<p>The National Report notes that the amount of the financial guarantee for radioactive sources is determined by the organization which is authorized to handle the source. Is this amount typically based on disposal of a source at the facility described in Section D.2.5? What training is provided to personnel to ensure they are qualified in evaluating the financial guarantees? How does the regulatory authority ensure the guaranteed amounts are adequate?</p>	<p>The amount of the financial guarantee for radioactive sources results from the technical documentation prepared by the specialist departments, which includes the expected scope of activities associated with the collection, sorting, storage, processing, modification and disposal of a specific specified unused high-activity source. The technical documentation prepared in this way is subsequently sent for evaluation and determination of the amount of the financial guarantee in accordance with the processed price calculations for the relevant period. All technical employees participating in the creation of documentation for the evaluation of financial guarantees are qualified in accordance with the requirements of Slovak legislation.</p> <p>ÚVZ SR has repeatedly requested JAVYS company, an authorization holder for the collection, sorting, storage, treatment, conditioning for disposal and disposal of radioactive waste and disused sources, to publish a price list for the liquidation of the most commonly used sources of ionizing radiation in Slovakia.</p> <p>This request was not met and the ÚVZ SR has currently no tools to ensure that the guaranteed amounts are adequate.</p>
31514	United States of America	2	General	Section G, p. 148	<p>Please describe any plans for extended storage and aging management of spent fuel facilities given the National Report states a geological repository is expected to be commissioned roughly around 2065.</p>	<p>Currently, the following design storage capacity is in operation: 14 112 pcs of spent nuclear fuel in the "wet" part and 10 115 pcs of spent nuclear fuel in the "dry" part of the Interim Spent Fuel Storage. In accordance with the current EIA process, it is foreseen to complete the Interim Spent Fuel Storage with additional 'dry' storage capacity - at least for 8 500 pcs of spent nuclear fuel (SNF). These SNF storage capacities represent sufficient capacity for storage of SNF produced during the operation of the NPP in the Slovak Republic, but at least until the period of construction of the Deep Geological Repository. Ageing and LTO management for spent fuel storage facilities is implemented through a monitoring programme (programme for monitoring the controlled ageing of important technological equipment and systems approved by the Nuclear Regulatory Authority of the Slovak Republic).</p>

31515	United States of America	3	General	Section J, p. 174	The National Report notes that 1,100 sealed radioactive sources are registered in a Central Register of Sources. However, there are 2,300 entities who hold registration and authorizations for the use of sealed sources. Please explain why the number of authorized entities is more than double the number of sealed sources in the Central Register.	We should differ between sources of ionizing radiation and sealed sources. The Central registry of sources of ionizing radiation is the inventory or database of all the sources of ionizing radiation imported and used in Slovakia, including sealed sources, devices containing a radioactive source, X-rays devices, radiation generators, unsealed sources. The Central registry of sources of ionizing radiation, maintained by the PHA SR, registered 2,495 operators of sources of ionizing radiation as of December 31, 2023. The number of registered sources of ionizing radiation as of December 31, 2023 was 6,651, of which 898 were sealed sources and devices with sealed sources, 5,173 were X-ray devices and radiation generators, and 580 were unsealed sources.
31859	Hungary	4	Article 4	(v)	How many leaking fuel assemblies have been identified in the VVER 440 nuclear power plants since their commissioning?	During the operation of all four SE units, only 10 leaking fuel assemblies were identified with small gas leak.
31860	Hungary	5	Article 4	(v)	How many leaking fuel assemblies are expected to be identified during the lifetime of the VVER 440 nuclear power plants?	SE do not expect any leaking fuel assembly.
31861	Hungary	6	Article 4	(v)	How are leaking fuel assemblies from VVER440 power plants stored and how are they disposed permanently?	Leaking fuel assemblies are stored in hermetic casks in the spent fuel pool near reactor, then will be handed over to an authorized organization JAVYS for long term storage.
31862	Hungary	7	Article 32	D.2.7 (page 42)	What are the considerations behind the fact that the very low-level waste is treated separately only for decommissioning waste, and not for operational or institutional waste?	To this date, there has been no need for the management of VLLW (soils and concretes) and institutional RAW from operating power plants. In the event of such a requirement, the management of this type of VLLW will be the same as that of VLLW arising from the A1 NPP and V1 NPP decommissioning.
31863	Hungary	8	Article 26	D.3 (page 41)	How beryllium elements were managed during decommissioning?	The question seems to be unrelated to content of national report. Presence of beryllium was not specifically addressed during decommissioning process, nor was it specifically treated.

31864	Hungary	9	Article 10	G6 (page 146)	What is the deadline for selecting between suitable locations to keep the 2065 commissioning date?	Based on the "National Policy and National Programme for Spent Nuclear Fuel and Radioactive Waste Management in the Slovak Republic", the projected date of selection of suitable location is planned for 2030 (selection of final and back-up location).
31865	Hungary	10	Article 10	G6 (page 146)	Is there a statutory timeframe for the authority to review the commissioning licence?	The NRA shall take a decision on issuing approval or authorization, if the application contains the prescribed essentials, if the required documentation was attached and the applicant meets the conditions, within the following time limits: a) within 60 days, unless this Act further stipulates otherwise, b) within four months, if it is for the siting the construction of the nuclear installation except for the construction of a nuclear reactor installation and except for the repository construction, c) within six months for approval for the commissioning of the nuclear installation and decommissioning phase, d) within one year for permission for construction of the nuclear reactor installation, construction permit, construction of the repository and the closure of the repository, approval subsequent to the termination of the approval issued with some restrictions. The deadline begins to run only when the application has all the required details and contains all the required documents.
31866	Hungary	11	Article 32	D.2.7 (page 42)	Is there legislation or requirements only for the National RAW Repository?	Requirements for each step of development of nuclear installation are prescribed generally for all types of nuclear installations, including the facility for disposal of radioactive waste as referred in the Atomic Act, Section 2, letter f), item 4) in the Annex 1 of the Atomic Act. There is no separate set of requirements for different types of disposal facilities, a graded approach is applied and the robustness of disposal system depends on types of waste to be disposed and associated hazard based on results of safety analysis.
32711	Lithuania	12	General	all report	Lithuania commends progress of Slovak Republic in SNF and RW management as well as effective implementation of decommissioning projects. Entities	Thank you. We are constantly striving to contribute to the exchange of knowledge and experience with other Member States.

					of Slovak Republic actively share experience and technological solutions on RW management and decommissioning. Lithuania learned a lot and implement in its own practices.	
33350	Ukraine	13	General	A	<p>Given that the 2011 amendment to Act No. 541/2004 on Peaceful Use of Nuclear Energy (Atomic Act) established the authorization for the operation of all nuclear installations in the Slovak Republic for an unlimited period, could you clarify the rationale behind this decision? Specifically, how does this align with international best practices for the safe operation of nuclear installations, where time-limited licenses, coupled with periodic safety reviews, are generally the rule?</p>	<p>Issuing a ten-year operating authorization increased the administrative burden as it was a duplicate obligation and also an administrative burden on the operator of the nuclear installation. The formal licensing procedure in 10-year intervals caused several procedural difficulties and, in particular, misinterpretation and misunderstanding in the application of international agreements and other legislation that does not provide for such a practice. By abolishing the 10-year period, a standard practice was introduced in the Slovak Republic in comparison with other EU Member States.</p> <p>Currently, the permit is issued without restrictions, but the operator remains obliged to carry out a periodic assessment of nuclear safety every ten years and, based on its results, the NRA considers further operation of the nuclear installation, restrictions on the operation of the nuclear installation or even the necessity of terminating the operation. The opening of proceedings in relation to the authorization occurs only if the periodic assessment reveals such shortcomings that lead to proceedings to restrict or withdraw the authorization. From the above, it is clear that the rule of periodic assessment of nuclear safety, as required by international standards, has been maintained.</p> <p>Article 8, point 1 letter d) of the Atomic Energy Act provides the NRA with the possibility to time-limit any authorization or technically limit the period for which the approval or authorization is issued. So, although the rigorous mandatory provision on issuing an authorization for 10 years has been abolished, the NRA's optional to limit the validity in time has remained.</p>

33351	Ukraine	14	General	A	<p>Taking into account the legislative requirements, how does Slovakia ensure that training programs are continuously updated to reflect advancements in nuclear safety and waste management practices?</p> <p>How do universities and vocational centres collaborate with industry stakeholders to ensure that the training programs meet the evolving needs of the nuclear sector?</p>	<p>ÚJD SR assesses set of documentation of licensee holder focusing for human resource management, qualification and training and their changed versions, as follows:</p> <ul style="list-style-type: none"> <li>a) The training system for the license holder`s employees includes training plans for short and long term (usually max for 3 years),</li> <li>b) Training programmes of licensed employees,</li> <li>c) Training programmes of professional competent employees (daily and shift),</li> <li>d) Technical equipment of specialized training facility.</li> </ul> <p>All above mentioned documents are part of management quality system documentation. According to ÚJD SR Decree no. 431/2001 on the quality management system “The documentation of the quality management system must be regularly reviewed and updated”. ÚJD SR ensure based on legal rules the reflection of all documentations for the actuality, for licensee holder needs, for outputs from any changing on nuclear facility or in management during their authorization process. Specialized training facility provides training on the basis of license obtained from ÚJD SR for 5 years means VUJE, a. s., SE, a. s. and JAVYS, a. s. also. VUJE, a. s. also provides for SE, a. s. or JAVYS, a. s. personnel training of contractors or subcontractors in accordance with the same principles and documents as for licensee holders.</p> <p>Professional training of employees performing work activities in nuclear facilities is handled on the basis of contracts. The training centre has contractual access to relevant customer documentation. Lecturers of the training centre have the opportunity to participate in the training of the customer's employees. Among other things, the contracts deal with the possibilities of training internal lecturers at trainings organized by the customer. Long-term contracts are updated at annual intervals. Nuclear knowledge is specific and unique ability to perform built, operation as well as decommissioning of nuclear installations safe and effective. It should include also:</p> <ul style="list-style-type: none"> <li>– Long-term accumulation and the long-life cycle of facility operation.</li> <li>– Remarkable investment from governments (public money).</li> <li>– Proliferation, security and safety concerns.</li> <li>– International obligations.</li> </ul>
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– Large critical mass of basic science to support nuclear safety.

Copenhagen declaration signed at November 30, 2002 set the priority of developing a credit transfer system for industrial needs. Via this declaration the European Commission established EUROPEAN CREDITS TRANSFERT SYSTEM FOR VOCATIONAL EDUCATION AND TRAINING (ECVET). The implementation of ECVET requires first an agreement at European level on the objectives, principles, scope and field of application of the system, as well as on the reference framework for its implementation.

The overall aim of ECVET is to contribute concretely to lifelong learning. ECVET should facilitate, on the one hand, mobility of trainees within their individual VET pathway within and between different national systems, and encourage and promote, on the other hand, individual geographic and professional mobility. ECVET should also include in its principles and organisation all formal, non-formal and informal training/education/learning processes. It should therefore support individual development and employability.

ECVET at once requires and promotes transparency of qualifications (defined the objectives of a VET programme, in turn expressed in terms of knowledge, skills and competences), of procedures (i.e. assessment or recognition procedures), of learning processes (i.e. formal, non-formal and informal learning processes and pathways) and structures (i.e. organisation of the VET systems, institutional responsibility of the stakeholders/practitioners). ECVET is based on the establishment of mutual trust between VET authorities, providers in terms of the assessment of the knowledge, skills and competences acquired, and the level of achievements of mobile VET learners or trainees.

Having in mind all ECVET characteristics, the Slovak University of Technology in Bratislava (STUBA) dominantly via its Institute of nuclear and Physical Engineering (<http://www.ujfi.fei.stuba.sk/>) perform vocational education and training mostly via following tools:

- on-site training (STUBA has a special laboratories in NPP Jaslovské Bohunice areal),
- technical tours (in frame of Slovakia or neighbour countries as Czechia, Austria, Hungary, Slovenia, ...

						<ul style="list-style-type: none"> <li>- laboratory exercises (in Slovakia or on trainings reactors in Czechia, Austria, Hungary),</li> <li>- best practices exchange (participation in different international networks and projects),</li> </ul> <p>where participate the under graduated as well as graduated students. Young professionals are sometimes included as well – via special postgraduate courses.</p>
33352	Ukraine	15	Article 32.1.1	B.1	What are the potential challenges or opportunities associated with the development of an international deep geological repository, and how is Slovakia preparing for this option?	<p>The Slovak Republic is participating in activities that could lead to an international deep repository, i. e. a repository jointly owned and operated by several states on the basis of relevant international agreements. It is expected that the economic and other benefits of such a solution for the final stage of spent nuclear fuel management will ultimately outweigh the geopolitical and social barriers that currently prevent the practical implementation of such solution. Key challenges associated with the development of an international DGR in Slovakia include: communication shaping public opinion, explanatory information campaigns, dialogue with organisations/associations opposing nuclear energy, etc. One of the opportunities would be intraregional solution, most preferably linked to EU supported measure, which have not fully transpired (during formal discussions) into actionable planning.</p> <p>According to the updated National programmer (2022 resp. 2024, currently in the SEA process) the primary objective is a DGR on territory of SR. On the "redundant" option as international DGR no activities have been undertaken in the last 20 years.</p> <p>Therefore, the development of an international deep geological repository is not considered as a challenge.</p>
33353	Ukraine	16	Article 32.1.1	B.1	The Interim Spent Nuclear Fuel Storage Facility (ISFS in Jaslovské Bohunice) has been in operation since 1978 for wet storage of fuel assemblies. The maintenance also improved the seismic resistance and extended the lifetime of the ISFS to	<p>The concept and strategy for the decommissioning of Interim Spent Fuel Storage Facility is developed in accordance with the legislation in the document “Conceptual plan for the decommissioning of Interim Spent Fuel Storage Facility”, which describes the possible decommissioning methods, the expected production of RAW from the decommissioning and the expected costs.</p>

					at least 50 years. Are there any concepts or strategies for the future decommissioning of the ISFS in Jaslovské Bohunice?	
33354	Ukraine	17	Article 32.1.2	B.2	How has Slovakia achieved the reduced production of liquid concentrates and spent ion exchange resins from VVER units in operation? Specifically, what technical or operational improvements were made to minimize the generation of these materials, and how have these advancements impacted overall waste management practices in VVER reactors?	<ul style="list-style-type: none"> <li>• Design modification of technology, systems and equipment with boric acid liquid</li> <li>• Modification of procedures for operation, maintenance, repair, start-up systems, drainage, venting, liquid sampling,</li> <li>• Immediate registration, searching for very small leakages</li> <li>• Regular evaluation, analysing and taking measures</li> <li>• Operation of the cleaning system with ionex exchanger (sorbents), updating the generation timetable based on sampling</li> <li>• Find new possibilities of improvement of existing equipment and procedures for RAW processing and volume reduction</li> </ul>
33355	Ukraine	18	Article 32.1.5	B.3	<p>The subsection shows table “Matrix (according to INFCIRC/604/Rev.3)” summarizing policies and installations for spent fuel and radioactive waste management. According to the matrix, the current spent fuel management envisages the use of the ISFS (wet storage facility in Jaslovské Bohunice), and a dry storage facility is planned for the future.</p> <p>Are wet and dry storage facilities to be used simultaneously in the future? Or will spent fuel be transferred to the dry storage facility from the wet storage facility?</p>	New storage capacities were commissioned in 2024. The storage capacity of Interim Spent Fuel Storage Facility (the ‘wet’ part) was upgraded with new capacity (the ‘dry’ part). Thus, there is one Interim Spent Fuel Storage Facility in operation, consisting of a ‘wet’ and a ‘dry’ part. Decommissioning of the ‘wet’ part of the Interim Spent Fuel Storage Facility is only possible in the event of the completion of the SNF storage capacity, which is foreseen only in the distant future. The current concept envisages the use of the ‘wet’ part of Interim Spent Fuel Storage Facility at least until the end of its lifetime.

33356	Ukraine	19	Article 32.2.1	D.1.1	It is mentioned about the “sipping in-core test” and leak test of assemblies at shut down reactor: “The In-Mast Sipping device is designed for quick checking of fuel assemblies for leakage when the reactor is shut down”. Are there any plans to use the “canister” method of checking unloaded fuel assemblies for leakage?	During an outage, SE use the sipping test to identify potentially leaking fuel assemblies. The canister method is used to confirm leaking fuel assembly.
33357	Ukraine	20	Article 32.2.1	D.1.2	Before the decision was made to increase the capacity of the wet spent fuel storage facility, what studies were conducted on the condition of safety barriers for leaky fuel assemblies and what were the results and forecasts?	Prior to the implementation of the project, a feasibility study was carried out which analysed and assessed possible options for the expansion of the storage capacity and the latest experience and trends in this area in the world. Subsequently, the process of assessing the impacts of the proposed change on the environment and the preparation of Detailed Design was carried out. At present, storage of leaking SNF in the ‘dry’ part of Interim Spent Fuel Storage Facility is not considered.
33358	Ukraine	21	Article 32.2.1	D.1.2	Is storage of leaky fuel in the JAVYS interim spent nuclear fuel storage facility authorized?	Yes, storage of leaking fuel in the JAVYS Interim Spent Fuel Storage Facility is allowed in the “wet section”.
33359	Ukraine	22	Article 32.2.1	D.1.2	It was noted that a monitoring program was introduced in 2001, including measures to determine the condition of spent nuclear fuel. What does this monitoring encompass, what methods and tools are used and how is it performed?	In addition to visually inspecting the condition of the spent nuclear fuel, monitoring includes checking any leakages by the equipment called Sipping in pool.
33360	Ukraine	23	Article 32.2.1	D.1.2	Leak test of spent nuclear fuel is envisaged during storage. What	In the event of a leaking fuel assembly, the fuel assembly would be placed in a hermetic casing in accordance with the applicable regulations.

					actions are envisaged if a leaky fuel assembly is detected?	
33361	Ukraine	24	Article 32.2.3	D.2.1	Is there a program for assessing the technical condition and life extension of containers for radioactive waste?	<p>RAW transport can only take place in an approved type of transport equipment. UJD approves the types of transport equipment for the transport of RAW in accordance Section 4 par. 2 letter a) point 1 of Act no. 541/2004 Coll. The application for approval of the type of transport equipment must be accompanied by a project of the consignment, which is characterized in more detail in Section 7 of the Decree no. 57/2006 Coll., which lays down details on the requirements for the transport of radioactive materials, as amended by Decree no. 105/2016 Coll. The assessment is also focused on assessing technical parameters in accordance with the Decree no. 431/2011 Coll., on a quality management system as amended by Decree No. 104/2016 Coll. and Decree No. 154/2022 Coll. (consolidated version). UJD evaluates and approves the quality assurance program, the quality plan and quality requirements by a separate decision.</p> <p>In practice, transport equipment and package forms are approved by the Nuclear Regulatory Authority of the Slovak Republic every 5 years. At the end of this period, the capability and safety of this equipment is demonstrated to the Authority. During the interim period, the prescribed inspections and tests resulting from the quality plans or manufacturer's requirements are also carried out.</p>

33362	Ukraine	25	Article 32.2.3	D.2.3	<p>What is the salt content of radioactive waste in bituminous compound after processing of liquid radioactive waste using the bituminization technology? Has the salt-bitumen product been investigated for explosion safety?</p>	<p>The operator of liquid waste treatment and conditioning facilities (JAVYS, Inc.) abandoned solidification of radioactive waste by bituminization several years ago and does not deal with this possible problem.</p> <p>As mentioned in the national report, the bituminisation technology is no longer used due to the significant reduction in production of liquid concentrates from NPP Mochovce.</p> <p>As part of the licensing process, the UJD SR evaluated the safety of the final product (salt-bitumen) concerning explosion risks, based on safety analyses derived from the Preliminary Safety Report in accordance Section 19 par. 2 letter (j) of Decree No. 58/2006 Coll. as amended by Decree No. 31/2012 Coll., Decree No. 102/2016 Coll. and Decree No. 155/2022 Coll. Laying Down Details on the Scope, Contents, and Manner of Maintaining Documentation of Nuclear Installations Necessary for Individual Decisions.</p> <p>Based on the safety analyses, the maximum allowable salt content of the radioactive waste in the bitumen product is determined, as stated in the document “Limits and Conditions for Operational Safety“, where the maximum salinity of the liquid waste entering the bituminization process is specified and equal 200 g/dm<sup>3</sup>. The properties of solidified forms of radioactive waste must comply with the criteria required for their safe storage and disposal at the repository.</p>
33363	Ukraine	26	Article 32.2.5	D.3.1	<p>What is the final condition of the site envisaged after dismantling of equipment and civil structures in the decommissioning design for NPP V1 and NPP A1?</p>	<p>The overall objective of A1 NPP and V1 NPP decommissioning is to exempt the nuclear installation from administrative control (from the scope of the Atomic Act). The civil buildings will be demolished with the following backfilling, surfacing and landscaping. A final dosimetry survey will be carried out in the area remaining after decommissioning, as well as in the area of A1NPP and V1 NPP, to confirm that the area can be exempted from administrative control and released for further industrial use. This will complete the A1 NPP and V1 NPP decommissioning process.</p>

33364	Ukraine	27	Article 21	F.1.3	What criteria determine when a license holder should notify the regulator about modifications that do not directly affect nuclear safety?	Article 2 letter w) of the Atomic Act defines modifications to nuclear installation affecting nuclear safety. These are modifications to classified equipment, which carry their safety function or which change their properties in relation to the safety function, modifications to documentation reviewed or approved by the NRA and modifications which result in changes to Limits & Conditions. The authorization holder may make such modifications only with the prior consent of the NRA. As stated in the national report, other modifications on the nuclear installation than those listed in the first sentence, during construction, commissioning, operation, decommissioning, closure of repository and after the repository closure, are subject to prior notification and review by the NRA. It follows from the above that that the NRA has information about all changes to the nuclear installations, unless they fall under § 2 letter w), the NRA does not have to approve them. Both the NRA and the license holder have developed internal guidelines on the evaluation of documentation/changes with a graded approach. NRA, in accordance with the Atomic Act, what type of modifications are involved. The NRA is also able to reclassify the license holder's modifications by applying a risk-based approach and decision-making according to international standards.
33365	Ukraine	28	Article 22	F.2.2	The Report mentions funding for the management of radioactive waste, spent nuclear fuel, and decommissioning of nuclear facilities. One of the funding methods is the establish a tax (levy), which is included in the electricity cost. "C) ... The levy is a part of the price of electricity supplied to end customers" What is the share of the levy (in percentage) for radioactive waste and spent fuel management and	The electricity price invoiced to end consumers does not explicitly include a levy specifically for RAW and spent fuel management and decommissioning, the levy is specifically for the National Nuclear Fund to compensate for the historical debt created as a result of A1 and V1 decommissioning process (which covers RAW and spent fuel management)

					decommissioning in the price of electricity?	
33366	Ukraine	29	Article 22	F.2.	<p>The Report mentions the sub-account for decommissioning of nuclear installations:</p> <p>“a) sub-account for decommissioning of nuclear installations”.</p> <p>Who controls the sub-account? How can NPPs use the savings in the sub-account?</p>	<p>The method of financing the management of RAW, SNF and decommissioning of nuclear installations is regulated by Act No. 308/2018 Coll. on the National Nuclear Fund. Government Ordinance No. 478/2022, stipulating the amount of annual levy intended for covering the historical debt from the supplied electricity to the end customers, and details of the method of its collection for the National Nuclear Fund, its use and on the method and deadlines for the payment. Government Ordinance No.478/2022 (previous No.22/2019), effective from 1 January 2023, stipulates the amount of mandatory contribution and mandatory payment, and details on the method and payment of mandatory contribution and mandatory payment to the account of the National Nuclear Fund. The purpose of the Nuclear Fund is to provide financing of activities related to the national program for the management of SNF and RAW (hereinafter referred to as “National Programme”), to collect and manage funds intended for the backend of the peaceful use of nuclear energy cycle, to secure funds from the state budget for them management of nuclear materials of unknown origin, and to administer financial security for high-activity sources in accordance with a special regulation.</p> <p>The system of sub-accounts provides reliable and stable system of financing policies, which covers:</p> <p>a) The “Polluters Pays” Principle - The costs related to the back-end of nuclear power engineering are borne by licence holder for the operation of a nuclear facility.</p> <p>b) Sufficiency in Time - The National Nuclear Fund secures financial resources in accordance with the required amount and time in order to execute the above-mentioned activities.</p> <p>c) Transparency - The National Nuclear Fund manages, allocates and provides financial resources in a non-discriminatory and transparent manner.</p> <p>d) Capital Appreciation - The National Nuclear Fund secures reasonable appreciation of financial resources held in the State Treasury accounts.</p> <p>The proposal of plan of financial provision states basic framework for</p>

					<p>procedure of NNF SR in management of financial resources falls in the system of public finance. It is based on the premise that asset and expenditure side of NJF in the long-term horizon is set in such a manner that it will achieve overall balance in management. In operation of nuclear installation such quantity of financial resources would be accumulated that it will be adequately for its future decommissioning, including handling of RAW and spent fuel, i. e. NJF would generate neither deficit nor surplus of financial resources. Meeting the premise is exceptionally demanding, reflecting the complexity of the process with number of changing input parameters spread over the long term. For this reason, demand for financial resources for the period of decades is stated based on certain assumptions or by expert guess. However, in case</p> <p>of SR it is necessary to consider the fact that from 01.01.1995 state by the Act No. 254/1994 Coll. on State fund for decommissioning of nuclear energy installations has imposed the obligation to owner/operator of nuclear installation to accumulate financial resources for its decommissioning and handling of RAO and spent fuel throughout delivery to the fund administered by the state. For the period from 12.25.1972 when JE A1 was phased in the grid until 12.31.1994 such financial resources had not been accumulated. System for funding of decommissioning of nuclear installations and handling of SF and RAW is based on current legislative rules in force and provides view of management until 2020 and rough estimate after this year. Cost estimates were stated at the price level of 2014.</p> <p>For this reason, it is important to stress, actual expenditures of NJF in the coming years considering inflation rate, will be in fact different. In light of complying with Maastricht criteria it is expected in financial calculations that inflation rate in the long-term considerations will not exceed the level of 2 % annually.</p> <p>Activities of the final stage of peaceful utilization of nuclear energy take form of long-term projects. Standard economy practice of preparation for financing of such projects is based on discount. In this manner it is possible to state the demand for funding of future activities more precisely.</p>
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33367	Ukraine	30	Article 24	F.4.4	<p>Please explain the reasons for the increase in collective dose to JAVYS, a.S, personnel and contractors, which are shown in Figure 25.</p>	<p>The increase in the collective dose of employees of JAVYS, a. s. and employees of contractor organisations was based on the work carried out on individual projects and at individual workplaces with increased radiation load, as the decommissioning schedule at that time was in the second part of Stage III and IV of the A1 NPP decommissioning and when the essential works of the D4.2 project at V1 NPP were implemented.</p>
33368	Ukraine	31	Article 11	H.1.1	<p>It is noted that specific solutions to minimize radioactive waste should be provided for in the development of design and operational documents. What specific measures were implemented during the reporting period? Which of them turned out to be the most effective?</p>	<p>Within the preparation of design and safety documentation for activities where the production of materials contaminated with radioactive substances is expected, comprehensive pre-implementation radiation monitoring is carried out on the basis of which the procedures and methods of their treatment, processing and storage are defined by optimization. The comprehensive system for minimisation of RAW generation is developed separately for each nuclear installation in the safety documentation, taking into account its specifics (NPP under decommissioning, nuclear power plants, non-reactor NPP....).</p>

33369	Ukraine	32	General	K.1	How are the cartridges for selective treatment of concentrated radioactive waste further managed?	If the question is directed to further management of concentrated liquid radioactive waste from NPP operation (V2 NPP, Mochovce NPP), these are further treated by cementation to FCC at JAVYS treatment facilities.
33370	Ukraine	33	Article 26	F.6	“The final documentation on decommissioning presents criteria for release of the site for unlimited utilization and contains data to what extent they were met. In case the criteria were not fully met, it presents limitations in the land use and measures taken to ensure control over the area”. Please clarify whether the criteria for release of the site established in national legislation or does the licensees establish these criteria themselves?	The conditions are defined in the national legislation for radiation protection in the scope of the Public Health Authority of the Slovak Republic
33371	Ukraine	34	Article 10	G.6	“Slovak Republic plans to construct deep geological repository and it is expected that this repository will be commissioned roughly around 2065”. Please clarify whether this repository will be designed for the disposal of spent fuel and radioactive waste that are generated at nuclear installations only in the Slovak Republic or at foreign ones as well?	The "National Policy and National Programme for Spent Nuclear Fuel and Radioactive Waste Management in the Slovak Republic" considers only the disposal of waste and spent fuel originated from Slovakia. See also response to the question on international / regional repository.

33372	Ukraine	35	General	K.1	<p>The question is about the decommissioning of NPP V1.</p> <p>K.1, Page 179: "After the site has been restored to its original condition (or after clearance) and its final inspection, the site will be released from the scope of the Atomic Act".</p> <p>Please clarify: was the original condition of NPP V1 documented before its operation, or will the licensee compare the restored site to the original condition of a similar site?</p>	<p>The original condition of the V1 NPP was not documented before its operation. The radiological status of the V1 NPP technological systems, structures and site area was continuously monitored during the V1 NPP operation, at the beginning and during the V1 NPP decommissioning process. The main objective of the V1 NPP decommissioning is to achieve the full planned condition of the site for further industrial use. Contamination with hazardous substances and radiological contamination will be eliminated. The removal of radiological contamination will be carried out in accordance with the limits specified for the site defined by the Optimisation Study developed pursuant to the Act No. 87/2018 Coll. on Radiation protection and approved by the Public Health Authority of the Slovak Republic. Following the removal/demolition of the buildings and subsequent environmental restoration of the V1 NPP site, a final site survey (investigation) will be performed to confirm that the radiation criteria have been met. For this purpose, the residual radiological and hazardous substance contamination values will be measured as part of the final characterisation (final survey) at the V1 NPP site, focusing on soils (both surface and subsurface), building structures and groundwater below the surrounding terrain level.</p>
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33373	Ukraine	36	Article 32.2.3	D.2.6	<p>What vehicles are used to transport liquid radioactive waste? What are the requirements for radiation protection during the transport of liquid radioactive waste?</p> <p>What are the requirements for containers used to transport liquid radioactive waste, taking into account chemical properties of liquid (chemical activity, toxicity), radionuclide components?</p>	<p>RM transport can only take place in an approved type of transport equipment. UJD approves the types of transport equipment for the transport of RM in accordance Section 4 par. 2 letter a) point 1 of Act no. 541/2004 Coll. UJD shall decide on the application for type approval of the transport equipment within 12 months from the commencement of the proceedings. The decision on the type-approval of the transport equipment is issued for a maximum of 5 years. the application for approval of the type of transport equipment must be accompanied by a project of the consignment, which is characterized in more detail in Section 7 of the Decree no. 57/2006 Coll., which lays down details on the requirements for the transport of radioactive materials, as amended by Decree no. 105/2016 Coll. In the case of transport equipment intended for the transport of RM, the documentation on the tests, which are performed at the expense of the applicant at the authorized person to perform such tests, shall be part of the documents for the decision of UJD on type approval. At the same time this decree regulates individual types of shipments in terms of limit activities as well as material restrictions. When transporting a shipment, it is necessary to know what type of consignment it will be, as different requirements are placed on individual types of consignments during the approval process.</p> <p>In practice: For the transport of liquid radioactive waste, vehicles complying with the requirements of ADR (modified truck trailer) are used. Liquid radioactive waste is transported only in approved transport equipment. The transport equipment is approved by the Nuclear Regulatory Authority for the specific type of liquid radioactive waste and the maximum activity to be transported.</p>
33374	Ukraine	37	Article 32.2.3	D.2.6	<p>Are there practices in your country to manage liquid radioactive waste containing tritium? If so, what technologies are used for this purpose?</p>	<p>Liquid RAW with low salt and tritium content is processed at the evaporation plant by evaporation, where the tritium is processed to the vapour condensate. The vapour condensate is further purified on ion exchange filters and subsequently diluted and discharged to the environment. Liquid RAW with higher salt and tritium content is treated</p>

						under strict safety conditions by cementation into the Fibre-Concrete Container (FCC).
33375	Ukraine	38	Article 28	J	What practices are in place for the management of “orphan sources”?	<p>In Slovakia, the regulatory authority responsible for orphan sources record keeping is the ÚVZ SR (radiation protection department). The first records are from 1985.</p> <p>Radioactive material and orphan sources mostly occur in scrapyards, and steel production facilities (both our steel producers use scrap as a secondary raw material) and are rare in other metal production facilities.</p> <p>There is an effective response system in place (the whole procedure has been in place for a long time, actually the procedure is fully in compliance with the requirements of Article 99 of the Act No. 87/2018 Coll. on Radiation Protection).</p> <p>The metal recycling facilities and all big scrapyards have detection equipment and there are also detection systems installed at some border crossing points. If an alarm occurs persons who suspect the presence of an orphan source or radioactive material call the responsible regulatory authority for specialized technical advice and assistance. If the case is confirmed by a staff member of the radiation protection department from the responsible radiation protection authority, the organization authorized for dealing with radioactive material of unknown origin is informed and this organization will realize the recovery, transport for analysis, storage, decommissioning, etc. If it is a suspect crime, the procedure is different as Police are involved.</p> <p>According to Article 100 of the Act No. 87/2018 Coll. on Radiation Protection expenses connected with handling radioactive material of unknown origin are covered by the owner; if the owner is not known, costs are covered by the State. The cost of found orphan sources up to now was mostly covered by a specific state fund (detailed rules can be found in the Act on the National Nuclear Fund).</p> <p>Regarding the orphan sources that originate from a foreign country (EU member or not) returning to the supplier or storing nationally are in principle possible, how such cases will be managed will depend on the situation (before or after customs clearance) and the decision of the regulatory authority (or authorities, if Police or Nuclear Regulatory</p>

					<p>Authority of the Slovak Republic will be involved).</p> <p>Regarding the orphan sources or radioactive material at scrap metal facilities/metal recycling industry or production facilities, the portal systems/handheld detection devices in use at scrapyards are capable of detecting them. The operator of the facility or of a system for controlling metal raw materials which enables detection of ionising radiation, is obliged to advise the staff how to visually recognize an orphan source (leaflets and other information were distributed by the regulatory authority during the campaign), inform about measures and procedures during the finding of an orphan source or radioactive material, or in the case of suspicion that radioactive material is present. Regular training is required. The list of countries that have expressed a political commitment to implement or comply with the IAEA Guidelines, including the Slovak Republic, is available online:  <a href="https://nucleus.iaea.org/sites/ns/code-of-conduct-radioactive-sources/Documents/Status_list%2026%20November%202024.pdf">https://nucleus.iaea.org/sites/ns/code-of-conduct-radioactive-sources/Documents/Status_list%2026%20November%202024.pdf</a></p> <p>In practice, JAVYS, a. s. expert group is acting based on the request to take over or to trace and take over the RMUO (radioactive material of unknown origin) sent by the competent authorities of the Slovak Republic. After the takeover, the type of the emitter is identified and gamma spectrometric measurements are carried out at JAVYS, a. s. by the relevant expert departments. Subsequently, it is transported for further management in the Facility for treatment and conditioning of RAW or for long-term storage in the Facility for the institutional RAW and collected radioactive material management.</p>
33572	Jordan	39	General	<p>Page 31</p> <p>Increasing SNF storage capacity in ISFS</p>	<p>In Table 2: Basic technical data for ISFS. It is stated that the maximal storage capacity is 14,112 fuel assemblies, and the available storage capacity as of 31/12/2023 is 14,046 fuel assemblies. Could you clarify this difference in numbers?</p> <p>This is not a contradiction but it reflects the current technological possibilities of storing SNF in Interim Spent Fuel Storage Facility. The maximum storage capacity is calculated for the storage of all SNF in KZ-48 type storage casks (48 pieces of SNF). As leaking SNF is currently also stored in hermetic casings in a T-13 type container (30 pcs of SNF capacity), it is not possible to reach the maximum storage capacity.</p>

33943	Belgium	40	Article 14	p.153	<p>Design and Construction of Facilities: How do you ensure that the design of new radioactive waste storage and disposal facilities incorporates lessons learned from the operation of existing facilities, particularly regarding seismic resilience and waste retrievability?</p>	<p>Decree No 430/2011 Coll. contains general requirements for the design of a nuclear installation, which also apply to new radioactive waste management facilities. The explicit requirement that the design of a nuclear installation should take into account the operating experience of similar nuclear installations appears several times in the decree, for example in the areas of "Good technical practice and operating experience" or "Results of research in the field of nuclear safety". Among the general design requirements, there is also a requirement that the design must include a proposal for measures to ensure a sufficient level of safety to protect against seismic events, including sufficient justification of the input data to determine the level of seismic resilience. The possibility of radioactive waste retrievability is addressed by specific requirements for the design of the repository set out in the same decree, which are intended to maintain this possibility without compromising the level of safety of the repository.</p> <p>In practice, obtaining and application of knowledge from RAW and SNF treatment and storage facilities, including seismic resistance and possible further RAW management, is mainly based on previous operational experience as well as on the experience of other countries in this field, and this information is gathered and assessed within feasibility studies, which are prepared for each major project prior to its actual implementation.</p>
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33944	Belgium	41	Article 26	p.130	<p>Can you please provide more detail on their strategies for managing radioactive waste generated during decommissioning activities, including how waste classification and disposal routes are optimized to align with national waste management policies?</p>	<p>The strategy for managing RAW originating from decommissioning is described in detail in the National Program for the Management of RAW and SNF in the Slovak Republic and is fully consistent with this document. The process of optimizing the classification of RAW is applied throughout the entire process of managing this RAW and is based mainly on the principle of achieving the greatest possible degree of decontamination and waste release by various methods applicable to individual types of RAW.</p> <p>The strategy for managing RAW from nuclear power plants is based on the fact that there is no fundamental difference between the management of waste generated during operation and waste generated during the decommissioning of nuclear facilities. The general requirements for the management of RAW in accordance with the Atomic act are applied to the management of RAW from decommissioning. The framework for the national waste management program is based on the categorisation of radioactive waste in accordance with the ÚJD SR Decree No. 30/2012 Coll. laying down details of requirements for the handling of nuclear materials, radioactive waste and spent nuclear fuel, which is based on the approaches in the relevant IAEA safety standard. The main steps of RAW management from decommissioning before their disposal or long-term storage represents their sorting, collection, processing and conditioning. The strategy does not count on the use of other technologies for the processing and treatment of RAW than are currently used in the Slovak Republic.</p> <p>The fundamentals of liquid RAW treatment is, for example, their solidification into a suitable matrix and into a suitable package form. For solid RAW from decommissioning, their decontamination and fragmentation can be considered a processing technology. All activities in the management of radioactive waste must lead to their safe disposal.</p>
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33945	Belgium	42	Article 27	p.166	What specific protocols and agreements are in place to manage transboundary movement of radioactive waste with neighboring countries, and how do you ensure compliance with international standards during these movements?	Requirements for authorization of transboundary movement of RAW are settled down in Section 16 of Atomic act and it is a transposition of Council Directive 117/2006/Euratom. The holder, who plans to carry out cross-border transport within the territory of the Member States or to ensure the implementation of such cross-border transport and the country of origin is the Slovak Republic, shall file an application with the supervisory authority for permitting the cross-border transport in the form of standard documents. Realization of the transboundary transport of RAW is possible only after receiving the positive decisions/opinions of the supervisory authorities of all countries through whose territory the transportation of RAW is carried out. According the legislation requirements on transboundary movement, there is system of communication between the holder and supervisory authority. If the Slovak Republic is the country of destination, the consignee is required to send to the supervisory authority an acknowledgement on receiving every shipment within 15 days from receiving the shipment. If the Slovak Republic is the country of destination, the supervisory authority shall send a copy of acknowledgement on receiving a shipment to the Member State of origin and to each transit country. If the Slovak Republic is the country of origin, the supervisory authority shall send a copy of acknowledgement on receiving a shipment to the original holder.
33946	Belgium	43	Article 32	B p.16	Slovakia's report mentions improvements in waste treatment technologies. Can you please provide specific examples of how these improvements have enhanced safety or efficiency in radioactive waste management?	Improvements and modernization of RAW processing and treatment technologies consist mainly in the construction of new, modern and safe technologies such as a RAW incinerating facility, metallic RAW melting facility and the currently implemented project of completing a high-pressure compactor. The original saws and shears were replaced with new fragmentation devices on the operated fragmentation technology facility. At the same time, following operational experience and needs, minor changes were implemented after the approval of the Slovak Nuclear Regulatory Authority and the demonstration of their safety and positive impact on nuclear safety, such as the possibility of manual control of selected important incinerator equipment in the event of a control system failure, etc.

35403	Belarus	44	Article 32	Section D.2.2, p. 33	Which facilities are used for solid and liquid radioactive waste incineration at the Jaslovské Bohunice site?	Incinerating facility PS- 06 in the Radwaste Treatment Centre building and incinerating facility PS - 45 in building no. 809.
35404	Belarus	45	Article 32	Section D.2.3, p. 34	Why is the radioactive waste cementing technology considered more preferable than bituminization at the FS KRAO?	In order to ensure maximum efficiency in the processing of RA concentrates, the method of fixation into a bitumen matrix is currently not used. The volume of concentrates intended for fixation is processed in the form of active cement grout.
35405	Belarus	46	Article 32	Section D.2.7, p. 39	What engineering and geological barriers contribute to the safety of the RU RAO?	From a geological point of view, a stable location with suitable hydrogeology was selected for the National Radwaste Repository during its design. As for engineering barriers, the primary barrier is the fixation of the waste in a cement matrix, the waste itself is stored in Fibre-Concrete Container, which are stored in reinforced concrete boxes, which are built in a 1m thick clay tub located under the boxes. The entire repository is protected by a system of drainage systems, the purpose of which is to drain rainwater away from the area where the RAW is disposed.

35406	Belarus	47	Article 32	Section D.3.4, p. 46	How is the soil sorted in a mobile contaminated soil sorting facility? Please, provide more information about the capabilities and technical indicators of the mobile facility.	<p>The main purpose of the facility is to sort contaminated soils into specified categories for further handling (VLLW, LLW) based on 137Cs monitoring. Soils are sorted into three classes according to their mass activity. The facility operates in the measurement with sorting mode, or only soil measurement mode. Material of a defined thickness moves on a belt conveyor under a pair of shielded NaI detectors.</p> <p>Both detectors are inserted into the collimator. The detectors together with the collimator can be adjusted in height to maintain the distance of the detectors from the surface of the measured soil. The monitoring mode, the thickness of the measured material, the speed of the belt movement, sorting performance, and the boundaries of individual activity classes can be set by the user on the controlling PC. The sorting and operating part of the facility is placed in an ISO container, which ensures the transportability of the device to the required location. The workplace includes input and output transport devices. At the input, the material is poured into the hopper of the input belt conveyor. A sorting flap is located at the outlet, behind which there are three belt conveyors, which transport the measured and sorted material into attached transport containers and/or large-volume bags.</p>
38494	Russian Federation	48	General	-	Is there a need for deep geological repositories for higher level waste in Slovakia?	Yes, there is. Slovakia has a small nuclear programme that produces both spent nuclear fuel and higher activity RAW that cannot be stored in near surface waste repositories.
38495	Russian Federation	49	Article 32	D.2.7, p.39	What are the threshold groundwater levels for low- and very low-level RAW disposed of in the National RAW Repository (RÚ RAO)?	It is not possible to answer the question, because we do not know what the author had in mind and no groundwater threshold are mentioned in the text. We are not obliged to monitor groundwater within the national legislation on radiation protection in the scope of the Public Health Authority of the Slovak Republic.

38496	Russian Federation	50	Article 32	D.3.2, p.43	What is the end-state status expected for the NPP A1 Jaslovské Bohunice site upon completing its decommissioning?	The overall objective of the A1 and V1 NPPs decommissioning is to exempt the nuclear facility from administrative control. The buildings will be demolished with subsequent backfilling, and surface landscaping. A final dosimetry inspection will be carried out in the area remaining after the decommissioned buildings as well as in the A1 and V1 NPP area to confirm that the area can be exempt from administrative control and released for further industrial use. This will complete the decommissioning process of the A1 and V1 NPPs.
38532	Russian Federation	51	Article 32	B.1	The report states that the Slovak Republic operates an open fuel cycle. Are there plans to explore the feasibility of transitioning to a closed fuel cycle in the future?	Slovenske elektrarne (operator) operates VVER 440 types of reactors with an open fuel cycle and currently has no plans to explore possibility and feasibility to transitioning to a closed fuel cycle. French NEWCLEO have signed an agreement with JAVYS and VUJE, establishing a joint venture tasked with developing and constructing an Advanced Modular Reactor based nuclear power plant of up to four LFR-AS-200 reactors at the Jaslovske Bohunice V1 site. The venture is also supposed to aim to develop a nuclear fuel supply route with the ultimate goal of reprocessing and use of Slovak spent nuclear fuels and to enable long-term multi-recycling as part of a closed fuel cycle. Apart from this initiative the Slovak Republic continues to operate in the open fuel cycle mode.
38533	Russian Federation	52	Article 32	B.2	Could you provide specifics on the vitrification technology used for intermediate-level radioactive waste? How is the long-term safety of vitrified waste ensured?	Vitrification is a high-temperature process of processing liquid radioactive medium into a borosilicate type glass matrix, and is carried out with the aim of achieving a significant volume reduction of liquid RAW while achieving the required quality parameters for leachability and stability of the matrix in order to fulfil maximum safety during storage and later disposal of this specific radioactive liquid waste. Long-term storage of processed RAW (e.g. chrompic vitrificate) is ensured in specially adapted premises approved by regulatory authorities.

38534	Russian Federation	53	Article 32	D.1.2	<p>Could you elaborate on the findings of the stress tests conducted on the Interim Spent Fuel Storage facility (ISFS) following the Fukushima incident? What measures have been implemented to address seismic risks and ensure long-term safety?</p>	<p>The results of the evaluation of the program "Reassessment of the Interim Spent Fuel Storage facility response to Fukushima-type events" resulted in two measures: modification of the diesel generator control, which ensured automatic start of the diesel generator in the event of a complete loss of electrical power, and supplementing the relevant operating procedure with a procedure taking into account a seismic event, focused on the priority of restoring safety functions.</p>
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39221	China	54	Article 32.2.1	D3.4 P46 para 2	<p>The report states that the "Facility for sludge fixation, Workplace for sorting contaminated soil, and Mobile decontamination circuits have been established". Please describe Slovakia's regulatory requirements for mobile waste treatment facility, as well as the operation of these systems, including how they are transferred between different plant sites and the treatment of secondary waste generated during the treatment process.</p>	<p>Slovak legislation does not have special legislative requirements for mobile RAW treatment facility. The nuclear safety requirements for mobile treatment facilities are the same as the requirements for any nuclear facilities for RAW management, appropriate to their purpose. The license for the operation of a nuclear facility is issued by the UJD SR in accordance with Act No. 541/2004 Coll. The RAW management system is described in the operational documentation so as to ensure compliance with the requirements of the UJD SR Decree No. 30/2012 Coll. laying down details of requirements for the management of nuclear materials, radioactive waste and spent nuclear fuel.</p> <p>In practice, mobile facilities that handle radioactive waste in situ outside the barriers of buildings, such as the Sludge Fixation Facility and the Contaminated Soil Sorting Facility, were assessed and approved by the regulatory authorities of the Slovak Republic through a standard legislative process with an emphasis on a multiple barrier system and radiation protection.</p> <p>The operation of facilities of this type is governed by the implementation and safety documentation assessed by the regulatory authorities of the Slovak Republic according to the nature of the processed RAW. The relocation of facilities is assessed and approved as a change to a given nuclear facility by the Nuclear Regulatory Authority. The authorization of further operation after its relocation is preceded by the performance of pre-complex, complex and active tests, where their operability is proven. Decontamination circuit mobile facilities are intended for circuit decontamination of technological equipment and piping systems (primary circuit, auxiliary systems...) in the civil buildings of individual nuclear facilities, where barriers are part of the construction. Secondary RAW processing is carried out in a standard manner using processing technologies of JAVYS, a. s.</p>
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39222	China	55	Article 32.2.2	D2.2 P132 para 2	It is stated that a metal melting facility has been specifically constructed for the decommissioning of NPP A1 and NPP V1 within TSÚ RAO. Please describe the operation of the facility as well as the indicators and parameters, and subsequent consideration of the facility after the completion of decommissioning of the nuclear power plant.	An induction furnace with a capacity of 2000 kg is intended for melting of metallic RAW. A more detailed description of the facility can be found on the operator's website: <a href="https://www.javys.sk/sk/jadrove-zariadenia/technologie-spracovania-a-upravy-rao/pretavba">https://www.javys.sk/sk/jadrove-zariadenia/technologie-spracovania-a-upravy-rao/pretavba</a>
39223	China	56	Article 15	H.5 P156 para 3	The report points out that according to the safety requirements published by ÚJD SR, the safety analysis of activities during the retirement period of nuclear facilities needs to be independently evaluated by third-party organizations that do not directly participate in safety analysis. Please describe the relevant workflow and how to ensure the independence of third-party organizations.	<p>The supplier of safety analyses shall ensure that they are independently assessed by a third-party organization.</p> <p>Procedure for verification by an independent entity is specified in ÚJD SR's Decree No. 58/2006 Coll. as amended. Section 26, letter h)</p> <p>The content of the decommissioning plan shall include: "safety analyses of planned activities and potential incidents during decommissioning verified by an independent person"</p> <p>The applicant for a decommissioning license shall submit an independent safety analysis to the ÚJD SR together with the prescribed documentation specified in the Atomic Act.</p> <p>ÚJD SR has no influence on the selection of the safety analysis supplier.</p>

39224	China	57	Article 28	J P175 para 4	With the deployment of facilities managed by IRAW and ZRAM, all IRAW and RMUO have been transferred from existing facilities. IRAW includes used sealed sources, used liquid scintillators, liquid and solid radioactivity sources, common laboratory waste - gloves, glass, chemicals, also materials containing natural radionuclides. Please introduce the status of the above waste at the time of storage, including package, conditioning measures, its surface dose level and contamination control level.	The Facility for management of institutional RAW and collected radioactive material in Mochovce does not store RAW of the common laboratory waste type - gloves, glass, chemicals. Only radioactive waste processed into a solid form is stored there so that the dose equivalent rate on the surface of the package form is less than 0.1 mSv/h and the surface contamination on the outer surface of the package form is less than 3 Bq/cm <sup>2</sup> for beta, gamma and low-toxic alpha nuclides and less than 0.3 Bq/cm <sup>2</sup> for other alpha nuclides. Institutional RAW and collected radioactive material are stored in this facility in MEVA drums.
39225	China	58	General	K.1 P180 para 3	The report points out that nuclear power plants have added new equipment to the existing system for concentrate, using absorbents to separate the radioactive nuclide and drying the salt to subsequently reduce the volume of the inactive concentrate by drying it to a crystalline salt. Please describe the subsequent treatment process of the adsorbents and salts generated by the above process.	<p>From the point of view of NPP operator, Slovenske elektrarne Investment Committee approved the cancellation of the project Avantech (Liquid radioactive concentrate treatment system) based on decision of EPH representatives.</p> <p>Significant risks were identified during project management:</p> <ul style="list-style-type: none"> <li>• Failure to achieve the required product quality- technology not yet proven in practice in the world</li> <li>• Increase in the expected price for waste processing from JAVYS</li> </ul> <p>There were planned to release non- radioactive salts into the environment like a dangerous solid waste. We planned to treat the sorbents from project into two ways: standard treatment at JAVYS or by a contractor into SIAL matrix and followed cementation.</p> <p>From the RAW treatment company point of view. currently, the mentioned RAW is not processed in JAVYS. The processing of this type of RAW will depend on the product data, which have not been provided to us by Slovenské elektrárne, a. s. so far. Only after obtaining this information will analyses be prepared and the possibilities of processing</p>

						this type of waste in JAVYS assessed, and this process will be subject to approval by Nuclear Regulatory Authority of the Slovak Republic.
39226	China	59	General	A Introduction, No. 6, Para2 P13	It is stated that "a) a contract for the take-back of the high-activity source by its manufacturer or supplier, b) a contract for commercial insurance against the cost of disposing of the high-activity source due to insolvency at the time the source becomes a disused source or abandoned source". Please introduce some details about commercial insurance.	The primary obligation is to deposit a financial deposit to the National Nuclear Fund. In the case that this payment represents a significant financial burden for the applicant (depending on the type and activity of the HASS), there are some other options how to fulfil this legislative provision. Except of those mentioned in the question, there is also the third option for the applicant for an authorisation who can submit together with the application for authorisation: c) a contract for the disposal of a high-activity source with a licence holder for the collection, sorting, storage, treatment, conditioning for disposal and disposal of radioactive waste at the time, when the source becomes a disused source. The contract for commercial insurance has never been submitted to the regulatory authorities during the authorization process. This was confirmed by the regional public health authorities. The applicants usually submit the contract with the manufacturer or supplier or the contract with the authorized company for the collection, sorting, storage, treatment, conditioning for disposal and disposal of radioactive waste (JAVYS).

39227	China	60	Article 32.2.1	D.2.1,Page 32, para 2 &3	<p>The report states "Solid RAW treatment facilities are: collection equipment, sorting equipment, washers, dryers, low pressure compactor and fragmentation equipment. These are used for fragmentation of large-size metallic solid RAW." and "Liquid RAW treatment facilities are: purification (filtration) stations with ion exchange resins (ŠOV 1, 4, 5 – single-block; ŠOV 2, 3, 6 - common), evaporating distillation equipment, treatment plant for contaminated oil, concentrate homogenization node and filling stations". For solid RAW treatment facilities, what are the requirements for fragmentation size of large-size metallic and for the radioactivity of metal after decontamination? What are the cutting and decontamination methods for these metals? For liquid RAW treatment facilities, could you give more introduction of contaminated oil treatment, such as road-map?</p>	<p>Treated RAW, including large metallic RAW (components), must meet the acceptability criteria specified in <i>Limits &amp; Conditions</i>. Saws, shearing machines, burning chamber are used within the fragmentation workplaces. Decontamination of metallic RAW is carried out using the “wet” methods in ultrasound baths, or by sand-blasting, or using the metallic RAW melting method. The Limits for release of decontaminated RAW result from the legislation effective in the Slovak Republic. Contaminated oils are treated by incineration by injection into an incineration furnace.</p>
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39228	China	61	Article 32.2.2	D.2.4, Page 35, para 1	<p>The report states that "IS RAO is used for storage of the following RAW: - Solid or solidified RAW before their further treatment in JAVYS, a. s., facilities - Solid or solidified RAW until their permanent final disposal, - Solid or solidified RAW for a period, during which their activity goes down to a level that they can be released into the environment." Please introduce the quantities and percentages of medium-level, low-level, cleared, and remelting waste produced by two reactors in the decommissioning phase. How many years are permitted for the temporary storage of metal that can be cleared before it is clearance? How are medium-level waste treated and disposed of? How are wastes with alpha surface contamination sorted? Are there specific decontamination requirements for wastes with alpha surface contamination, and does this affect the classification of radioactive waste?</p>	<p>Maximum total activity of RAW stored in the IS RAW (Interim Storage of RAW) facility is maximum 1x10 to 18 Bq. The period required for storage of metallic waste before its release to the environment is assessed individually according to the activity and specific radionuclide, thus it is not possible to give a general indication of the period when the activity would fall below the limit level before its release. The lifetime of IS RAW facility is planned to be at least 100 years. In case of RAW not expected to be released within this period, it will be stored at the Deep Geological Repository. No specific procedures are used for alpha surface contamination.</p>
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39229	China	62	Article 11	H.1.1, Page 150, para 2	<p>The report mentioned Draft procedure for measuring low contaminated materials from the operation of NPP V1, V2 and their release into the environment and Methodology for releasing low contaminated waste from operation of NPP V1, V2 into the environment, could you introduce more about the approval process, and the technical requirement on the review side?</p>	<p>According to Article 28 para 1. letter e) of the Act No. 87/2018 Coll. On Radiation Protection, authorization from ÚVZ SR from the aspect of radiation protection is needed in the nuclear facility for releasing radioactive substances and radioactively contaminated material and objects, which originated or were used during activity performed based on authorization in the nuclear facility, from administrative control. Physical person – entrepreneur or legal person who has the intent to release radioactively contaminated material from administrative control is obliged to apply an application to the regulatory authority. Documentation that must be submitted to the regulatory authority including all the procedures and methodologies contains:</p> <ul style="list-style-type: none"> <li>a) description and justification of the activity,</li> <li>b) description of technological systems related to the sorting and processing of radioactively contaminated materials before their release from administrative control,</li> <li>c) method and conditions of releasing radioactively contaminated materials into the environment,</li> <li>d) proposal of activity limit values and reference levels for radioactively contaminated materials released from administrative control and their justification, monitoring systems, and a monitoring plan for radioactively contaminated materials released from administrative control,</li> <li>e) system for recording data on radioactive materials released from administrative control and templates of documents used in the recording system,</li> <li>f) assessment of the impact of the release of radioactively contaminated materials from administrative control on the exposure of the population, if the activities of the released materials are higher than the established release levels,</li> <li>g) assessment of the possibility of a radiation emergency arising from the release of radioactively contaminated materials from administrative control and evaluation of its consequences,</li> <li>h) documents on metrological verification or calibration of monitoring systems, during calibration, it is necessary to demonstrate metrological traceability, including the scope and frequency of their verification and</li> </ul>
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					<p>calibration.</p> <p>When an authorization application is submitted to the ÚVZ SR, the ÚVZ SR reviews that documentation and its compliance with the legislation, radiation protection principles, dose limits, reference levels, clearance levels, etc., in addition, technical service providers could be requested to provide support for the authorization procedure and the review process.</p> <p>In practice, licensing related to the methodology development is an iterative process. It requires close cooperation with the regulatory authorities. The Licensing plan must be developed with criteria, guidelines, references, it includes requests/applications under the effective legislation, planned clarifications and/or negotiations, associated time schedules and expected periods required for obtaining permits, statements/opinions and authorisations from the regulatory authorities. This process includes the preparation and submission of required documents for licensing and certification of equipment and thereto related components. The licensing documentation was prepared in three stages:</p> <ul style="list-style-type: none"> <li>• Development of the release concept and its discussion with the Regulatory authority</li> <li>• Development of the licensing documentation</li> <li>• Cooperation with the regulatory authority on permitting the releases to the environment</li> </ul>
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39230	China	63	Article 14	H.4, Page 153, para 4	<p>The report states that “The design of a nuclear facility must, through design features, take account of planned decommissioning and take into account expected levels of contamination and activation of the nuclear facility at the end of the service life ” . Please introduce how to consider specific requirements for convenient decommissioning during the design stage for new nuclear power units, and whether samples of different materials are required to be sampled during the construction stage in order to be used as input for activation source calculation when subsequent units are decommissioned; please explain what regulatory requirements exist for decommissioning funds before, after and during facility construction.</p>	<p>Specific requirements for activities during the design phase of the new NPP units are stipulated in the effective legislation. The defined set of documentation required for the license/permit application for each stage (nuclear facility siting, construction permit, commissioning of the nuclear facility, NPP decommissioning) includes, among other documentation, a plan for the radioactive waste and spent nuclear fuel management and documentation on the method of NPP decommissioning, a conceptual plan for the NPP decommissioning, which is subsequently elaborated into a detailed decommissioning plan prior to the decommissioning stage. In general, the Decommissioning Plan is a document containing detailed information on the NPP decommissioning. It provides more detailed information on the objectives and scope of decommissioning, the decommissioning time schedule and cost estimates. The estimated costs of the NPP decommissioning cover all activities necessary for the successful decommissioning of the NPP at a given time.</p> <p>Calculation of the estimated V1 NPP decommissioning costs is developed in the “International Structure for Decommissioning Costing”. V1 NPP decommissioning is funded from the resources of:</p> <ol style="list-style-type: none"> <li>1. The Slovak Republic <ul style="list-style-type: none"> <li>• The National Nuclear Fund</li> <li>• Own resources (funds) of company JAVYS a. s.</li> </ul> </li> <li>2. The European Union provided through the ""Bohunice Programme"" <ul style="list-style-type: none"> <li>• European Bank for Reconstruction and Development (EBRD)</li> <li>• Slovak Innovation and Energy Agency (SIEA)</li> </ul> </li> </ol> <p>Decommissioning planning from the early stages of new nuclear power units design should significantly facilitate and economically make its implementation more efficient.</p> <p>The general legislative requirement for the design of nuclear installation, stated in Decree No. 430/2011 Coll., requires that the design shall take account, through design characteristics, the planned decommissioning, considering assumed levels of contamination and activation of the nuclear installation at the end of operation.</p> <p>Consideration of decommissioning requirements in the design of</p>
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					<p>nuclear installation is the content of the Reference report on the method of decommissioning, which is the first-level document in the hierarchy of decommissioning plans. It is submitted as part of the documentation required for the written application for approval of the siting of a nuclear installation. The requirement to take samples of various materials during the construction stage is not directly stipulated in the legislation. However, it was already considered in the Reference report on the method of decommissioning, which UJD SR assessed as part of the new nuclear power unit siting, and it is assumed that it will be applied in the case of construction, which is expected to take place in about a few years. The currently ongoing construction of MO4 in Mochovce does not implement this approach.</p>
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According to the Atomic act, the holder of authorisation for commissioning and operation has the obligation to provide for earmarked funding to cover the costs associated with decommissioning. There are no regulatory requirements for decommissioning funds for the phase before, after and during the construction of a nuclear facility.

The National Nuclear Fund only has to review the "financial" part of the decommissioning plan (the evaluation of the costs). The funds (financial means as a fee) for NI are collected only during the operational period of the NI - after the construction.

39231	China	64	Planned Activities	K.1, Page 178, para 2	The report states that "Approval for the construction of the metal RAW by the ÚJD SR in June 2023" , Please introduce whether the debugging results are required in the approval process of radioactive metal smelting facilities, if so, at which stage they should be provided, and if not, how to prove that the design requirements are met; how are the processing capacity and receiving radioactivity levels of the smelting facilities determined?	Commissioning of metallic RAW melting facility was preceded by performance of pre-commissioning and commissioning tests, during which the facility was tuned/adjusted and subsequently the operability of the facility was demonstrated by the evaluation of these tests. Only on the basis of demonstration of compliance with the operating parameters of the facility, the permit for its active operation was issued by the Nuclear Regulatory Authority of the Slovak Republic. The processing capacity results from the volume/quantity of the furnace batch and operating modes of the facility. The limits for acceptance (receiving) of RAW for melting result from the safety analyses carried out and are specified in the operational procedure approved by the Nuclear Regulatory Authority of the Slovak Republic.
39232	China	65	Planned Activities	K.1, Page 179, para 1&2	Please introduce how the main nuclides in waste are determined at different stages of the decommissioning of NPP A1 & NPP V1, and whether different waste streams have different main nuclides; in addition, when estimating the source term of decommissioning, whether it is required to further supplement the source term during the demolition process. Whether these supplementary survey results have any major adjustments to the source term estimate or the demolition and decontamination plan; As for the approval process before decommissioning approval, what documents or materials are mainly approved, what contents are concerned about, and how to	<p>Process of the NPPs decommissioning in the Slovak Republic is based on the so-called continuous option of the nuclear installation decommissioning, which is presented in the strategic document "National Policy and National Programme for Spent Nuclear Fuel and Radioactive Waste Management in the Slovak Republic" approved by the Government of the Slovak Republic, in which the framework time schedule (stages) of the nuclear installation decommissioning in the Slovak Republic is defined.</p> <p>Necessary documentation: <b>Ministry of Environment of the Slovak Republic (EIA process)</b></p> <p>In accordance with the effective legislation for the Environmental Impact Assessment, which in order to ensure a high level of environmental protection provides for a procedure of professional and public assessment of the expected environmental impacts, the Preliminary Environmental Study with the assessment of impact of the NPPs decommissioning stage on the environment is prepared. The so-called scope of the assessment to the Preliminary Environmental Study is issued by the Ministry of Environment of the Slovak Republic, on the basis of which the Report on the assessment of impact of the nuclear installation decommissioning stage on the environment is prepared. As a result of the EIA process, the final opinion of the Ministry of</p>

				<p>consider the different stages of decommissioning; what documents or materials need to be approved and what contents are concerned about before the different stages of decommissioning begin.</p>	<p>Environment of the Slovak Republic on the assessed activity is issued.</p> <p><b>Nuclear Regulatory Authority of the Slovak Republic</b></p> <p>In line with the Act on Peaceful Use of Nuclear Energy, a conceptual decommissioning plan is submitted to the Nuclear Regulatory Authority of the Slovak Republic prior to the planned decommissioning of a nuclear installation in order to terminate its operation. In order to obtain the decision of the Nuclear Regulatory Authority of the Slovak Republic for the decommissioning stage of a nuclear installation, a legally defined set of documents is prepared as part of the application, e.g. the NPP Decommissioning Stage Plan, Concept after the end of the relevant Stage, RAW and conventional waste from decommissioning management and transport plan, etc. At the end of the stage, the Periodic Nuclear Safety Assessment of the relevant stage is sent to the Nuclear Regulatory Authority of the Slovak Republic for review. The above-mentioned legislative process is repeated for the licensing of each nuclear installation decommissioning stage until the nuclear installation decommissioning process has been completed. The structure and content of individual documents are defined by implementing regulations of the Nuclear Regulatory Authority of the Slovak Republic to the Act on Peaceful Use of Nuclear Energy.</p> <p><b>PUBLIC HEALTH AUTHORITY OF THE SLOVAK REPUBLIC</b></p> <p>Within the decommissioning process of the nuclear installation, activities leading to radiation exposure are carried out. The process of assessment and approval of these activities is specified in the Act on Radiation Protection, which, among other things, regulates the activities of state administration bodies in the field of radiation protection, the conditions for carrying out activities leading to radiation exposure, and requirements for the management of radioactive substances.</p> <p>Within the framework of the licensing process for the nuclear installation decommissioning, Public Health Authority of the Slovak Republic issues a decision on activities leading to radiation exposure, which are subject to the NPP's decommissioning stage. The following documentation required by the legislation, among others, is prepared</p>
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					<p>for the licensing process: Radiation Protection Programme, Decommissioning Stage Programme, Decommissioning Concept after the end of the relevant Stage, RAW and conventional waste from decommissioning management and transport plan.</p> <p>European Commission (EC)</p> <p>As a member of the EU, the Slovak Republic is obliged to submit the required information on nuclear installations to the European Commission. This means that for the decommissioning stage, documentation on the notification obligation under No. 37 of the EURATOM Treaty is prepared and sent to the EC via authorized state administration body (Nuclear Regulatory Authority of the Slovak Republic) in order to obtain its opinion.</p> <p>Another document sent to the EC is the documentation for the fulfilment of notification obligation under Article 41 of the EURATOM Treaty, in which information on upcoming investment activities carried out during the relevant stage is sent.</p> <p>In addition to the documentation required for the issuance of decommissioning stage licenses, the licence holder must have quality management system documentation and operational documentation for all processes, equipment, facilities and workplaces, setting out the procedures and methodologies for the relevant nuclear installation decommissioning, treatment and management of decommissioning waste, and management and organisation of decommissioning projects.</p>
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39233	China	66	Planned Activities	K.1, Page 180, para 1&2	<p>The Report states that “Change in the system of treating liquid radioactive concentrates in NPP Mochovce Activity in progress” , please introduce the activity concentration level of the concentrate before treatment. How the new treatment method is used for decontamination of different nuclides, the radioactivity level of the concentrated waste, and how to treat and dispose of it.</p>	<p>The SE Investment Committee approved the cancellation of the Avantech project (Liquid Radioactive Concentrate Treatment System) based on the decision of EPH representatives. Significant risks were identified during project management:</p> <ul style="list-style-type: none"> <li>• Failure to achieve the required product quality- technology not yet proven in practice in the world</li> <li>• Increase in the expected price for waste processing from JAVYS</li> </ul> <p>The total activity (beta + gamma) concentration level of the concentrate before treatment is &lt; 5.0E+6 Bq/l.</p> <p>Plan: Treatment of radioactive liquid concentrates with Avantech technology to reduce the final volume of radioactive waste for the external processor to approximately 8% of the original volume.</p> <ol style="list-style-type: none"> <li>1. Ozonation and ultrafiltration for oxidation of organics as chelating agents and oils with coprecipitation of some isotopes such as Co60, Mn54, Fe55, Co58, Ag110, etc.</li> <li>2. Ion-selective media for fixation of soluble ionic forms of Cs, Sb, Se, Zr, Co, Mn radionuclides.</li> <li>3. Vacuum dryer for reduction of H3 and C14.</li> </ol>
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39234	China	67	Article 27	P171 I.2	Report I.2 mentions that you import RAW from Italy for its treatment by incineration. In addition to transboundary authorization, do such foreign waste incineration activities require other administrative approval? What are the standards for charging?	<p>The process of transboundary shipment of RAW from Italy to Slovakia, for its treatment by incineration in Jaslovské Bohunice, were running since June 2018 to December 2023, when all secondary waste generated from treatment was shipped back to Italy, what meant the end of this project.</p> <p>Realization of the transboundary transport of RAW for its treatment requires several licensing steps by the authorizing authorities:</p> <ul style="list-style-type: none"> <li>• approval of the type of transport equipment (package design) in the form of decision</li> <li>• transport permit issued by UJD SR in the form of decision (maximum period - three years for RAW)</li> <li>• authorization according to Council Directive 117/2006/Euratom (3 years validity) – standard documents</li> <li>• import/export permit issued by UJD SR in the form of decision</li> </ul> <p>In SR we do not have the standards for charging, in Atomic Act there is settled down in Section 34a Contributions from the authorisation holders for state supervision.</p> <p>The MD SR performs state supervision over the provision of radiation protection in the transport of radioactive materials in the form of on-site controls and inspections within the scope of its competence in the field of radiation protection pursuant to No. 87/2018 Coll.</p>
39235	China	68	Article 32	P16, Para.4 P25, Para.4	The report mentions solid neutron absorbent, please introduce the type and technical parameters of neutron absorbers, as well as the specific requirements of various regulatory standards for the credit of neutron absorbing nuclides content, and the requirements of relevant standards for the measurement of neutron absorbing nuclide content.	Solid neutron absorbers currently used in spent nuclear fuel storage are in the form of ATABOR boron steel baskets (Compact basket 48 or Basket VJP-85) and storage grids. There are no specific regulatory requirements on absorbing nuclides content. As explained in the National report (pg. 138): "efficiency of the solid absorbent use is proved by calculation or experiment". In 2018 ATABOR witness samples were checked on the amount of boron after years of exposure. The measurements showed a sufficient quantity of boron to ensure subcriticality.

39236	China	69	Article 28	J Disused Sealed Sources, Page 174/204	<p>It is said that the holder of an authorisation for activities leading to radiation exposure with a source of ionising radiation is obliged to hand over the sealed source to a supplier, manufacturer or an organisation authorised by the UVZ SR for the collection, assembly, storage and treatment of radioactive sources, including ionising fire detectors, for disposal without delay, no later than 12 months from the date on which the sealed source has become unused. Please explain what measures are taken to ensure the safety of disused radioactive sources before they are sent to the supplier, manufacturer, or organisation authorised by the UVZ SR.</p>	<p>All activities related to the management of disused sources (collection, storage, treatment, disposal, transport etc.) of disused sources are subject to licensing, inspection and enforcement of regulatory requirements. The time limit for short-term storage of a disused source is 12 months after the source become disused - the authorized user is not allowed to store a disused source longer. All disused sources are reported and are under continuous regulatory control. Registrants and licensees are required to ensure that when radioactive sources are not in use they are stored appropriately for protection and safety. According to Article 84 of the Act No. 87/2018 Coll. on Radiation Protection, a physical person – entrepreneur, or legal person, who performs an activity with a radioactive source, is obliged to secure its safety and security; this provision also relates to devices, which contains radioactive sealed source. Securing safety and security includes protection of radioactive sources against theft, loss, damage, destruction, or unauthorized manipulation, unauthorized use by another person during its usage, transport, and storage, after ending of usage till handing over.</p> <p>As for practical measures of NPP operator in the Slovak Republic, unused sources are collected in a special storage room inside the controlled area, which is fully under the control of the Radiation Protection Department. The room is locked, sealed, and has restricted access (only radiation protection staff are allowed). On the day of transport, the sealed radioactive sources are transported to the auxiliary building (unit 801) with the assistance of radiation protection staff, prepared according to legislative requirements for transport, and then handed over to an authorized organization.</p>
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39237	China	70	Article 21	Section F. P37, Para 7	It is stated that "The radioactive waste producer shall pay all the expenses incurred during the management of radioactive waste from the moment of its generation to its emplacement at a disposal facility". The Ignalina Nuclear Power Plant (INPP) was shut down in 2009, how should it pay for the disposal of radioactive waste?	Since the Ignalina Nuclear Power Plant is located in Lithuania, we assume that this question was meant to be addressed to Lithuania. As concerns Slovakia's approach, disposal of RAW from Bohunice is financed in part by levy collected by the transmission system operator and a distribution system operator (hereinafter referred to as "System Operator"), to cover historical debt (hereinafter referred to as "levy"); The levy is a part of the price of electricity supplied to end customers (see National report, section F 2.2 Financial Resources, pg. 94)
39686	Austria	71	Article 25	Section F.5.3.5, p. 129	The Slovak Republic participated in the INEX 6 exercise, conducted as a table top exercise in 2024. The exercise addressed issues related to the long-term management of the recovery phase, one year after the end of a radiological event that occurred during the transport of radioactive materials. Please describe your main findings with respect to appropriateness of the use of existing legislation and procedures regarding the management of radioactive waste and any other findings you consider relevant resulting from the radiological event.	<p>In the Evaluation Report on the execution and assessment of exercise INEX 6 in the Slovak Republic, a total of 17 findings arising from the conclusions of the exercise were identified:</p> <ol style="list-style-type: none"> <li>1. Crisis communication: The exercise highlighted the absence of a National Public Communication Plan for radiological events. To address this, the government should update communication protocols and documents to ensure timely and accurate information during emergencies.</li> <li>2. Update of documentation of counter-radiation measures: The existing documentation of counter-radiation measures, an internal document of Ministry of Interior developed for the management of major radiological emergencies, will be submitted to the Central Crisis Response Team members (relevant ministries and organisations) for review, comments and final approval.</li> <li>3. Emergency response system updates: There is a need to refresh the list of measures under the National Emergency Response System as well as the Catalogue of Measures of the National Emergency Response System to address gaps identified in the exercise, ensuring proper coordination and responsibility distribution across involved ministries and organisations.</li> <li>4. Leading organization for recovery: Currently, there is no designated body for managing the post-emergency recovery phase. A dedicated organization should be established to oversee recovery processes, ensuring effective public safety and environmental protection.</li> <li>5. Database of persons affected by radiological incident or accident:</li> </ol>

					<p>Legislative changes should be made to facilitate the creation of centralized database (along with technical solutions for data collection and sharing) to track individuals impacted by radiological events.</p> <p>6. Mental health support: A national system for mental health support after radiological events is lacking. Internationally recognised minimum standards (Minimum Service Package), successfully used during the response to the crisis triggered by the war in Ukraine, should be scaled up and integrated into the broader nation-wide emergency response framework to cover different types of emergency situations.</p> <p>7. Improvement in technical and health education: The education system needs to include more comprehensive training on radiological events for healthcare workers and technical professionals, such as students of medicine, natural sciences and nuclear physics, medical and laboratory personnel, to improve response capabilities.</p> <p>8. Training of healthcare providers: Healthcare workers should undergo regular training on radiological event preparedness, including handling and treatment of injured persons and use of protective equipment.</p> <p>9. Expanding the number of healthcare providers: Emergency services and healthcare providers in key cities need more resources to prepare for radiological emergencies, ensuring that they can respond effectively to large-scale incidents.</p> <p>10. Equipment for internal exposure measurement: The lack of equipment to measure internal radiation exposure needs to be addressed, with improvements in public procurement to ensure specialized healthcare facilities are equipped adequately.</p> <p>11. Radiation monitoring network: The radiation monitoring network requires analysis and interconnection of information systems to improve response efficiency. Financial resources should be allocated to strengthen its personnel and technical capacities.</p> <p>12. Regular preparedness exercises: Healthcare providers must be involved in regular emergency preparedness exercises to ensure readiness for radiological emergencies, including training with local hospitals and outpatient healthcare providers.</p> <p>13. Improving the system of official laboratories: Official laboratories need modernized technical resources and more skilled workforce not</p>
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					<p>only for routine official measurements, but also for radiological emergencies and related follow-up measurements and actions. A renewal plan for laboratory equipment (short and long-term) should be developed.</p> <p>14. Disposal of contaminated animals: A clear system for managing and disposing of animals contaminated by radioactive materials must be developed to avoid disrupting normal operations of rendering plants and ensure environmental safety.</p> <p>15. Management of radioactive waste: Slovak laws do not specify entities responsible for the management of radioactive waste generated during an emergency. The Atomic Energy Act, specifies the responsibility for the management of radioactive waste arising from the commissioning, operation and decommissioning of a nuclear installation by a competent organisation commissioned by the Ministry of Health of the Slovak Republic. Amendments should be made to clarify responsibilities and improve waste management protocols.</p> <p>16. Radioactive material storage: The law concerning the storage of radioactive waste at the incident site should be amended to ensure its safe management beyond the 12-month period currently allowed by law.</p> <p>17. 24/7 on-call duty: A system should be implemented and sufficient financial resources must be allocated to ensure round-the-clock availability of qualified personnel across relevant ministries and other central government authorities.</p>
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40540	Slovenia	72	Article 28	p. 175	<p>The Report briefly lists, among other, the campaign “Amnesty for disused sources of ionizing radiation and radioactive materials in 2022/2023”. Can you provide any feedback about its outcome, "success" and lessons-learnt to be shared among similar-size/nuclear program countries?</p>	<p>To reduce the risk of illegal handling of used radioactive sources and radioactive materials and their possible misuse for terrorist purposes, it was and still is necessary to search for them actively and to develop procedures aimed at prevention, early detection, and rapid response to avoid endangering the health of the population. In 2022 - 2023, the ÚVZ SR, in cooperation with the RÚVZ based in Bratislava, the RÚVZ in Banská Bystrica, the RÚVZ in Nitra, and the RÚVZ in Košice, implemented a campaign to search for and identify used radioactive sources and radioactive materials, to create a database, primarily of radioactive sources and radioactive materials whose owner cannot be easily and unambiguously identified, as they are located in business entities that have undergone several ownership transformations. No one has reported the liabilities of radioactive sources, but also of radioactive materials that were of traceable origin, but were stored in unsuitable conditions, as their liquidation was financially demanding. The information that the ÚVZ SR obtained through the campaign to search for used radioactive sources and radioactive materials was used for the needs of creating a database (these were very old legacies, mainly from research activities in the past) and served as a basis for estimating the necessary financial costs for the disposal of these materials and for making a mechanism for financing their collection. The ÚVZ SR, in cooperation with the commercial company JAVYS, a. s., created a database of institutional radioactive waste (IRAO), which is owned by both state and private entities and meets the above criteria. The IRAO in question was disposed of, using the financial resources of the company JAVYS, a. s.</p> <p>In total, institutional RAW (IRAW) from 13 organisations was taken over as part of the campaign implemented in 2022-2023. The organisations, from which the IRAW was taken over, were made free of historical burdens and the 'amnesty' had positive feedback.</p>
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40644	Armenia	73	General	N/A	<p>How is aging management and LTO conducted for spent nuclear fuel facilities? Are the SNF assemblies and casks are subject for aging management and LTO?</p> <p>Are these casks regularly monitored? Additionally, is there a requirement for re-assessment of SNF facilities due to changes in nuclear fuel type?</p>	<p>Ageing and LTO management for spent fuel storage facilities is implemented through a monitoring programme (the programme for monitoring of controlled ageing of important technological equipment and systems approved by the Nuclear Regulatory Authority of the Slovak Republic). Both the SNF and the containers are included in this programme and are therefore regularly monitored and their condition is assessed. If there is a change in the SNF type, all SNF storage facilities are analysed and compliance with the criteria for the storage of such SNF is demonstrated to the Nuclear Regulatory Authority of the Slovak Republic.</p>
43295	Germany	74	General	Section A - p.15	<p>With regard to the consideration of extended storage for spent fuel elements, the report refers to an action plan for implementing the measures from the IRRS mission. Can you please explain in more detail the measures formulated there regarding extended interim storage?</p>	<p>Slovakia currently operates Interim Spent Fuel Storage that consists of a wet interim storage facility and a newly built dry interim storage facility. It is important to note that both of these facilities use storage-only equipment. This equipment is not designed nor certified for transportation after the storage period. This means that the fuel, once stored, cannot be directly transported in its current storage containers. The new dry storage canisters are single purpose for storage only.</p> <p>The 2022 IAEA IRRS Mission highlighted a need for the Slovak Republic to ensure the incorporation of the assessment of ageing management mechanisms into the authorisation process for packaging to transport nuclear and radioactive materials in accordance with IAEA safety standards. It is essential to note that this finding specifically refers to transportation equipment and packages, not storage equipment. Our current legislation update also reflects this focus.</p>

43296	Germany	75	Article 19	Section E.2.1 - p.68	The report mentions that the findings of the ARTEMIS Mission have been translated into an Action Plan, taken note of by the Slovak Government in August 2023, and are also considered in the framework of updated National Program for the Management of SNF and RAW. Could Slovakia please further describe the content of this Action Plan?	The ARTEMIS Action Plan includes 13 tasks stemming from 13 findings (originally 11 Recommendations and 2 Suggestions from the Final Report). The Action plan includes the responsible state authorities and stakeholders to address all findings and respective tasks. The findings have been also taken into the updated National programme (currently under the Strategic Environmental Assessment process, available as version from February 2024 also in German and in English at <a href="https://www.enviroportal.sk/eia/detail/vnutrostatny-program-nakladania-s-vyhoretym-jadrovym-palivom-radioakti">https://www.enviroportal.sk/eia/detail/vnutrostatny-program-nakladania-s-vyhoretym-jadrovym-palivom-radioakti</a> ) as Annex 1 of the National programme. A separate action plan consisting of the ARTEMIS findings has not been conducted.
43297	Germany	76	Article 32	Section D.1.2 - p.26	The report mentions that the service life of the ISFS after the 1997-1999 refurbishment is at least 50 years. The deep geological repository is expected to be commissioned roughly around 2065 (p. 148). What are the plans for the extension of ISFS when a deep geological repository will be available in 2065? What would be the requirements for such an extension?	In 2024, new "dry" storage capacities were put into operation, completed as part of Phase 1 of the extension of the SNF storage capacities in the ISFS facility, having a lifetime of at least 100 years. It is foreseen to extend the SNF storage capacity until the construction of the Deep Geological Repository in the framework of Phase II of the SNF Storage Capacity Completion.
43298	Germany	77	Article 32	Section D.1.2 - p.31	In December 2023, 98% of the storage capacity of the ISFS was reached. According to the report, the planned completion and commissioning of the new storage capacity of the ISFS is expected for early 2024. According to the report on p. 178, the project (new storage capacity) is in the final phase of implementation. Has the expansion of the facility been put into	The new storage capacities were commissioned in 2024 with a capacity of 10,115 pieces of SNF. With an expected import of about 450 pieces of SNF per year, the existing storage capacity limit will be reached in about 22 years.

					operation in the meantime? When will the maximum storage capacity be reached?	
43623	France	78	General	None	<b>Comment:</b> In Slovakia's 2024 National Report, the information updated (additions/modifications) with respect to the previous report is highlighted using italic font text. This way of presenting recent updates in the country is very helpful and could be used by other parties.	Thank you for this positive feedback.
43624	France	79	Article 32	Section B - p17	It is indicated in the National Report that an increase in the Interim Spent Fuel Storage (ISFS) capacity was planned for the beginning of 2024. Could Slovakia indicate if this new storage capacity is already operational?	Yes, the new storage capacity is already operational.
43625	France	80	General	Introduction, Annexe I	It is indicated in the National Report that 3 units are under operation at the Mochovce NPP. A fourth unit is mentioned for this NPP in Annex I, without further information. Could Slovakia indicate the status of Mochovce unit 4?	As of February 2025, Mochovce Unit 4 is under construction.
45674	Poland	81	Article 9	Section G, page 146	Please provide data on the number and nature of unplanned incidents in facilities during the reporting period.	During the monitored period, no INES-classified operational event was reported in nuclear facilities operated by company JAVYS, a. s.

					<b><u>Comment:</u></b> No detailed data on unplanned operational events or incidents.	
45676	Poland	82	Article 27	Section I	<p>Could you provide details on measures ensuring the safety of transboundary movements of radioactive materials?</p> <p><b><u>Comment:</u></b> Limited description of procedures for international transport of radioactive materials.</p>	<p>In compliance with the provisions of the Code of Conduct and the Guidance, an authorization for the import of radioactive sources according to Article 28 of the Act NO. 87/2018 Coll. on Radiation Protection is required. The authorization is issued only if the recipient is authorized to receive and use the radioactive source of the respective category. The Government of the Slovak Republic has expressed their political commitment in the application of the Code of Conduct on safety and security of radioactive sources (Code of Conduct). Additionally, in 2023, the Government of the Slovak Republic expressed their political commitment to the supplementary guidance on the Import and Export of Radioactive Sources to provide for an adequate transfer of responsibility when a source is being transferred from the Slovak Republic to another country and to the Guidance on the Management of Disused Radioactive Sources regarding the establishment of a national policy and strategy for the management of disused sources, and on the implementation of management options such as recycling and reuse, long term storage pending disposal and return to a supplier. The list of countries that have expressed a political commitment to implement or comply with the IAEA Guidelines, including the Slovak Republic, is available online: <a href="https://nucleus.iaea.org/sites/ns/code-of-conduct-radioactive-sources/Documents/Status_list%2026%20November%202024.pdf">https://nucleus.iaea.org/sites/ns/code-of-conduct-radioactive-sources/Documents/Status_list%2026%20November%202024.pdf</a></p> <p>Transport of radioactive waste, including cross-border transport, is permitted in accordance with the requirements of Section 15 and Section 16 of the Atomic Act and UJD SR's Decree No. 57/2006 Coll., which lays down details of the requirements for the transportation of radioactive materials, as amended by Decree no. 105/2016 Coll. According to Section 15 of the Atomic Act, the applicant for the transport of radioactive waste (future transporter) submits together with the application a wide set of documents according to Annex No. 2</p>

					<p>of the Atomic Act, together with safety documentation dealing with potential safety risks that may arise during transboundary transport. The requirements for the approval of the type of transport equipment, which is an inherent condition for the issuance of a permit for the transport of radioactive waste, are defined in Section 7 of the aforementioned decree and also include safety analyses for the approved type of transport equipment.</p> <p>The holder, who plans to carry out cross-border transport within the territory of the Member States or to ensure the implementation of such cross-border transport and the country of origin is the Slovak Republic, shall file an application with the supervisory authority for permitting the cross-border transport in the form of standard documents. Realization of the transboundary transport of RAW is possible only after receiving the positive decisions/opinions of the supervisory authorities of all countries through whose territory the transportation of RAW is carried out.</p> <p>The MD SR performs state supervision over the provision of radiation protection in the transport of radioactive materials in the form of on-site controls and inspections within the scope of its competence in the field of radiation protection pursuant to No. 87/2018 Coll.</p>
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45678	Poland	83	Article 28	Section J	<p>Could you provide details on measures in place to prevent and manage orphan radioactive sources?</p> <p><b>Comment:</b> Limited details on measures to prevent orphan</p>	<p>In Slovakia, the regulatory authority responsible for orphan sources record keeping is the ÚVZ SR (radiation protection department). The first records are from 1985.</p> <p>Radioactive material and orphan sources mostly occur in scrapyards, and steel production facilities (both our steel producers use scrap as a secondary raw material) and are rare in other metal production facilities.</p> <p>There is an effective response system in place (the whole procedure has been in place for a long time and at the present time, the procedure is fully in compliance with the requirements of Article 99 of the Act No. 87/2018 Coll. on Radiation Protection).</p> <p>The metal recycling facilities and all big scrapyards have detection equipment and there are also detection systems installed at some border crossing points. If an alarm occurs persons who suspect the presence of an orphan source or radioactive material call the responsible regulatory authority for specialized technical advice and assistance. If the case is confirmed by a staff member of the radiation protection department from the responsible radiation protection authority, the organization authorized for dealing with radioactive material of unknown origin (JAVYS) is informed and this organization will realize the recovery, transport for analysis, storage, decommissioning, etc. If it is a suspect crime, the procedure is different as Police are involved.</p> <p>According to Article 100 of the Act No. 87/2018 Coll. on Radiation Protection expenses connected with handling radioactive material of unknown origin are covered by the owner; if the owner is not known, costs are covered by the State. The cost of found orphan sources up to now was mostly covered by a specific state fund (detailed rules can be found in the Act on the National Nuclear Fund).</p> <p>Regarding the orphan sources that originate from a foreign country (EU member or not) returning to the supplier or storing nationally are possible, in principle. How such cases will be managed will depend on the situation (before or after customs clearance) and the decision of the regulatory authority (or authorities, if Police or Nuclear Regulatory Authority of the Slovak Republic will be involved).</p>
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						<p>Regarding the orphan sources or radioactive material at scrap metal facilities/metal recycling industry or production facilities, the portal systems/handheld detection devices in use at scrapyards are capable of detecting them. The operator of the facility or of a system for controlling metal raw materials which enables detection of ionising radiation, is obliged to advise the staff how to visually recognize an orphan source (leaflets and other information were distributed by the regulatory authority during the campaign), inform about measures and procedures during the finding of an orphan source or radioactive material, or in the case of suspicion that radioactive material is present. Regular training is required. The Government of the Slovak Republic has expressed their political commitment in the application of the Code of Conduct on safety and security of radioactive sources (Code of Conduct). Additionally, in 2023, the Government of the Slovak Republic expressed their political commitment to the supplementary guidance on the Import and Export of Radioactive Sources to provide for an adequate transfer of responsibility when a source is being transferred from the Slovak Republic to another country and to the Guidance on the Management of Disused Radioactive Sources regarding the establishment of a national policy and strategy for the management of disused sources, and on the implementation of management options such as recycling and reuse, long term storage pending disposal and return to a supplier.</p>
45680	Poland	84	Article 12	Section H	Could you provide details on remediation efforts for historically contaminated sites in Slovakia?	<p>As part of the remediation of historically contaminated sites, remediation activities were carried out in the external areas of the A1 NPP on site in Jaslovské Bohunice.</p> <p>Decommissioning activities at the Bohunice nuclear power plant in Slovakia are ongoing. The Bohunice A1 reactor, impacted by a 1977 accident, is undergoing a prolonged decommissioning process, with spent fuel having been returned to Russia in 1990. While the reactor core and cooling systems remain contaminated, the National Nuclear Fund is financing the ongoing clean-up efforts.</p> <p>During the implementation of Stage I of the A1 NPP Decommissioning Project in the years 1999-2009, initial monitoring was carried out in the</p>

					<p>areas of the external buildings/facilities in order to determine the extent and depth of contaminated areas and the level of contamination by taking representative samples followed by radiochemical analyses. On the basis of the obtained results, the decommissioning of construction parts of external facilities, which included the external areas with underground storage tanks of liquid RAW, was subsequently carried out during the implementation of Stage II and Stages III and IV of the A1 NPP decommissioning project, and the remediation of contaminated soils and contaminated construction part of the buildings was carried out in parallel.</p> <p>Contaminated soils and construction debris were transported after removal to the site for further processing using verified and established procedures at the facilities built for this purpose on site. After their sorting according to the level of contamination, they were divided into categories - uncontaminated material, VLLW, LLW.</p> <p>Meanwhile, the Bohunice V1 reactors were successfully decommissioned between 2012 and 2022, with the complete removal of equipment and systems scheduled for 2025. Subsequently, building demolition and site redevelopment are planned for completion by 2027. The Bohunice International Decommissioning Support Fund (BIDSF), established in 2001 with EU and National Nuclear Fund contributions, has played a crucial role in facilitating the decommissioning of the V1 reactors.</p>
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45733	Czech Republic	85	Article 32	B/19	Is there any time limit for storage of RAW, which is classified as transient one?	<p>In general, the time limit for the storage of RAW classified as very short-lived waste is not specified in our legislation. Very short-lived radioactive waste (transient) is stored in the nuclear facility IS RAW (Integral storage for RAW), where RAW is stored for a short period of time until its activity decreases below the limit for its release into the environment. In accordance Section 9 (1) the UJD SR's Decree No. 30/2012 Coll., laying down details of requirements for the management of nuclear materials, radioactive waste and spent nuclear fuel, that for each radioactive waste storage facility, the authorisation holder shall determine the storage method, the maximum amount and activity of stored radioactive waste, as well as the expected date of its removal from storage.</p> <p>As for practical situation in NPP operating company: Transient radioactive waste is radioactive waste in NPP (concrete, air filters, etc.) with a dose rate of 1 µGy/h to 20 µGy/h, containing short-lived radionuclides (gamma spectrometric analysis), whose activity falls below the release levels for the radionuclides in question during storage, and is released to the environment once the criteria of Law No 87/2018 are met.</p> <p>There is no legal limit for the storage of transient waste. According to the historical experience of measuring this type of waste in NPP, we have an internal time limit of 5 years. This is the time required to reduce the activity of short-lived radionuclides (Ag110m, Mn54, Co57, Co58, etc.) and the activity of the main radionuclide in the solid waste, Co60 (T1/2 = 5.27 years). After re-measurement, the waste is either released into the environment or classified as definitely RAW</p>
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45734	Czech Republic	86	Article 32	-/20	<p>Explain differences between deep geological repository, geological repository for high-activity RAW, repository and disposal facility. How many disposal facilities do you really plan to build?</p>	<p>In Section 5 of the ÚJD SR's Decree No. 30/2012, as amended, the appropriate disposal facility type for various classes of radioactive waste is defined.</p> <p>Specifically, the decree outlines the classification of radioactive waste based on its activity level and provides guidelines on the necessary isolation measures for each category. This includes near-surface disposal facilities for low-level waste, while high-level waste is designated for deep geological disposal due to its residual heat and long-lived radionuclide content.</p> <p>Regarding very low-level radioactive waste, whose activity is slightly higher than the limit value for their release into the environment, primarily contains radionuclides with a short half-life, or possibly radionuclides with a long half-life in low concentrations. These wastes require a lower degree of isolation from the environment through a system of engineered barriers during disposal, or may not require the use of engineered barriers at all. The period of institutional control over the disposal facility is shorter than in the case of near-surface-type repositories for radioactive waste.</p> <p>In accordance with the National Policy and National Programme for Spent Nuclear Fuel and Radioactive Waste Management in the Slovak Republic, this type of radioactive waste is disposed of in the trench-type part of the Mochovce near surface disposal facility, which has fewer engineered barriers required for isolation from the environment than the part for low level waste, where waste are disposed in high integrity fibre reinforced concrete containers.</p> <p>Regarding intermediate level radioactive waste, as defined in Section 5 of the Decree No. 30/2012, this category includes waste with an average specific activity of long-lived radionuclides, especially those emitting alpha radiation, equal to or greater than 400 Bq/g. This waste may produce residual heat, although the measures required for its removal are less stringent compared to high-level radioactive waste. After conditioning, such waste does not meet the safe operating limits and conditions for near-surface disposal facility and requires a different disposal approach.</p> <p>The exact type of suitable disposal facility for intermediate and high-</p>
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						level waste, as well as the overall strategy how to manage all institutional radioactive waste and hazardous radioactive waste, will be defined in the update of the National Policy and National Programme for Spent Nuclear Fuel and Radioactive Waste Management in the Slovak Republic, prepared by National Nuclear Fund of the Slovak Republic. The Nuclear Regulatory Authority issues an expert opinion on such updates according to Section 4 (2) letter e) of the Atomic Act. In practice, besides the already operated repository RÚ RAO in Mochovce a DGR has been considered (planned to build).
45735	Czech Republic	87	Article 32.2.2	D/31	Explain the two different SF inventory values in the ISFS as of 31 December 2023 - 13 840 units as per Chapter D.1.2 and 12 712 units as per Annex IV.	In the Slovak version the SF inventory value is correct – 13,840 pieces. In the English version there seems to be a typo.
45736	Czech Republic	88	Article 32.2.3	D/34	What are the two corrective actions of moderate safety significance proposed for the RAW melting workplace? Provide some detail.	The proposed corrective actions of moderate safety significance did not refer to the RAW melting facility workplace as such, but the overall nuclear Facility for treatment and conditioning of RAW (TSÚ RAO). The proposed corrective actions were related to the area of safety analyses and consisted, for example, of ensuring the monitoring of metrological data on site and their online availability for the emergency response units and the NRA SR /regulator/, as well as completion of the list of possible extreme external events in the safety analyses of the nuclear Facility for treatment and conditioning of RAW (TSÚ RAO).
45737	Czech Republic	89	Article 32.2.3	D/35	What is the reason for storage of solid or solidified RAW from NPP V1 decommissioning? Why is this RAW stream not directly disposed at RÚ RAO Mochovce at e. g. VLLW double rows?	The need for temporary storage of solid or solidified RAW originating from the V1 NPP decommissioning results from the available capacity of the RAW treatment and conditioning facilities – Liquid RAW Final Treatment Facility /FS KRAO/ and Facility for treatment and conditioning of RAW /TSU RAO/. In case the RAW production exceeds the capacity of treatment facilities in a given year, RAW is stored in the RAW storages until the treatment facility and its capacity is available.

45738	Czech Republic	90	Article 32.2.3	D/36	Clarify, how is RAW disposed at the facility for IRAW and RMUO at the Mochovce site.	IRAW and RMUO are disposed of at the Facility for IRAW and collected RAW Management at the Mochovce site after meeting the criteria for their acceptability until they are processed in the Facility for treatment and conditioning of RAW, or in case that these radioactive wastes do not meet the criteria for acceptability at the processing facilities, these IRAW and RMUO will be disposed of until the suitable type of repository has been constructed.
45739	Czech Republic	91	Article 32.2.3	D/40	Clarify the contradiction between the definition of VLLW in chapter B.3 and the statement in chapter D.2.7, that "...very low-level radioactive waste, i.e. waste whose activity does not exceed the limits for its release into the environment...". Do you really dispose at RÚ RAO Mochovce radioactive material, which can be cleared as VLLW?	In the Slovak version in the definition in chap. B.3 and in the statement in chap. D.2.7., there is no contradiction, apparently there is a discrepancy in the translation. The Mochovce National Radioactive Waste Repository facility operates both a VLLW repository and a LLW repository, which were built for this purpose and represent two separate RAW disposal systems under one nuclear facility.
45740	Czech Republic	92	Article 32.2.3	D/40	What are the two corrective actions of low safety significance proposed for the RÚ RAO Mochovce? Provide some detail.	The proposed corrective actions of low safety significance were an update of the independent safety analysis assessment and an update of the pre-operational safety report of the Mochovce National Radioactive Waste Repository.
45741	Czech Republic	93	Article 32.2.3	D/44	What are the plans for storage and disposal of vitrified Chrompik and conditioned Dowtherm waste?	Chrompik is fixed by vitrification in special cartridges, which are placed in hermetic casings and stored in specially adapted premises approved by the regulatory authorities. Dowtherm waste has been processed and is currently no longer stored in the storage facilities. In the future, storage of vitrified cartridges is planned in the Interim Storage of RAW facility, which was put into active operation in 2018.

45742	Czech Republic	94	Article 19.2.1	E/47-48, 71	<p>How it is ensured, that ÚVZ SR is effectively independent in its safety related decision making and that it is functionally separated from MZ SR?</p> <p>ÚVZ SR is an independent state authority with a registered office in Bratislava, legally established by Act No. 272/1994 Coll. on public health in the wording of Act No. 578/2003 Coll. as a budgetary organization of the State, with competences and jurisdiction over the territory of the Slovak Republic. ÚVZ SR is managed by the Chief Public Health Officer of the Slovak Republic (nominated and removed by the Minister of Health), who is also the Director General of the office. ÚVZ SR is financially linked to the budget of the Ministry of Health of the Slovak Republic which has potential for conflict of interest in regulatory oversight but the ÚVZ SR performs its responsibility with independence and objectivity and it is free from any undue influence by interested parties and any conflicts of interest.</p> <p>Under the Act on Radiation Protection a number of state authorities are responsible for radiation protection and radiation safety, with the primary one being ÚVZ SR and the Regional Public Health Authorities (RÚVZ in BA, RÚVZ in BB, RÚVZ in NR and RÚVZ in KE). However, the Ministry of Transport of the Slovak Republic, Ministry of Defence of the Slovak Republic, and Slovak Information Service, are also assigned responsibility of the regulatory body under circumstances specified under the Act on Radiation Protection. The Act on Radiation Protection clearly delineates the roles and responsibilities of the various state authorities.</p> <p>According to the Article 4 para 3 of the Act on Radiation Protection, radiation protection authorities are acting without prejudice and independently. State authorities, territorial self-government authorities, other authorities of public power nor other persons can influence them during their regulatory activities.</p> <p>Additionally, any employee of the public authorities of the Slovak Republic (including radiation protection authorities) must follow State regulations such as the Act on Civil Service. According to these regulations, a civil servant has to perform the civil service in a politically neutral and impartial manner. Moreover, a civil servant is obliged to notify their administrative office without undue delay of any actual or potential conflict of interest, as well as of teaching or lecturing activities that are identical or similar to the activity specified in the description of</p>
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						<p>their civil service position. According to the same act, a civil servant cannot conduct business or perform any other gainful activity, which is identical or similar to the activity specified in the description of his/her civil service position. The Code of Ethics for civil servants defines the principles of ethical behaviour when performing public service. The principles for preventing and resolving conflict of interest situations for ÚVZ SR are implemented in the Ethical code of the employee of ÚVZ SR (VD-04).</p>
45743	Czech Republic	95	Article 20	E/58	<p>How do you ensure the compliance of the site properties with internationally endorsed safety standards such as IAEA SSR-1, if only for reactor installations the siting is a subject of UJD authorization? How do you plan to develop non-reactor NIs, such as DGR?</p>	<p>The NRA issues an authorization for the siting of a nuclear reactor installation pursuant to Article 17a of the Atomic Act. For the other nuclear installation, the NRA issues approval for siting the construction of the nuclear installation pursuant to Section 17 of the Atomic Act. The NRA decides on the issuance of a approval for siting the construction of the nuclear installation based on a written application supported by the documentation specified in the Act's Annex 1, point A, and on the basis of a statement by the European Commission in accordance with an international treaty by which the Slovak Republic is bound. It follows from the above that even for other nuclear installations, other than reactors, the NRA examines the submitted documentation for siting and also examines whether such placement is in accordance with safety norms and international standards. On this basis, it issues approval.</p>

45744	Czech Republic	96	Article 4.6	G/135	<p>Considering question related to chapter E.2.1.2 clarify the following sentence: “The siting of a nuclear installation, except for the construction of a nuclear installation (reactor type of facility), approval from the ÚJD SR is required under Act No. 541/2004 Coll. (Atomic Act)”.</p>	<p>The Atomic Act distinguishes between the issuance of approval and an authorization. NRA issue approval for</p> <ol style="list-style-type: none"> <li>1. siting the construction of the nuclear installation</li> <li>2. implementation of modifications according to Section 2 (w),</li> <li>3. exclusion of the nuclear installation from the scope of this Act,</li> <li>4. dilution and consumption of nuclear materials,</li> <li>5. individual phases of commissioning of a nuclear installation,</li> <li>6. trial operation of a nuclear installation,</li> <li>7. use of a new type of nuclear fuel.</li> </ol> <p>The NRA's approval is therefore required for the siting the construction of a nuclear installation except for the construction of a nuclear reactor installation. The NRA's authorization. is required for the siting of a nuclear reactor facility.</p>
45745	Czech Republic	97	Article 10	G/148	<p>Is there any progress in DGR development in recent 5 – 7 years? Which organization is responsible for DGR development and what resources are available for this task (human and financial).</p>	<p>According to the National Policy and National Programme for Spent Nuclear Fuel and Radioactive Waste Management in the Slovak Republic, JAVYS is responsible for activities related to the implementation of the Slovak DGR. They (JAVYS) are currently in the process of creating a specific DGR related department, as well as updating the DGR feasibility study.</p> <p>(Information on progress in DGR in recent years is expected to be provided in the awaited updated version of the Domestic policy and domestic program for the management of spent nuclear fuel and radioactive waste in the Slovak Republic. )</p>

45746	Czech Republic	98	Article 27	I/169	Which transport equipment other than transport package is a subject of type approval by ÚJD SR?	<p>Under the term transport equipment, in accordance Section 2 of the ÚJD SR's Decree No. 57/2006 Coll., which lays down details on the requirements for the transport of radioactive materials, as amended by Decree No. 105/2016 Coll., shall mean packaging or transport facilities for the transportation of unpackaged radioactive material. The application for approval of the type of transport equipment must be accompanied by a project of the consignment, which is characterized in more detail in Section 7 of the Decree No. 57/2006 Coll. At the same time this decree regulates individual types of shipments in terms of limit activities as well as material's restrictions. When transporting a shipment, it is necessary to know what type of consignment it will be, as different requirements are placed on individual types of consignments during the approval process. Approved type of transport equipment for the transportation of radioactive waste, which ÚJD SR licenced:</p> <ul style="list-style-type: none"> <li>- fibre concrete container FRC AS IP2 for type A package</li> <li>- MEVA barrel type 0488 for type 2 industrial package (IP-2)</li> <li>- container ISO 20' for type 2 industrial package</li> <li>- container PK/SK for type A package</li> <li>- container PK/SK2 for type A package</li> <li>- container ISO 20' for type 2 industrial package (IP-2)</li> <li>- PKIII/BARREL for type B(U) package</li> <li>- PKII/SLUDGES for type B(U) package</li> <li>- container PK 90 for type B(U) package</li> <li>- container TK C-30 for type B(U) package for spent fuel transport</li> <li>- container PO-09 for type B(U) package for transport of radioactive materials</li> <li>- container TK-S4 for type B(U) package for rail and road transport of fresh nuclear fuel</li> <li>- container TK-S55 for type B(U) package for rail and road transport of fresh nuclear fuel of several types (including control rods)</li> <li>- container UKTIIA for type A package for transport of radioactive materials - closed sources of fast neutrons on Pu-Be basis</li> </ul>
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45747	Czech Republic	99	Planned Activities	K/178	What is the total storage capacity of operated and planned ISFS and how do they cover the overall country's needs for storage of SF from all operated, constructed and planned NPPs?	Current storage capacity of the ISFS facility is 14,112 pcs of SNF in the "wet" part and 10,115 pcs of SNF in the "dry" part of the ISFS facility. According to the valid <i>Final Opinion to the EIA process</i> , the storage capacity can be expanded by at least another 8,500 pcs of SNF in the "dry" part. These storage capacities will be sufficient for the storage of all the SNF produced from the WWER 440 reactors in Slovakia.
45748	Czech Republic	100	General	K/180	<p>"The current method of managing the RA-concentrate in NPP Mochovce is based on their transfer from the storage tanks at NPP Mochovce to the facility – Final treatment of KRAO, where RA-concentrate is fixed into a cement or bitumen matrix".</p> <p>Explain the contradiction with the text of chapter B.2: "Bituminisation is no longer used due to the reduced production of liquid concentrates and spent ion exchange resins from VVER Units in operation" and D.2.3: "Bituminisation technology is no longer used due to reduced production of liquid concentrates and saturated ion exchange resins from operating VVER Units." Is bituminisation used to condition liquid RAW in both NPPs or not?</p>	Due to the low production of concentrates from the operation of V2 NPP and Mochovce NPP, there is currently no need to operate bituminization technologies/facilities and produced concentrate is treated by cementation to FCCs /fibre-concrete containers/. However, if necessary, bituminisation technology can also be used.