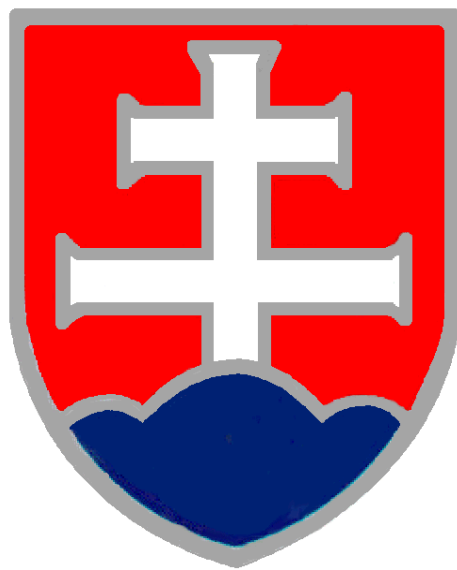


**QUESTIONS
ON
NATIONAL REPORT
OF THE SLOVAK REPUBLIC**



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

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2022**

1.		Article 12	Ref. in National Report Section H2, p.133
Question/ Comment	Please describe what the review of past practices looks like. For example, are there campaigns to detect radium-containing or thorium-containing waste from past industrial applications?		
Answer	The portfolio of activities implemented by company JAVYS, a. s. also includes the collection of IRAW and collected RAW throughout the Slovak Republic, including the management of this waste. Depending on the result of the radiochemical analysis, the waste may be disposed of at the National Radwaste Repository or, in the case of nuclear material content, stored in JAVYS premises.		
2.		Article 14	Ref. in National Report Section H.4, p.136
Question/ Comment	Legislative requirements and procedures for the design and construction of facilities for RAW management are defined in Decrees No. 430/2011 Coll. and No. 30/2012 Coll. Are there also procedures or legislative requirements for the decommissioning of a RAW Management facility?		
Answer	<p>UJD's Decree No. 430/2011 Coll., in addition to the requirements for nuclear safety in the design and siting of nuclear facilities, contains also requirements that must be met during their construction, commissioning, operation, decommissioning and, in the case of a repository, also during its closure. The Decree also includes the principles of safe decommissioning regulating some specific requirements for nuclear safety related to decommissioning. Requirements for documentation necessary for issuing a decision on decommissioning of nuclear facilities are set out in the UJD's Decree No. 58/2006 Coll.</p> <p>No other special decommissioning requirements are specified for RAW management facilities. The requirements of the Atomic Act and related implementing regulations generally apply to all type of nuclear installations for which their future decommissioning is considered.</p>		
3.		Article 32	Ref. in National Report Section D.3.4., p. 43
Question/ Comment	Facility for fixation of sludge. It states the facility is relocatable. Is it licensed as an associated facility of the NPP A1 or as a standalone facility?		
Answer	Facility for fixation of sludge has been designed and installed especially for the needs of the A1 NPP decommissioning and was included in the A1 NPP, so it is a part thereof. This facility is relocatable (in 4 pieces of ISO containers).		
4.		Article 20	Ref. in National Report p. 59
Question/ Comment	Routine inspections are performed mainly by site inspectors at the corresponding installation. Does it suggest that the site inspectors are stationed at the sites? If so, is there any rotation of site inspectors to prevent regulatory capture?		
Answer	Currently UJD has 10 on-site inspectors who carry out their daily work at two nuclear sites. This number is represented by inspectors dealing with the operation of nuclear facilities, including nuclear power plants, but also by inspectors working in the field of radioactive waste management and decommissioning. They are located directly on		

	<p>the premises of license holder nuclear facilities, where they perform their inspection and supervisory activities on a full-time basis.</p> <p>In the conditions of the Slovak Republic, due to the size of the regulatory body, it is not practically possible to apply the principle of rotation of on-site inspectors in full. Different principles of work of on-site inspectors are applied to avoid regulatory capture. The natural circulation of inspectors, of course, results from the continuous departure of inspectors from UJD to another job or to a pension and from the ongoing recruitment of new staff to the position of on-site inspector, respectively. In addition, the activity of the on-site inspector is usually not carried out individually by himself, but in such a way that the on-site inspector is a member of a team of other inspectors from the UJD's headquarters. Such organization of the performance of inspection activities also ensures that within the inspection it is possible to meet the different needs in terms of professional orientation of individual members of the inspection team. The decisions of the on-site inspector and his orders to solve identified deficiencies are always consulted and approved by the relevant superior, which also contributes to maintaining the natural distance between the supervisor and the supervised organization.</p>		
5.		Article 20	Ref. in National Report p. 60
Question/ Comment	Analysis of inspection activities: Are the inspection findings used as performance indicators as part of performance based and risk-informed regulatory approach?		
Answer	The inspection activity analysis is a tool for evaluating the effectiveness and efficiency of UJD's inspection activity in the past as well as for planning the focus and intensity of inspections in the next period of time. As part of the analysis, the findings of inspection activities are also classified according to their severity and safety significance. The results of the analysis are then used in connection with next inspection plan in such a way that areas with an increased number of findings are given more attention in the next inspection activity, a larger number of inspections is performed in them, and so on.		
6.		Article 21	Ref. in National Report Section F.1.3, p. 74 -75
Question/ Comment	It states any modifications impacting nuclear safety require prior approval from the regulatory authority. Do the regulator require the licensee to update the safety analysis report (safety case) following implementation of such modifications having impact on nuclear safety noting that safety analysis report is a living document?		
Answer	Requirements related to the implementation of modifications at the nuclear facility are defined in the Atomic Act (Act No. 541/2004 Coll.) and in the relevant UJD's decrees (Decree No. 430/2011 Coll. and Decree No. 431/2011 Coll.). Prior to the implementation of the modification, the license holder/operator is obliged to assess its possible impact on the safety case/documentation, which the regulator approves for individual stages of the lifecycle of the nuclear facility. One of the documents is the Pre-operational Safety Analyses Report. According to legal requirements the operator is required to update the safety analysis report (safety case) before making such modifications that having impact on nuclear safety of nuclear installation. On the basis of the above the safety analysis report is a living document that is modified according to the above requirements. One of the requirements is also to assess the		

	impact of the modification on all existing operational documentation and the need for updating in relation to the implemented modification at the nuclear facility.		
7.		Article General	Ref. in National Report Annex 5
Question/ Comment	Is this waste classified as high-level radioactive waste? / The report does not provide information on the number of highly radioactive RW held at JAVYS, a.s. as of December 31, 2019. However, in clauses V.1, V.2, V.3 the amount of solid radioactive waste with "higher activity" is given.		
Answer	Solid radioactive waste given in Annex V, clauses V.1, V.2 and V.3 defined as "radioactive waste with higher activity" is not classified as "high - level radioactive waste" according to ÚJD SR Decree No. 30/2012 Coll., as amended by ÚJD SR Decree No. 101/2016 Coll (see Annex V., clause V. 3 Inventory of stored RAW as at 31 December 2019 in JAVYS, a. s. Criteria used to define and categorize waste, page 176/196 - 178/196).		
8.		Article 27	Ref. in National Report Section I
Question/ Comment	How does this take into account the IAEA's TS-R-1 recommendations for developing and implementing maintenance guidelines for containers and packages to account for their aging mechanisms and analyse the impact of decreasing strength, durability, and other mechanical characteristics of packages on the safety of transporting radioactive materials? / The section "Transboundary movement of spent nuclear fuel and radioactive waste", clause I.1.1 "Basic requirements for safety documentation" provides information that safety documentation should contain a set of measures to effectively protect people, property, and the environment from the effects of radiation exposure during transportation of radioactive materials, including the design, maintenance, and repair of transportation equipment.		
Answer	<p>The requirements for packages of transporting radioactive materials are subject to Decree of the Nuclear Regulatory Authority of the Slovak Republic No. 57/2006 Coll. as amended by Decree No. 105/2016 Coll. laying down details of the requirements for the transportation of radioactive materials, Decree of the Nuclear Regulatory Authority of the Slovak Republic No. 431/2011 Coll. on a quality management system as amended by Decree No. 104/2016 Coll. and Decree of the Nuclear Regulatory Authority of the Slovak Republic No. 430/2011 Coll. as amended by Decree No. 103/2016 Coll. on nuclear safety requirements:</p> <p>e. g.</p> <p>Section 2 j) Qualification of classified equipments in Coll 430/2011</p> <p>Qualification shall mean confirmation that classified equipment is capable of fulfilling, throughout its design service life, the requirements for performing its functions, while taking account of the effect of service conditions during the period of its usage, while the service conditions shall include anticipated changes in operation, with respect to ageing, wear and tear and the impact of events.</p>		
9.		Article 11	Ref. in National Report Section H, p. 132
Question/ Comment	1. Have such documents been developed for radioactive materials produced during the operation of Mochovce NPP?		

	<p>2. Please provide the total amount of radioactive material released. / The report indicates that a measurement procedure and a release methodology have been developed for radioactive materials from NPP operation V1, V2, containing radionuclides with activity below the release level.</p>
<p>Answer</p>	<p>1. Authorization from the ÚVZ SR is needed for all the activities performed in nuclear facilities in Slovakia (including NPPs in Mochovce). Holders of authorization have to submit the documentation listed below:</p> <ul style="list-style-type: none"> a) justification for releasing of radioactively contaminated materials from administrative control, b) description of technological systems related to sorting and processing of radioactive contaminated materials before their release from administrative control, c) the way of releasing of radioactive contaminated materials to the environment, d) proposal of limit values of activity and reference levels for radioactive contaminated materials released from administrative control and their justification, systems of monitoring and a monitoring plan of radioactively contaminated materials released from administrative control, e) system of evidence of data on radioactive materials released from administrative control, f) evaluation of quantity, form, nuclide composition, and activity of radioactive contaminated materials released from administrative control, g) evaluation of the impact of releasing of radioactively contaminated materials from administrative control on the effective dose of a representative person, h) evaluation of possibilities of occurrence of extraordinary situations during releasing of radioactively contaminated materials from administrative control and evaluation of its consequences, i) documents on metrological check or calibration of monitoring systems. <p>2. Information on the number of radioactive materials released from administrative control to the environment is a part of annual reports of the operators. The Table contains the quantities of materials from the V1 NPP released into environment for the years 2020 and 2021.</p>

Materials released into environment	202 [kg]	2021 [kg]
Concrete debris	2 505	0
Aluminium	831,6	2 740,9
Insulation materials containing asbestos	0	665
Cables	91	202,2
Copper, bronze, brass	38 029,4	32 829,2
Lead	0	17 268,8
Plastic materials	915,6	494,8
Construction material (Asbestos)*	0	1 066,9
Carbon steel	1 413 300,8	1 748 481,5
Mixed metals	238	0
* Mixed waste from construction + Building material (containing or not containing asbestos)		

Act No. 87/2018 Coll. on Radiation Protection combats the issue and serves as such document, mainly pinpointing out paragraphs 87-93 referring to the release of the radioactive substance. Mentioned paragraphs define conditions for discharge of radioactive substance to living environment and as well as radioactive substances that require no permission in order to discharge them, releasing the contaminated material from administrative control, detection of radioactive contamination and discharges to air and water. Discharge of radioactive substances to living environment means directed systematic discharge or campaign discharge of radioactive substances to the air, surface waters or public sewer, which is systematically monitored.

10.		Article 32	Ref. in National Report Section D.3
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Question/ Comment	How does this take into account the IAEA's recommendations in GSR Part 6 and SSG-47: "For all aspects of decommissioning, a differentiated approach should be used in determining the scope and level of detail for any given facility, according to the magnitude of the possible radiation risks posed by decommissioning"? Have these IAEA recommendations been taken into account in the development of the Bohunice, Jaslovske Bohunice nuclear power plant decommissioning plans and the radioactive waste management facility and their revisions? / Section D.3 "List and Description of Decommissioned Facilities" provides information on the stages of decommissioning of the Bohunice NPP located in Jaslovské Bohunice and the Radioactive Waste Management Facility.
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Answer	Each stage of the NPP decommissioning in the Slovak Republic is implemented on the basis of detailed documentation, the basis of which is the documentation for EIA process, Plan of the specific decommissioning stage and Conceptual decommissioning plan after the end of the stage. Implementation of the NPP decommissioning begins only after obtaining positive opinions/statements of all relevant state administration bodies of the Slovak Republic, as well as the EC, to which the documentation is submitted according to Art. 37 of EURATOM. During the entire A1 NPP decommissioning process, the relevant IAEA recommendations of a differentiated approach for each individual facility are taken into account. Prior to the start of decommissioning process for each facility there is a process of preparing the necessary documentation, including study, design and safety documentation
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	<p>taking into account the conservative approach of all known safety risks, including radiation and environmental risks. The afore-mentioned documentation is subsequently assessed by the relevant state administration bodies of the Slovak Republic and the relevant facility may begin with its decommissioning only after their consent has been obtained.</p> <p>The concept of a graded approach is defined in Section 4 of the Atomic Act and is used to optimize safety assessment to give due weight to potentially higher risk activities and events. The complexity of the facility (whether it is a separate nuclear installation in decommissioning or it is a technology that is part of another nuclear installation), planned activities, inventory, amount and activity of RAW, etc. are taken into account. The principles of the graded approach application are defined by UJD's Decree No. 431/2011 Coll. (section 2, paragraph 4). These requirements were applied during the development of the Decommissioning stage plan of V1 NPP and also A1 NPP. Graded approach was applied in these documents, for example, within the safety analyses in the selection of representative event scenarios in the decommissioning process.</p>		
11.		Article 3	Ref. in National Report Section C1, p.22
Question/ Comment	<p>The words 'currently' and 'not yet' seem to suggest that Slovakia's national policy does not completely rule out the possibility of spent fuel reprocessing. Also other examples of this wording can be found in the National Report. This is somewhat confusing, because on p.129, it is stated that the national policy is direct disposal of spent fuel (in a national geological repository, with an international repository being the back-up option). We would appreciate if Slovakia could clarify its position on spent fuel reprocessing?</p>		
Answer	<p>There is still option to recycle spent fuel. Currently the only strategy how to manage spent nuclear fuel is the direct disposal in geological repository in Slovakia. International repository is not excluded yet.</p>		
12.		Article 17	Ref. in National Report Section H.7.2, p.145
Question/ Comment	<p>Could Slovakia, please, elaborate on the difference between the 300 years and the 500 years? Is solely the overlay relied on to prevent intrusion for another 200 years after the lifting of the institutional control over the disposal site? Is it envisaged to leave the site unguarded and without any maintenance or repairs during those 200 years?</p>		
Answer	<p>The exact scope of institutional control will be determined on the basis of safety analyses prior to the repository closing.</p> <p>It is currently assumed that the period of institutional control will be 300 years, with the system of final overlay/covering of own disposal facilities preventing intrusion into the vicinity of RAW repository for another 200 years.</p>		
13.		Article 32	Ref. in National Report Section D.1.1, p.25/26
Question/ Comment	<p>Could Slovakia, please, clarify the difference (if any) between a 'basket' and a 'cask' for spent fuel? Moreover, it would be interesting to know whether or not the current disposal concept envisages the spent fuel to be disposed enclosed in its cask/basket.</p>		

Answer	The difference between the terms 'basket' and 'cask' is practically insignificant (minor). This is the same equipment for which both terms can be used (basket or cask is inside the transport container). At present, an alternative of disposal of SNF in a special hermetic package form, which will be developed for this purpose, is expected.		
14.		Article 27	Ref. in National Report Section I.1.2, p.148
Question/ Comment	Could Slovakia, please, clarify the meaning of the word 'product' in point a? Can it be ruled out that a 'product' exceeds the maximum values of point b (i.e. 500 kg and 1000 kg)?		
Answer	<p>The word product refers to shipment and its classification is strictly defined in Decree 57/2006 Coll. on details of requirements for the transport of radioactive substances. Legal requirements are set in order to achieve proper measurements; therefore the shipments are expected to be within the limits regarding its properties. The tests can be found in Annex 4 of the mentioned document.</p> <p>Radioactive materials (nuclear material, radioactive waste and spent nuclear fuel) may only be transported based on shipment authorization issued by the ÚJD SR.</p> <p>Permission from the Ministry of Transport of the Slovak Republic is needed for import of source of ionising radiation from third countries and transport of radioactive material according to Act No. 87/2018 Coll. on Radiation Protection.</p>		
15.		Article General	Ref. in National Report Section A/p. 11
Question/ Comment	Clarify the role of URL considering that the planned construction of DGR will follow immediate after the construction of URL in 2047.		
Answer	URL is considered as onsite test laboratory.		
16.		Article General	Ref. in National Report Finding No. 1. Point 3/p.11
Question/ Comment	Construction of a DGR - how did you proceed in selecting the site (population density, proximity of the nuclear facility)? Were you looking for critical problems in the search for a DGR by the surrounding municipalities / cities?		
Answer	Based on international recommendations, the characteristic of a suitable site in Slovakia were determined (aspects of long-term development of the area, geological risks, geological structure, hydrogeological conditions, geochemical aspects, engineering-geological properties, the occurrence of natural resources, legislative protection of the area). A total of 58 characteristics, represented the first step in selecting criteria for evaluating the suitability of using multiple-criteria analysis.		
17.		Article General	Ref. in National Report Finding No. 3/p. 12
Question/ Comment	Slovakia is working on the revision of the National Emergency Plan. Did you include any experiences from the Covid-19 pandemic?		
Answer	The revision of National Emergency Plan is a thorough one with all hazards approach. National Emergency Plan focuses on capacities and capabilities that are critical to preparedness for a full spectrum of emergencies (not only radiation, or nuclear ones) with direct connection to Pandemic plan.		

18.		Article 32	Ref. in National Report Section D 2.2/p. 31
Question/ Comment	What are the corrective actions identified in the PSR of BSC facility? Please provide details.		
Answer	<p>Periodic safety review for the BSC (TSÚ RAO) facility performed to the reference date of the 22nd of January 2019 review resulted in 4 integrated corrective measures, of which 3 corrective measures were of low significance and one measure of medium significance. The measures are predominantly focused on completion of the safety documentation with the following information:</p> <ul style="list-style-type: none"> - Independent verification of analyses, - Analysis of extreme external events (with the frequency of occurrence 10E-5), - Applying/including the outcomes from analyses into the emergency planning documentation, - On-line monitoring of meteorological data - Extending the barrier control system against leakage of radioactive substances into environment. 		
19.		Article 20	Ref. in National Report Section E.2.1.4/p. 58
Question/ Comment	What requirements must an employee meet in order to become an inspector? Does the regulator authority cooperates with invited persons (e.g. external or support experts) during an inspections? Is it possible to perform an inspection solely by the invited person (without the presence of the inspector)? Does the regulatory body use control groups for the inspections? If so, is the signature of the inspection report required from the control group as a whole, or is the signature of the head of the inspection team sufficient?		
Answer	<p>The general requirements are set up in the § 31 para 3 of the Atomic Act and in detail by the requirements are defined the ÚJD's internal procedure on Inspector's exam. Based on above mentioned documents the requirements are the University degree education on the level Master degree and the special qualification prerequisite which is the Inspector's exam graduation.</p> <p>According to § 10 para 4 Atomic Act the licence holder is obliged to allow entry of the inspectors and of invited person. However, the inspection can be conducted only together with UJD inspector. The inspection conducted solely by the invited person is not possible.</p> <p>The group inspection called „team inspection“ is commonly used form of inspection. The final output from inspection has to be signed by all members of the inspection team.</p> <div style="text-align: center;"> <pre> graph TD A[Inspections] --> B[Planned] A --> C[Unplanned] B --> D[Routine inspections] B --> E[Special inspections] B --> F[Team inspections] C --> G[Routine inspections] C --> H[Special inspections] C --> I[Team inspections] </pre> </div>		

20.		Article 20	Ref. in National Report Section E 2.1.4 (Table 3)/p. 60
Question/ Comment	According to the Table 3 from 204 planned and unplanned ÚJD SR controls only 14 have been finished with a protocol and for 33 controls the protocol is not completed (but still under development?). Clarify, why more than 75% of all controls were not finished with a protocol in 2019. Were they performed at all? And if yes, what is the output from these controls.		
Answer	The output from inspections depends on the result. If there are some findings during inspection the output is a protocol and if there are no findings the output is called record. So the data in the Table 3 means that within 14 inspections findings were identified. In 33 cases there were still not known if the result was the protocol or record and the rest of inspections were finished with record without findings.		
21.		Article 21	Ref. in National Report Section F.5.2., F.5.2.1/p. 73
Question/ Comment	How is Slovakia prepared for the possibility of an accident resulting in impacts that could exceed the emergency planning zone?		
Answer	<p>We understand evolving needs of Emergency planning in case of accidents that could require protective actions even beyond an emergency planning zone. Ministry of Interior of the Slovak Republic is in the process of preparing a wide revision of all hazards National Emergency Plan, which will address these issues. Slovak Republic is also taking part on HERCA WENRA meetings and the results that have already been made were acknowledged with greatest emphasis on rapid information exchange through existing bilateral and international arrangements.</p> <p>As far as decision making is concerned, the level of decision making is dependent on the territory that is affected by the emergency. If only local areas are affected, regional crisis headquarters will serve as a coordinating body and the chairman of the regional county office is responsible for decision making. In case the emergency exceeds territory of one region, Central Crisis Headquarters (CCH) is responsible for coordination of activities. CCH provides advice to the Government of the Slovak Republic that takes decisions.</p> <p>Secondly, assessing of course and consequences of incidents and accidents at nuclear installations and for preparation of recommendations for actions licensee, ÚJD SR and ÚVZ SR are responsible.</p> <p>Licensee declares emergency and takes protective and mitigatory actions on-site to prevent or to control releases and is responsible for its workers as well as for all other persons on the premises of the nuclear installation. Licensee has some further practical responsibilities relevant for EPZ area.</p> <p>The EPZ is defined based on analysis of the source term and radiological consequences of selected severe accidents and represents a circle with the centre in the nuclear facility and further divided into 16 sectors (of 22.5° each). The radius is NPP-specific and is defined as 20 km for Mochovce and 21 km for Bohunice. In case that the boundary demarcating the EPZ interferes with an inhabited area, the whole inhabited area is considered as a EPZ.</p> <p>The licensee shall notify the ÚVZ SR of incidents or accidents over the telephone without delay. For event classified as “alert”, the licensee is also obliged to inform the Ministry of Interior, Ministry of Health, ÚVZ SR and other responding</p>		

	<p>organizations with no delay. Licensees are required to update the information as soon as it is known to have changed. The operator, in co-operation with the civil protection, provides warning (sirens) and notification (radio, TV) to the population.</p> <p>The situation described in the question is classified as 3rd degree emergency (accident) according the emergency plan and Atomic Act.</p> <p>The important measures connected with the protection of population are as follows: monitoring of the radiation situation; iodine prophylaxis (provided by the licensee for all inhabitants within a radius of 21 km (Jaslovské Bohunice) or 20 km (Mochovce) from the NPPs; sheltering, which is carried out immediately after the warning and notification of the population about the radiation accident; evacuation, from the areas endangered by the radiation gradient. Performing of an intervention must be carefully considered if intervention levels are exceeded.</p> <p>Criteria are as follows:</p> <p>Projected doses:</p> <p>Sheltering - 100 mSv/7 days (effective dose/ equivalent dose to fetus) (10 mSv/48 hours (effective dose in practical arrangements))</p> <p>Iodine prophylaxis 50 mSv/7 days (equivalent dose to thyroid)</p> <p>Evacuation of people 100 mSv/7 days (effective dose/ equivalent dose to fetus)</p>		
22.		Article 21	Ref. in National Report Section F.5.2, F.5.2.1/p. 101
Question/ Comment	<p>Is the iodine prophylaxis pre-distributed in Slovakia? If not, where are the iodine tablets stored? Who is responsible for the distribution of the iodine prophylaxis to the public? Are there any regulations in your country governing the handling of antidotes that impose special handling requirements? How does Slovakia deal with expired antidotes?</p>		
Answer	<p>Yes, iodine-prophylaxis is pre-distributed in Slovakia. Planned surplus of prophylaxis is stored in civil protection storages. Responsibility for the distribution lies with:</p> <p>a) license holder (provision of prophylaxis and storage for own purposes), b) Ministry of Interior (coordination of distribution, storage of procured prophylaxis for county offices), c) county offices in Emergency Planning Zones (distribution to municipalities and to specific institutions like schools, hospitals, etc.) and d) municipalities (distribution to specific households). Iodine prophylaxis is dealt with as a drug / medicine.</p> <p>It means, for example, that they should be disposed of as other drugs. Expired antidotes are collected in the framework of regular distribution round (next one being in summer 2022) and they are disposed of by authorized person selected by license holder (NPP owner).</p>		
23.		Article 9	Ref. in National Report Section G 5.5/p. 127
Question/ Comment	<p>How do you intend to implement BUC during the transport of SF in C-30 cask with T-12 or KZ-48 baskets in practice? Will you calculate keff for every single loading pattern?</p>		

Answer	Monitoring and calculation of Keff is the responsibility of the NPP operator. From the point of view of transport and storage of SNF, the BUC value is prescribed/defined in the Safety documentation and Limits & Conditions for the C30 transport container as well as for the ISFS facility.		
24.		Article 17	Ref. in National Report Section H 7.2/p. 145
Question/ Comment	Which governmental body is responsible for passive measures during passive institutional control period, after the license for closure of a disposal facility is terminated?		
Answer	<p>ÚVZ SR is responsible for all the activities associated with institutional control of terminated disposal facilities, for the regulatory supervision, the assessment of monitoring plans, and evaluation of the impact of the operation on public health and effective doses.</p> <p>Reference levels for release of materials are set in the Act No 87/2018 Coll. on Radiation protection, after all materials in the environment are within the legal limits, the area might be released from administrative supervision as well.</p>		
25.		Article 28	Ref. in National Report Section J, p. 154
Question/ Comment	In the National Report you state that no sealed sources are being produced in Slovakia. Do you have a study on proper disposal of imported sources?		
Answer	Operator, who performs activity leading to exposure, for which authorization or registration from ÚVZ SR is needed, is obliged without delay, 12 months at latest from the day; when the sealed source becomes unused source, give sealed source to supplier, manufacturer or organization which has permission for accumulation and storage of sources of ionising radiation.		
26.		Article 22	Ref. in National Report Section A – p. 8
Question/ Comment	<p>Slovakia's report mentions that the operation and decommissioning of nuclear installations' licensee is the Slovenské elektrárne and Nuclear and Decommissioning Company JAVYS.</p> <p>Could Slovakia provide details about the safety authority's control policy of the operation and decommissioning of nuclear installations carried out by JAVYS?</p>		
Answer	Although the JAVYS is a 100% state-owned joint stock company, there is no difference in UJD's approach to this company and to private company Slovenské elektrárne. From the point of view of UJD, both of these organizations are equal license holders and therefore they have the same rights and obligations under the Atomic Act. Both companies are subject to the requirements of the Atomic Act and the respective regulations in the field of nuclear safety, as well as the requirements of other generally binding legal documents, which are mandatory in the construction, operation or decommissioning in relation to their nuclear facilities. UJD is a supervisory and regulatory body with the power to perform inspection activities for both companies. The same means of law enforcement are applied to all license holders. Both companies also participate in the financing of UJD in the form of contributions to the performance of supervision.		

27.		Article 28.1	Ref. in National Report Section J, p. 157
Question/ Comment	<p>Slovakia mentions dozens of orphan source capture events in the last 15 years. Due to limited resources, the active search of orphan radioactive sources and radioactively contaminated objects stopped.</p> <p>As collecting orphan sources is a very important safety issue, though it is unfortunate that Slovakia has stopped active searching for these sources. Could Slovakia indicate how it considers finding the appropriate means to resume collecting orphan sources?</p>		
Answer	<p>Collecting/capturing of orphan radioactive sources and contaminated objects of unknown origin has never been interrupted and takes place continuously on the basis of notification of their occurrence/finding by finders who deal with the collection and processing of scrap metal and who perform their own monitoring of radioactivity. The occurrence of such objects is notified to the Public Health Authority of the Slovak Republic.</p> <p>In 2021, the ÚVZ SR, in cooperation with regional public health authorities, conducted a campaign to search for unused sources of ionizing radiation. A database of unused sources of ionizing radiation and institutional radioactive waste located in the Slovak Republic was created. These materials will be disposed of in 2022 by the organization which has an authorization for accumulation and storage of sources of ionising radiation.</p> <p>According to paragraph 6, 1st section, letter d) of the Act no. 87/2018 Coll. on Radiation protection, UVZ SR issued a document serving as a manual for the layout of responsibilities and activities, organisational structure, and step by step textbook on how to handle the situation of orphaned sources and UVZ SR dedicated a team of experts to provide manpower in case an orphaned source is to be found.</p>		
28.		Article 32	Ref. in National Report Section D, p. 29
Question/ Comment	<p>The expansion of the ISFS capacity is currently ongoing in order to allow the dry storage. A building permit was planned to be submitted by the end of 2020 and a first module allowing the storage of 10,100 assemblies is scheduled for 2022. In its national report, Slovakia highlights that the actual ISFS capacity is supposed to be sufficient until 2023.</p> <p>The deadlines are very close together. Therefore, does Slovakia have a strategy in case of delays in the building permit granting or in the extension works?</p>		
Answer	<p>The capacity of the ISFS is currently being expanded in accordance with the effective Time Schedule, without any delay of the works. The deadline of 2023 was chosen with a (time) contingency, in case of unexpected delays in the implementation of the project, which is not expected based on the current situation.</p>		
29.		Article General	Ref. in National Report Sections A, K
Question/ Comment	<p>Slovakia has implemented or completed all the measures answering to the challenges and suggestions addressed to the country during the 6th review meeting of the Joint Convention. In particular, the second disposal module for very low-level radioactive</p>		

	waste has been constructed and put in operation, allowing to go forward with the decommissioning activities of nuclear power plants (A1 then V1).		
Answer	This is understood as a comment and as a confirmation of progress achieved.		
30.		Article 32	Ref. in National Report p. 26
Question/ Comment	<p>The purpose of the reconstruction of the ISFS, wet storage facility for spent fuel, was to increase the storage capacity but also to enhance the seismic resistance and to increase the lifetime of the facility. The lifetime of the facility was extended by minimum 50 years.</p> <p>What was the intended lifetime of the ISFS before this reconstruction and what is the foreseen maximum lifetime now?</p>		
Answer	<p>Maximum designed storage period of SNF in the ISFS facility is assumed at least until the time of decommissioning of EMO3,4 (Mochovce NPP, Units 3 and 4), or until the construction and operation of a deep geological repository. In the ISFS, regular safety inspections are carried out in accordance with the inspection schedules approved by the regulator (NRA SR), within which the conditions of building structures and technological systems of the ISFS facility are constantly monitored and continuously evaluated. At the same time, periodic nuclear safety reviews of the ISFS are carried out at regular intervals. The results of these reviews are then submitted to the UJD SR (regulator). The ISNFSF does not contain and will not include a hot chamber even after the extension of storage capacities for the SNF, but it has a device for checking the condition of the SNF outside the hot chamber (SVYP 440).</p>		
31.		Article 14	Ref. in National Report p. 137
Question/ Comment	<p>Within TSÚ RAO, investment projects “Optimization of RAW incineration capacities” and “Facility for melting of metal RAW” are currently implemented at the Jaslovské Bohunice site.</p> <p>What does the optimization of RAW incineration capacity comprise, is it just a modification of the facility, facility extension or will a new additional incineration facility be built to optimize the capacity?</p>		
Answer	<p>The investment project is aimed at construction of a new facility for RAW incineration with optimized parameters of the RAW incineration process on site in Jaslovské Bohunice. The facility has been designed for volume and weight reduction of radioactive waste by incineration. The facility will operate on the principle of modern, efficient, safe incinerators with an inclined rotary furnace and dry flue gas cleaning, which will meet the current strict emission limits and will have a minimal impact on the environment.</p>		
32.		Article 32	Ref. in National Report p. 181
Question/ Comment	<p>By the end of 2019, there were 8,812 FCCs disposed in total, representing ca 18,017.2 m³ solidified RAW from NPP A1, NPP V1 and NPP V2 and NPP Mochovce 1&2. One FCC has a volume of ca. 3.1 m³, that would result in a volume of 27,317 m³. Please provide an explanation for the difference.</p>		

Answer	Please note that the identified number 8,812 FCCs is a typographical error. The correct quantity of FCCs by the end of 2019 was 5,812.		
33.		Article 32	Ref. in National Report Section B1, p. 15
Question/ Comment	<p>Long-term storage of SNF in the separate wet storage facility for SNF at Bohunice site – ISFS is planned for 40 – 50 years and more. Can you explain what the maximum storage period of the IFSF is designed for and provide some details on aging management and periodic safety inspections?</p> <p>According to your report, preparations for the construction of the ISNFSF dry interim spent fuel storage facility have been completed and commissioning of the dry storage facility is expected for 2022. Will the ISNFSF include a hot cell for repair and maintenance?</p> <p>For which storage periods was the storage facility designed or which long-term storage periods do you foresee?</p>		
Answer	<p>Maximum designed storage period of SNF in the ISFS facility is assumed at least until the time of decommissioning of EMO3,4 (Mochovce NPP, Units 3 and 4), or until the construction and operation of a deep geological repository. In the ISFS, regular safety inspections are carried out in accordance with the inspection schedules approved by the regulator (UJD SR), within which the conditions of building structures and technological systems of the ISFS facility are constantly monitored and continuously evaluated. At the same time, periodic nuclear safety reviews of the ISFS are carried out at regular intervals. The results of these reviews are then submitted to the UJD SR (regulator). The ISNFSF does not contain and will not include a hot chamber even after the extension of storage capacities for the SNF, but it has a device for checking the condition of the SNF outside the hot chamber (SVYP 440).</p>		
34.		Article 32.1.3	Ref. in National Report Section K.1, p. 160
Question/ Comment	<p>Activities of stage 2 of decommissioning of NPP V1 (2015 – 2025) will also include dismantling of unnecessary external objects of NPP V1, tanks, underground pipelines and cable lines. After the site has been restored to its original condition (or after clearance) and its final inspection, the site shall be released from the scope of the Atomic Act. Can you give some information concerning the application of clearance levels? When does waste meets the criteria for clearance, exemption or exclusion from regulatory control for radiation protection purposes as described in Ref. [6] of your report? Which are the criteria for release of the site from the scope of the Atomic Act?</p>		
Answer	<p>The clearance, exemption and exclusion levels are set in Act No. 87/2018 Coll. on Radiation Protection in the Annex 5. ÚVZ SR is the Regulatory Body responsible for authorization of releasing the site from the scope of the Act No. 87/2018.</p> <p>Reference levels for release of materials are set in the Act No 87/2018 Coll. on Radiation protection, after all materials in the environment are within the legal limits, the area might be liberated from administrative supervision as well. The reference levels are in the Annex 5 of the mentioned act.</p> <p>If radioactive contaminated material contains more than one type of radioisotope, in evaluation of following of releasing levels the additive rule is used. The sum of</p>		

	<p>portions of detected activity and releasing level of all detected radionuclides and hardly measurable radionuclides, which are expected in released radioactive contaminated material, must be lower than 1. Into consideration are taken all radionuclides, which portion of activity and releasing level is bigger than 0,01.</p> <p>After releasing of objects and premises from administrative control waste originated from their demolition does not require independent measurement for its releasing from administrative control.</p> <p>Area activity of surface radioactive contamination of objects which are bought out from controlled area is determined as average from area not bigger than 150 cm². For material radioactive contaminated in volume mass activity is determined as average in kilogram of mass, if brought out material can not be divided to parts of 1 kg, than mass activity is determined as average in the smallest parts, for which material can be reasonably divided, not bigger than 10 kg of weight.</p>		
35.		Article General	Ref. in National Report Section D.1.2.
Question/ Comment	Can you add some detailed information about the 9 integrated corrective actions of the second PSR of ISFS?		
Answer	<p>Periodic safety review for the Interim Spent Fuel Facility (ISFS) performed to the reference date of the 30th of November 2018 identified twelve (12) corrective measures with low significance and are aimed at:</p> <ul style="list-style-type: none"> - Upgrade of deterministic analyses in safety report, - Upgrade of external and internal threats/hazards in safety report - Upgrade of RAW Management Plan for the ISFS - Developing guidelines for writing procedures on how to deal with emergency states - Formal modifications of safety documentation in line with requirements of internal procedures - On-line monitoring of meteorological data - Updating the emergency planning documentation - Updating the programmes of care for equipment significant from the safety point of view 		
36.		Article General	Ref. in National Report Section D.1.2.
Question/ Comment	The storage capacity of ISFS is sufficient until 2023. In the previous National Report the end of this period was 2024. What is the reason of the change?		
Answer	Sufficiency of SNF storage capacity in the ISFS facility depends on the actual production of SNF in the given period and on fulfilment of precisely determined SNF parameters to be stored in the ISFS. For this reason, the assumption of reaching the SNF storage capacity depends on the actual production of SNF and is currently assumed in the year 2024. Thus, a certain (time) contingency in connection with the deadline is included in the plans in case of project implementation delays.		
37.		Article General	Ref. in National Report Section F.4.3.
Question/ Comment	It is possible to discharge radioactive material into the environment from a workplace, where activity leading to exposure is performed, without the permission from the ÚVZ SR or the relevant regional authority, if in any calendar year the average		

	<p>effective dose caused by their introduction into the environment does not exceed 0.01 mSv in a representative person, and at the same time the collective effective dose shall not exceed 1 manSv;</p> <p>In these cases, how is it necessary to demonstrate operation within the criteria? What organization does control the activity in this case?</p>		
Answer	<p>The conditions for meeting the criteria under this paragraph are set out in Annex 5 of Act No. 87/2018 Coll. on Radiation Protection. UVZ SR may require the applicant for a permit for the release of radioactive materials from the workplace to prepare an optimization study. This means that the dose limit is the basic criterion for checking the current annual reference levels of discharged activities of radioactive materials. (checking that the above-criterion is not exceeded – not exceeding the effective dose – was performed by a software through the appropriate geographical model and conversion factors).</p>		
38.		Article General	Ref. in National Report Section F.4.3.
Question/ Comment	<p>According to Table 6, tritium discharge was increased in 2018 compared to previous years. What was the reason for the 2-3 times increasing of the activity?</p>		
Answer	<p>During that period, tritium discharges were in accordance with the relevant authorisations and limit indications and were in no way exceeded. Values related to decommissioning work of NPP A1. The discharge of tritium in 2018 was in consequence of draining pipelines of heavy water operating. In process decommissioning work of NPP A1.</p>		
39.		Article 25	Ref. in National Report Section E.2.1.6, p. 63
Question/ Comment	<p>It is noted that the Regulatory Authority for Nuclear Safety is currently running a project titled “implementation of knowledge management”, to ensure that the knowledge base of the regulatory authority is maintained including the preservation of critical knowledge.</p>		
Answer	<p>The project of the Knowledge Management is implemented at the Regulatory Authority based on the IAEA standard basis and recommendations. The whole project is on-going process during which the knowledge management is established as the UJD SR quality assurance process. The basic requirements are set by the UJD SR Knowledge Management Strategy. Furthermore, there was adopted an internal Directive on the Knowledge Management to establish and describe the knowledge management process as well as the related documentation to be implemented at the UJD with objective to set a management knowledge system, its objectives and tasks, their management, coordination, monitoring and evaluation, including tools and techniques that are used to acquire, record, store and use the knowledge and skills of the UJD's staff. The knowledge management system is inspired by the quadrant model. The inspectors professional competencies mapping was performed and to be continued.</p>		
40.		Article 25	Ref. in National Report Section E.2.1.3, p. 57
Question/ Comment	<p>It is noted that the Regulatory Authority for Nuclear Safety is implementing a quality management system (Slovak Technical Standard STN EN ISO9004:2001) for its regulatory activities. This ensures that the performance of the regulatory authority is</p>		

	subject to continued scrutiny arising from ongoing audits and an annual assessment from the accredited body.		
Answer	The basis for the management system is the IAEA GSR Part 2 and Technical Standard STN EN ISO9001:2016 while parts of the STN EN ISO 9004:2001 are applied where appropriate. The basic document of the system is the Quality Manual, in which the Quality Policy is formulated, where the quality objectives that the ÚJD SR aims to achieve in relation to the inhabitants of the Slovak Republic and to the international community are outlined. The Authority continuously improves its management system. The experience of the implementation of management systems in other state administrations and the international recommendations in the field of nuclear safety and good practice are considered. The regulatory authority undergoes regular assessments of the quality management system by a specialised external organisation. The results of these assessments are distributed within the authority's Board for the Management System and its recommendations are implemented as necessary.		
41.		Article 22	Ref. in National Report Section F.2.1, p. 75 - 80
Question/ Comment	While noting that a comprehensive training programme is in place for all staff performing work activities that have an impact on nuclear safety. How is determined that the ongoing competencies of such staff to effectively perform these safety critical activities are satisfactory?		
Answer	We use a Systemic Approach of Training (SAT) which is a description of the methodology used in professional training based on a systematic approach, which proceeds logically from the identification of qualifications, through the development and implementation of professional training programmes including the respective teaching aids and subsequent assessment of this professional training. It means adequately analyse working activities and competencies (mix of knowledge, skills and attitudes), design for them training programmes, ensure training tools, environment and instructors, implement and realise real training and finally evaluated effectivity by instructors, trainees and managers. Some forms of evaluation are also examinations before the examination board.		
42.		Article 32	Ref. in National Report Section D.2.2, p. 31
Question/ Comment	Could Slovakia provide more details of the 2 corrective actions including their significance for safety following the second Periodic Safety Review of the Bohunice RAW Treatment Centre and status of their implementation?		
Answer	Repeated periodic safety review of the Bohunice RAW Treatment Centre was performed as to the reference date of 22.01.2019, i.e. after 10 years from the last periodic safety review. The periodic safety review resulted in 4 integrated corrective measures, of which 3 corrective measures were of low significance and one measure of medium significance. The measures include e.g. ensuring the transmission of meteorological data to the regulator (NRA SR), completing the safety analyses with extreme events with an occurrence of more than 10,000 years (floods, extreme rain, wind), ensuring new independent verification of these safety analyses and extension of the existing barrier control system in the Bohunice RAW Treatment Centre to be also reflected in the operational documentation. The results of performed comprehensive periodic safety review show that no discrepancies with fundamental safety significance that would prevent further operation of the Bohunice RAW		

	Treatment Centre were identified. Periodic safety review has shown that good preconditions for meeting the legislative requirements for safe operation also in the next 10 years have been established.		
43.		Article 32	Ref. in National Report Section D.1.2, p. 27
Question/ Comment	Could Slovakia provide more details of the 9 integrated safety actions that were identified following the second Periodic Safety Review of the ISFS and the status of their implementation?		
Answer	<p>Periodic safety review for the Interim Spent Fuel Facility (ISFS) performed to the reference date of the 30th of November 2018 identified twelve (12) corrective measures with low significance and are aimed at:</p> <ul style="list-style-type: none"> - Upgrade of deterministic analyses in safety report, - Upgrade of external and internal threats/hazards in safety report - Upgrade of RAW Management Plan for the ISFS - Developing guidelines for writing procedures on how to deal with emergency states - Formal modifications of safety documentation in line with requirements of internal procedures - On-line monitoring of meteorological data - Updating the emergency planning documentation - Updating the programmes of care for equipment significant from the safety point of view <p>Periodic safety review has shown that good preconditions for meeting the legislative requirements for safe operation also in the next 10 years have been established.</p>		
44.		Article General	Ref. in National Report p.159
Question/ Comment	According to the report, the application for a building permit of a dry Interim Spent Fuel Storage Facility (ISNFSF) has been planned to submit to Urad jadroveho dozoru Slovenskej republiky / Nuclear Regulatory Authority of SR (UJD SR) by end of 2020, and the expected date of operation is in 2022. What are the current status of the construction of a dry ISNFSF. Please specify any impacts of COVID-19 pandemic on the expected date of operation?		
Answer	<p>Currently, a project to complete the storage capacities of the ISFS, the so-called dry storage in accordance with the effective Time Schedule and without any delays, is being implemented. COVID-19 pandemic has no impact on the expected date of commissioning of the facility in 2023. This deadline respects the current development in the SNF production in the Slovak Republic in relation to the capacity of the ISFS. There is a certain (time) contingency in connection with the deadline.</p> <p>Sufficiency of SNF storage capacity in the ISFS facility depends on the actual production of SNF in the given period and on fulfilment of precisely determined SNF parameters to be stored in the ISFS. For this reason, the assumption of reaching the SNF storage capacity depends on the actual production of SNF and is currently assumed in the year 2024. Thus, a certain (time) contingency in connection with the deadline is included in the plans in case of project implementation delays.</p>		

45.		Article 28.1	Ref. in National Report p. 154/155																									
Question/ Comment	The list starts with j). If there are parts of the list missing, please provide the list in full.																											
Answer	We apologize for the mistake in the queue. The list should start with a).																											
46.		Article 22	Ref. in National Report Section F, Fig. 21, p. 78																									
Question/ Comment	In the chart of professional training systems for employees but it would be interesting to know how often the “basic training”, “periodical training” or “re-training” is being performed.																											
Answer	<p>JAVYS, a. s. performed or organized the following number of different types of training (number of employees during the time period 2017-2020).</p> <table border="1"> <thead> <tr> <th>Year/Professional Training</th> <th>2017</th> <th>2018</th> <th>2019</th> <th>2020</th> </tr> </thead> <tbody> <tr> <td>Basic</td> <td>15</td> <td>24</td> <td>24</td> <td>16</td> </tr> <tr> <td>Periodic of daily employees</td> <td>108</td> <td>-</td> <td>194</td> <td>129</td> </tr> <tr> <td>Periodic of shift employees</td> <td>200</td> <td>200</td> <td>199</td> <td>65/199*</td> </tr> <tr> <td>In case of job position changing</td> <td>37</td> <td>24</td> <td>10</td> <td>6</td> </tr> </tbody> </table> <p><i>*Periodic professional training is realized in spring and the autumn cycle (2 * 15 terms). They organized only 3 from 15 during spring of 2020 in case of the epidemic COVID-19 impact, and realized all on second part of year 2020</i></p>			Year/Professional Training	2017	2018	2019	2020	Basic	15	24	24	16	Periodic of daily employees	108	-	194	129	Periodic of shift employees	200	200	199	65/199*	In case of job position changing	37	24	10	6
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47.		Article 23	Ref. in National Report Section F																									
Question/ Comment	How is the integrated management system policy checked and how is it related to the safety policy?																											
Answer	<p>JAVYS, a. s. Integrated management system policy is checked:</p> <ul style="list-style-type: none"> - on yearly basis within the management review, - on yearly basis within the certification/periodical audits realized by the certification company, - on three years basis within the control of the Nuclear Regulatory Authority. <p>The safety policy is related to integrated management system policy as consists of the several processes of the integrated management system such as operational safety, technical safety, objects and physical safety, environmental management, safety culture, fire protection, information safety, protection of restricted matters, crisis planning and civil protection, personal safety, administration safety, risk management/financial safety, protection of the company’s good name, action continuity planning and protection of personal informations.</p> <p>Both policies, integrated and safety, are parts of the IMS Manual and are reviewed by the Nuclear Regulatory Authority.</p>																											

48.		Article 23	Ref. in National Report Section F
Question/ Comment	How is the integration of individual standards and systems checked, e.g. ISO 9001 with ISO 14001?		
Answer	<p>JAVYS, a. s. integration management system consists of:</p> <ul style="list-style-type: none"> - quality management system according to ISO 9001:2015, - environment management system according to ISO 14001:2015, - occupational health and safety management system according to ISO 45001:2018 <p>and</p> <ul style="list-style-type: none"> - information technologies management system according to ISO/IEC 20000-1:2018 and this integration is checked by the certification company on yearly basis within certification/periodical audits. 		
49.		Article 23	Ref. in National Report Section F
Question/ Comment	Which organizations in Slovakia certify the integrated management system?		
Answer	JAVYS, a. s. integrated management system is certified by DNV Business Assurance Slovakia, s. r. o.		
50.		Article 23	Ref. in National Report Section F
Question/ Comment	Why does Slovakia apply only the requirements of the IAEA GS-R-3 standard and not also GSR part 2?		
Answer	<p>IAEA safety standard GS-R-3 was replaced with GSR Part 2 in 2016, which has been currently implemented in Slovakia. Requirements from IAEA safety standard No. GSR Part 2 are transposed mainly into the Act No. 541/2004 Coll. on the Peaceful use of nuclear energy (Atomic Act) and on the amendments and supplements to some acts as amended and the Decree No. 431/2011 Coll. on a Quality management system as amended. Last update of the Act No. 541/2004 Coll. was performed in 2021 and Decree No. 431/2011 in 2016. The vast majority of requirements from IAEA GSR Part 2 has been already transposed into national legislation. The transposition will be completed by the issuance of a new Atomic act, which is being prepared.</p>		
51.		Article 19	Ref. in National Report Section F5
Question/ Comment	Does exist in the legal and regulatory framework provisions on the existing of strategy for management of RW from emergency? The licensee is obliged to develop and to implement a strategy for management of RW from emergency?		
Answer	<p>Within the Fukushima National Action Plan there was a task dealing with large volumes of contained water. Within this task a study was prepared. The aim of the study was the preparation of a conceptual study for addressing issues, dealing with high activity liquid wastes after severe accident.</p>		

52.		Article 19	Ref. in National Report Section E2.2
Question/ Comment	Please briefly describe the process of verification of the compliance with regulatory requirements regarding the employer of outside workers. What kind of document the regulatory authority does grant for the employer of outside workers?		
Answer	<p>Outside workers are in the terms of graded approach considered under obligatory notification according to the Act No. 87/2018 Coll on Radiation protection. All the doses are measured and uploaded into National Registry of Doses. National Registry of Doses is maintained at the ÚVZ SR.</p> <p>Notification of employer of external workers/outside workers/itinerant workers according to Act No 87/2018 Coll. on Radiation protection regarding the planned performance of working activity leading to exposure contains:</p> <p>description and extent of working activity, place and date of start, data on employee who was delegated the power from employer of external employees to fulfil the duties connected with radiation protection of employees who perform working activity as external workers, data on holder of permit on which workplace the working activity will be performed, commercial name, legal form, seat and identification number if holder of permit is legal person, or name, surname, commercial name, place of business and identification number if the holder of permit is physical person – entrepreneur, specification of sources of ionising radiation, their number and address of workplace where they are, expected way of termination of activity leading to irradiation, expected date of termination of activity leading to irradiation, if it is known, and operating instructions.</p>		
53.		Article 11	Ref. in National Report Section A
Question/ Comment	Could you please clarify whether the plant for processing metallic radioactive waste scheduled to be commissioned in 2020 has been put on line? What is the plant capacity?		
Answer	Construction works in metallic RAW melting facility were completed in 2021. Subsequently, pre-commissioning tests of individual parts and a set of technological systems were performed, so the facility was not put into operation in 2020. The facility is currently being prepared for active commissioning tests (until 31. 05. 2022).		
54.		Article 11	Ref. in National Report Section A
Question/ Comment	What containers are used to accommodate solid / processed liquid RW, acceptable for transportation and storage, as well as for disposal at the National RW Disposal Facility?		
Answer	Fibre-concrete containers (FCCs), which are approved for transport, storage and disposal of conditioned RAW, are used for the disposal of solid and fixed liquid radioactive waste at the National Radwaste Repository – see picture.		



Transport of fibre concrete containers to the National Repository of RAW

55.		Article 32	Ref. in National Report Section G
Question/ Comment	Please clarify whether Slovakia has made a final decision to construct a geological RW disposal facility together with another country (or other countries)?		
Answer	Not yet. Decision on the construction of the Slovak geological repository resp. on the continuation or stopping of the dual track approach has not been made yet and was postponed until 2030.		
56.		Article 25	Ref. in National Report Section F
Question/ Comment	It is stated on page 104 that the Emergency Response Center may invite experts from various ministries to solve the incident. Are experts from various ministries involved also in your expert group “Information and PR group”? Do these experts support your PR tasks during the event? If they do, how often do they participate in the exercises?		
Answer	Emergency Response Center of UJD SR (ERC) does not have the ability to invite other experts to resolve the situation except for the PHA representative. There was wrong abbreviation used in the statement you refer to in your question. The correct one is CCS, instead of ERC. We apologize for this misunderstanding.		
57.		Article 14	Ref. in National Report Section H
Question/ Comment	It is written in the report that during the construction of facilities for radioactive waste management, it is necessary to ensure the compliance check of installed systems, structures, components or their parts with the design documentation and the quality assurance requirements, records are made and maintained on the checks performed. Which organisation in Slovakia is responsible to perform compliance check of installed systems, structures, components or their parts with the design documentation during the construction of facilities for radioactive waste?		
Answer	<p>UJD SR as a central state administration authority in the field of nuclear safety of nuclear installations in the Slovak Republic is also responsible for reviewing requirements for the quality of nuclear installations, requirements for the quality of classified equipment and details of their approval.</p> <p>UJD SR controls the fulfilment of the obligation arising from Atomic Act, according to which the authorization holder is obliged to ensure, during construction, reconstruction or during repairs of nuclear installations with the participation of the UJD SR or persons authorized by the UJD SR the conformity check of assembled</p>		

	<p>systems, structures and components or their parts with the design documentation, with the quality assurance system requirements, quality requirements and verify compliance of their accompanying technical documentation with generally binding legislation; also to prepare and keep records of the inspections carried out.</p> <p>The applicant for an authorisation or the authorisation holder shall check conformity of classified equipment with quality requirements for classified equipment and accompanying technical documentation when they are delivered to the construction site, and shall make a record of this. The applicant for an authorisation or the authorisation holder shall check conformity of classified equipment with quality requirements for classified equipment, accompanying technical documentation, quality plans, and conformity of accompanying technical documentation after installation of classified equipment into integrated systems or parts thereof has been completed, and shall make a record of this.</p> <p>In accordance with the requirements of the Atomic Act, the authorization holder shall notify the UJD of the date post-installation tests in which the inspector of the UJD SR also participates. A binding inspection procedure "Post-installation inspection - conformity inspection" has been developed for UJD SR inspectors. The procedure applies to the area of quality assurance and equipment care.</p> <p>Besides the supervision of the UJD SR there are state authorities responsible for the other aspects of the new facilities. The UJD SR has to take into account the statements of the:</p> <p>Public Health Authority of the Slovak Republic is responsible for the compliance of the new facilities with design solutions for the radiation protection.</p> <p>Ministry of the Interior, fire brigade and rescue, Fire prevention department is responsible for the compliance of constructions during their implementation in terms of compliance with fire safety according to the approved project documentation of constructions</p> <p>Labour Inspectorate legal is responsible for compliance of the design and the realization with the legal provisions and other provisions for securing occupational safety and health protection, including the provisions which govern factors of the working environment.</p>			
58.	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;"></td> <td style="width: 30%;">Article 14</td> <td style="width: 40%;">Ref. in National Report Section H</td> </tr> </table>		Article 14	Ref. in National Report Section H
	Article 14	Ref. in National Report Section H		
Question/ Comment	<p>It is written on page 136 that Systems, structures and components shall be designed according to the relevant technical standards, their selection meets the reliability objectives of a facility for radioactive waste management in terms of nuclear safety and the design was verified in similar previous applications. The design of such facility takes into account operational experience and available results from research programs from similar nuclear facilities.</p> <p>Which technical standards did you use for systems, structure and components? Were during the review only the internationally recognized technical standards in conjunction with the IAEA recommendations used or did you also use your national technical standards, obtained on the basis of your research institutes in Slovakia, which are not yet internationally recognized or IAEA recommendations harmonized?</p>			
Answer	<p>Special condition for a nuclear facility operator is the introduction of a certified quality system according to the international standard ISO 9001 issued in the Slovak</p>			

	<p>Republic under the name Quality Management System. The principles of the quality management system are in accordance with international practice and respect the obligations of the Slovak Republic arising from Article 13 of the Convention on Nuclear Safety.</p> <p>The IAEA standards and recommendations themselves are taken into account in legislation issued under the Atomic Act and important quality requirements are set out in safety guidelines issued by the UJD specifying conditions, procedures and quality assurance rules for individual systems, structures and components of nuclear facilities. The system focuses on quality management in a complex area of requirements, such as: compliance with legislative requirements, process management, risk management, quality system definition, resource management responsibility, implementation management, supplier evaluation, internal audit, analysis and improvement.</p> <p>Based on the above principles, each certificate holder is obliged to accept a mandatory requirement to comply with special legal regulations, i. e. legislation on safety and interoperability requirements. To ensure the repeatability of quality and control for the quality of nuclear installations in the design, production, installation and inspection stages, individual technical specifications for the above activities were adopted. At the same time, the holder of the nuclear facility operating license undertakes to perform all the mentioned activities for individual stages of nuclear facilities according to the valid legislation and standards approved in the system of the National Standards Body (NSB), or European standards and harmonized standards that are considered appropriate or sufficient to be the technical requirements laid down in EU legislation are met.</p> <p>At national level, standardization is carried out by NSBs which adopt and publish national standards. At the same time, these bodies are responsible for transposing all European standards to the same national standards and removing any national standards that conflict with them. For NSBs, this obligation follows from Act no. 60/2018 Coll. Act on Technical Standardization and Regulation (EU) No. 1025/2012 of the European Parliament and of the Council, as well as the commitments made upon accession to the EC for AE.</p>		
59.		Article 9	Ref. in National Report Section G
Question/ Comment	Are the procedures for spent fuel removal and repairing the spent fuel containers in case of events required? What is the approach in such situation?		
Answer	Transport containers for SNF are designed and tested in such a way that in any event, container leakage and damage to SF are ruled out. The certification of a transport container for SNF includes the assessment/review of the design and test results, which must demonstrate that no event will cause the container to leak and that the SNF will not be damaged.		
60.		Article 9	Ref. in National Report Section G
Question/ Comment	Could you please indicate the operational experience and give some examples of deviations or events related to the storage of spent fuel facilities in your country.		

Answer	The ISFS operation is highly reliable; during the operation of the ISFS so far, there have been no operational events that would need to be reported to the regulator (UJD SR).		
61.		Article 9	Ref. in National Report Section G
Question/ Comment	It is stated on page 124 that limits and conditions of safe operation is the basic legislative document containing permissible values of parameters of nuclear installation facilities and defines its operating regimes. Are the limits and conditions for design extension conditions of spent fuel storage facilities required? If yes, could you please give some examples.		
Answer	The limits and conditions of operation of nuclear installation (NI) is actually a set of allowed parameters within which the safety of installation is ensured. The aim of this set of operating requirements is to keep parameters of the installation within normal range (as understood by the concept of defence in depth). In case any of the limits is exceeded, there are specified actions to be performed to return to normal parameters. Therefore, if any initiating event develops into an accident considered to belong in design extension conditions, it will already be out of bounds of the limits and conditions. Violation of L&C is penalised by the authority. There is no distinction of design and design extension of the L&C.		
62.		Article 6	Ref. in National Report Section G
Question/ Comment	On which basis was changed the seismic design basis for NPP Mochovce site? Is the spent fuel facility fragility analysis required from licensee for facility operation? What is the methodology for such analysis, is methodology prescribed in regulation?		
Answer	<p>For the NPP Mochovce site, the original design value of PGA = 0.06 g was increased (based on the IAEA recommendations) to PGA = 0.1 g, which was later, based on a new calculation from 2003, and the following ÚJD SR Decision, increased to PGA = 0.15 g. This value is binding for the completion of MO 3&4, as well as for the seismic reinforcement of EMO 1&2.</p> <p>Fragility analysis of the spent fuel facility is not required under the legislation (under the legal regulations).</p> <p>Data for the Mochovce NPP site are not identical for the National Radwaste Repository (PGA value = 0.15 g is not applicable for the National Radwaste Repository).</p> <p>In terms of the impact of local subsoil properties on seismic movement, the area is classified in category B. Based on the seismic-statistics assessment of the seismic threat to the site, the design earthquake was determined at an intensity of 5° EMS-98, i.e. the maximum design acceleration is 0.25 m.s-2 and the calculated earthquake corresponds to the intensity of 6° of EMS-98, i.e. the calculated maximum acceleration is 0.5 m.s-2.</p>		
63.		Article 7	Ref. in National Report Section G
Question/ Comment	The storage of spent fuel assemblies in the spent fuel pool is protected against external hazards within the design basis, and appropriate margin is available for such hazards beyond the design basis. As a whole, the facility and the handling of stored nuclear		

	fuel could be seen as protected against external hazard. Could you please describe the natural and man-made hazards, which are beyond the design basis, against which the safety of SFISF are assessed?		
Answer	<p>Safety of the ISFS is assessed in terms of the following hazards:</p> <ul style="list-style-type: none"> - explosion, clouds of flammable vapours, toxic chemicals, - fires, - violation of inlet objects, - contamination with harmful liquids, - plane crash, - flood, - earthquake, - terrorist attacks <p>The pool itself is a facility with low operating parameters (pressures, temperature, ...) and does not require such strict assessment as nuclear installations with a reactor. Within the design basis events such as pool overflow, pipe leaks and pool leaks are assessed. The basic initiating events that could lead to accidents beyond design basis are assessed for the area of the whole waste processing company JAVYS, a. s. and are as follows: radwaste out of specification (unexpectedly high activity), fall of heavy loads, fire, explosions, leaks, mechanical faults (incl. sabotage), earthquake, aircraft crash, flooding, thunderbolts and wind damage.</p> <p>Information about the stress tests of the storage facility for events stronger than envisaged in the design are also in section D.1.2 of the national report.</p>		
64.		Article 6	Ref. in National Report Section G
Question/ Comment	Seismic load of the Jaslovské Bohunice site was re-assessed and measures for improve seismic resistance of NPP V1 (when in operation) and ISFS were implemented. Could you please describe which measures were taken for improving the seismic resistance of ISFS?		
Answer	<p>Seismic resistance improvement and extension of storage capacity of the Interim Spent Fuel Storage facility was carried out between 1997 and 1999.</p> <p>The original Soviet ISFS design, according to which the storage facility was carried out, anticipated seismic parameters up to 6 ° of MSK 64 scale. The ISFS is geographically located in an area with possible seismic activity. For this reason, the seismic resistance was re-assessed and the reconstruction project increased the seismic resistance of the ISFS to the required level.</p> <p>Seismic resistance improvement of the ISFS addressed the following parts:</p> <ul style="list-style-type: none"> • construction part - the lower part of the building (concrete pools and adjacent reinforced concrete structures), • main steel structures were reinforced and completed, including the reinforcing of their anchorage • superstructure (hall and roof structure), • panels of the outer cladding in the upper part of the building were replaced by panels with a lower weight, which reduced the seismic effects on the building, • technological - seismic resistance of the hydraulic part, part of the cooling system and pool water treatment, 		

	<ul style="list-style-type: none"> • functionality of the cooling and cleaning/treatment system in terms of hydraulic conditions in the system in connection with the possibility of their failure caused by a seismic event, • parts of electrical systems - bridge cranes, pool water cooling and pool water treatment. <p>The reconstruction also included the installation of a device for monitoring the seismic activity - seismic monitoring system GeoSIGsa SMACH.</p>		
65.	<table border="1"> <tr> <td>Article 28</td> <td>Ref. in National Report Section J</td> </tr> </table>	Article 28	Ref. in National Report Section J
Article 28	Ref. in National Report Section J		
Question/ Comment	Do you in your country collect consumer goods and products containing radioactive substances? Do you have any restrictions on the available disposal options at the end of their useful lifetime? If yes, what are the basis for such decision.		
Answer	<p>Firstly, any intentional adding of radioactive substances during manufacturing and processing of food, feed, toys, cosmetic products, jewellery and other personal decorative objects is forbidden. It is also forbidden to use radioactive substances in preparations intended for tattoo and other decorations of skin; import and export of such adapted goods is forbidden.</p> <p>Secondly, sale of consumer product or introduction of consumer product with added radionuclide on market, if its planned use is not reasoned and does not fulfil conditions for exception from duty of notification, registration or permission, is forbidden.</p> <p>Physical person – entrepreneur or legal person who has the intent to manufacture consumer product with added radionuclide or import consumer product with added radionuclide, which intended use is most likely new category of activity leading to irradiation or new kind of activity leading to exposure, is obliged to ask ÚVZ SR for evaluation whether intended use of consumer product is reasonable.</p> <p>Thirdly, ÚVZ SR based on information stated in application evaluates intended use of consumer product with added radionuclide and makes decision if it is reasonable; during evaluation it takes into account whether the product a)has the properties which justify its intended use, b)is manufactured in such a way that during common use minimalization of irradiation and probability of consequences of misuse or consequences of accidental irradiation is secured, or whether it requires determination of additional requirements on technical properties or physical properties, c)is proposed in a way to fulfil criteria for exemption from notification duty or, if it is appropriate, to be type approved, and no additional instructions for its liquidation after termination of its use are needed, d)is appropriately labelled and consumer has relative documentation, direction for use and instructions for liquidation after termination of its use.</p> <p>Decision according to section 3 (above) contains standpoint to intended use of consumer product with added radionuclide; whether its use is reasoned and whether it fulfils requirements for exemption from duty of notification, registration or permission.</p> <p>ÚVZ SR informs about information obtained during the process of evaluation of validity of planned use of consumer product with added radionuclide through contact place according to § 6 sec. 2 letter n) of Act No. 87/2018 Coll. on Radiation Protection</p>		

	<p>respective bodies of other member states; on their request also about decision and its reasoning.</p> <p>Information about consumer goods and products containing radioactive substance are also held in the database of National Registry as a tool to help prevent any harmful use.</p>		
66.		Article 23	Ref. in National Report Section F
Question/ Comment	The IAEA GS-R-3 has been replaced in 2016 with the IAEA GSR Part 2. Do you plan to include its requirements into the legislation?		
Answer	<p>Requirements from IAEA safety standard No. GSR Part 2 are transposed mainly into the Act No. 541/2004 Coll. (Atomic Act) and the Decree No. 431/2011 Coll. on a Quality management system as amended. Last update of the Act No. 541/2004 Coll. was performed in 2021 and Decree No. 431/2011 in 2016. The vast majority of requirements from IAEA GSR Part 2 has been already transposed into national legislation. The transposition will be completed by the issuance of a new Atomic act, which is being prepared.</p>		
67.		Article 23	Ref. in National Report Section F
Question/ Comment	How and when do you plan to upgrade the existing quality assurance system with the management system?		
Answer	<p>JAVYS, a. s. do not have only quality assurance system, but since 2012 fully certified integrated management system consisting of 4 management systems.</p> <p>JAVYS, a. s. integration management system consists of:</p> <ul style="list-style-type: none"> - quality management system according to ISO 9001:2015, - environment management system according to ISO 14001:2015, - occupational health and safety management system according to ISO 45001:2018 <p>and</p> <ul style="list-style-type: none"> - information technologies management system according to ISO/IEC 20000-1:2018 and this integration is checked by the certification company on yearly basis within certification/periodical audits. 		
68.		Article 24	Ref. in National Report Section F
Question/ Comment	It is stated that the dose limit for the representative person due to operation of a nuclear facility is 0,25 mSv/y. Furthermore, there are limits for discharges to the air and waters, 0,2 and 0,05 mSv/y respectively. How is direct exposure to radiation from the facility taken into account since there is no margin between total dose limits and partial limits due to releases?		
Answer	<p>Anyone who performs activity leading to exposure is obliged to limit exposure of workers and inhabitants from all performed activities in a way that it does not exceed the limits for irradiation according to the Act No. 87/2018 Coll. on Radiation protection.</p> <p>Besides the limits defined for water and air, no other possibilities of direct exposure are expected. Also, it is important to note, that limits are not set for facilities, but for</p>		

	an area of the facilities (for a nuclear site), therefore the limits involve the sum of activity regarding the area. In order to provide increased safety culture, reference levels are set to a certain amount so it would prevent breaching the exposure limits of population. The reference levels already take into account the limits.		
69.		Article 24	Ref. in National Report Section F
Question/ Comment	It is stated that dose limits are the basic criterion for checking the current annual reference levels of discharged activities of radioactive materials. Since the dose is calculated after the fact, are there in all cases mechanisms to limit releases in order to ensure discharges will not cause doses above the legal limits?		
Answer	<p>Besides the limits defined for water and air, no other possibilities of direct exposure are expected. Also, it is important to note, that limits are not set for facilities, but for an area of the facilities, therefore the limits involve the sum of activity regarding the area. In order to provide increased safety culture, reference levels are set to a certain amount so it would prevent breaching the limits of population. The reference levels already take into account the limits.</p> <p>The entire release process is set and monitored to ensure that the relevant limits are not exceeded.</p>		
70.		Article 19	Ref. in National Report Section E
Question/ Comment	It is stated in the report »Since its validity the Atomic Act has been amended twenty-two times«. We could not figure it out whether this applies to the Act No. 541/2004 Coll or to the Atomic Act No. 130/1998 Coll? Can such an intensity of amendments affect the stability of the legal system in this area, its transparency and the legal protection of persons (legal and physical) obliged to respect it?		
Answer	<p>The number of amendments (22) is stated in relation to the Act No. 541/2004 Coll. Most of the amendments to the Atomic Act were caused by the necessity for changes due to the transposition of EU Directives and Decisions (e.g. Council Directive 2006/117/EURATOM, Council Decision 2008/312/Euratom, Council Directive 2009/71/Euratom, Council Directive 2011/70/EURATOM, Council Directive 2013/59/Euratom, Council Directive 2014/87/Euratom), new knowledge of science, research, WENRA Reference levels, the conclusions of the IRRS mission, national legislation (e.g. Act No. 211/2000 Coll. on free access to information, Act No. 305/2013 Coll. on electronic form of the tasks performed by the public authorities and on amendments and supplements to certain acts (the e-government), Act No. 308/2018 Coll. on the National nuclear fund, Act No. 177/2018 Coll. on certain measures to reduce administrative burdens by using public administration information systems and on the amendments and supplements to some acts (the anti-bureaucracy Act), and others.</p> <p>The transparency legislative process itself consists of more stages. Each stage can only start after the previous one has been completed through the SLOV-LEX portal. The portal is freely accessible to the public and they can get acquainted with the draft legislation.</p> <p>During Interdepartmental comment procedure ministries, governmental bodies, municipalities and also public may comment the material as a whole and make their comments and proposals for changing the proposal.</p>		

	It is very important that the preparation of legislation is transparent and the drafts are accessible to the public.		
71.		Article General	Ref. in National Report Finding 7, p.13
Question/ Comment	Could you please further elaborate the safety and technical bases for the construction of an onsite melting facility at Bohunice site for metal decommissioning radioactive waste? Could you please report the current status of such facility?		
Answer	<p>The decision to construct a Metallic RAW Melting Facility on site of Bohunice NPP resulted from analyses of the expected production of metallic RAW from decommissioning of NPPs in the Slovak Republic and the requirement for most efficient management and minimization of volumes of generated RAW that would have to be disposed of at the Repository if its volume was not reduced using the re-melting. In the project implementation phase, necessary project and safety documentation, including the relevant safety analyses, was prepared.</p> <p>Construction works in metallic RAW melting facility were completed in 2021. Subsequently, pre-commissioning tests of individual parts and a set of technological systems were performed, so the facility was not put into operation in 2020. The facility is currently being prepared for active commissioning tests (until 31.05.2022).</p>		
72.		Article 32	Ref. in National Report Section D.3.3., p. 42
Question/ Comment	Could you please refer the storage/disposal pathway for the waste packages resulting from the operation of the Vitrification Facility of Chrompik (VICHR)?		
Answer	<p>The vitrification products are not disposable at the National Radwaste Repository and it is planned to dispose of them at the Deep Geological Repository. At present, they are stored in a special shielded unit in hermetically sealed casks in A1 NPP. Five (5) vitrification products are placed in one hermetic cask. After the vitrification has been fully completed in line with and depending on the progress of the A1 NPP decommissioning, products that cannot be disposed of at the National Radwaste Repository will be transferred for long-term storage to the Interim Storage of RAW facility, where they will be stored until the Deep Geological Repository has been constructed.</p>		
73.		Article 24	Ref. in National Report Section F, p. 96
Question/ Comment	<p>Figure 26 of the Report shows the values of collective effective dose for personnel working with radioactive waste for the period from 2010 to 2019.</p> <p>In what units are these values given? What are the established limits of exposure dose for personnel and target ALARA indicators?</p>		
Answer	<p>The collective dose is reported in man. mSv. Guide values are based on legislation, internal guidance values are planned on the basis of a plan of decommissioning and processing activities.</p>		
74.		Article General	Ref. in National Report Section A, p. 10
Question/ Comment	The Report mentions “the planned update of the National Policy and National Program for the Management of Spent Nuclear Fuel and Radioactive Waste in the Slovak Republic in 2021”. Is there a legislative requirement for periodic revision and		

	update of the National Policy and the National Program or are they planned to be updated in 2021 particularly for the introduction of DGR provisions? What is the procedure of updating and further approval of the updated Policy and how long is it expected to take?		
Answer	The periodicity for submission of the updated National Program by the board of governors of the National Nuclear Fund to the Ministry of Economy is every 6 years according to Article 6, section 7 of the Act No. 308/2018 on the National Nuclear Fund. The procedure for the updating, commenting, approval and endorsement (by the government) is as for strategic document with impact on the entire country takes over 2 years.		
75.		Article 32	Ref. in National Report Section B 1, p. 15 (point 6)
Question/ Comment	The Report mentions that “Slovakia monitors activities that could lead to international deep geological repository, i.e. repository jointly owned and operated by several States under relevant international agreements.” Are there any proposals or projects of international or jointly owned DGR?		
Answer	No, Slovakia only monitors the activities in the central European region and of the ERDO group. There are no any projects or design proposals for international or jointly owned DGR yet.		
76.		Article 32	Ref. in National Report Section B 2, p. 17 (point 2)
Question/ Comment	The Report mentions that “Bituminisation technology is used very little due to the reduced production of liquid concentrates from the WWER units in operation”. What specific technical measures have been implemented to reduce the production of liquid concentrates from WWER units?		
Answer	<p>Measures to reduce the production of liquid RAW during their operation were implemented by the operator of WWER reactor units in the Slovak Republic and are the specific know-how of their operator, i.e. company SE, a. s.</p> <p>A large number of partial project changes were implemented in the operation of Mochovce units 1 and 2 during 2009 – 2015. Based on the analysis, the projects with the greatest contribution to liquid RAW production minimalization were selected. Please find below the list of some implemented specific measures with dominant effect to liquid RAW minimization:</p> <ul style="list-style-type: none"> - Modification of samples collection from special purification system 2,4,6 and demi water supply to samples manifold - Monitoring of streams to special drainage tanks - Reconstruction of system draining samples from auxiliary systems in primary circuit and emergency tanks - Increase of efficiency of air condition filters in entrance to controlled area in replacement for filters of standard efficiency - etc. 		
77.		Article 20	Ref. in National Report Section E2.1.2, p. 54
Question/ Comment	The Report describes the “Nuclear Installation Authorization Procedure”. Does the term nuclear installation include in your case also radioactive waste management facilities – storage, processing, disposal?		

Answer	<p>Act No. 541/2004 Coll. on the Peaceful use of nuclear energy (Atomic Act) stipulates that Nuclear installation is a set of civil structures and the necessary technological equipment in a configuration specified by the design, intended for:</p> <ol style="list-style-type: none"> 1. generation of electric energy or for research in the field of nuclear energy, part of which is a nuclear reactor or nuclear reactors, which will use, are using or had been using controlled fission chain reaction, 2. management of nuclear material - quantities greater than one effective kg 1ab) except areas for storage of containers and shields, in which the nuclear material is used as shielding material for radioactive sources, facilities for treatment of uranium ore and storage of uranium concentrate, 3. spent nuclear fuel management, 4. radioactive waste management; or 5. uranium enrichment or production of nuclear fuel. <p>According Atomic Act Management of nuclear materials means their production, treatment, reprocessing, transmutation, handling, use, storage.</p> <p>Management of radioactive waste means their collection, sorting, storage, treatment, conditioning, handling and disposal of radioactive waste from nuclear installation, institutional radioactive waste, orphan sources, radioactive waste of unknown origin, disused sources, if these activities take place at a single installation in parallel with activities with radioactive waste from nuclear installations; the shipment of radioactive waste is not deemed to be its management.</p> <p>Management of spent nuclear fuel means its storage, reprocessing, transmutation, handling and disposal; the shipment of spent fuel is not deemed to be its management.</p> <p>Management of special materials and equipment means their imports, exports and use.</p>		
78.		Article 21	Ref. in National Report Section F 1.3, p. 75
Question/ Comment	<p>The Report mentions that “The producer of radioactive waste is responsible for safe management of radioactive waste up to their disposal, and the licensee operating the facilities for the management of radioactive waste and spent fuel is responsible for safety of these facilities.” Does this mean that the producer still has responsibility for the safety of radwaste management (up to waste disposal) after waste has been transferred to the legal authorized entity – JAVYS?</p>		
Answer	<p>Article 21 of the Atomic Act stipulates that the originator (producer) of radioactive waste shall be responsible for ensuring the safe management of radioactive waste in accordance with the National Program up to its taking-over by a legal entity holding a license for repository operation, license for a storage/disposal facility operation or a license for decommissioning and radioactive waste management. After the RAW is handed over, the responsibility passes from the RAW producer to the legal entity – company JAVYS.</p>		

79.		Article 14	Ref. in National Report Section B.2, p. 16 - 17
Question/ Comment	With respect to the new low-level waste disposal facility near Mochovce Nuclear Power Plant, please elaborate on the remaining milestones and the schedule before the disposal facility will become operational.		
Answer	<p>The National RAW Repository (put into operation in 2001) is a surface-type repository designed for the disposal of solid and solidified low and very-low activity RAW from the operation and decommissioning of nuclear installations in Slovakia. The Repository site is located about 2 km northwest from NPP Mochovce site.</p> <p>The 1st, 2nd and 3rd double-rows are protected against weather influences by halls, which ensure that the area is covered during the entire operation until it is replaced by a final cover.</p> <p>For the disposal of VLLW, i.e. waste with activity only slightly exceeding the limits for their release into the environment (contaminated soils, crushed concrete from decommissioning) a location was selected in the southern part of the RÚ RAO Mochovce site for this category of RAW as a separate structures. The 1st part stage of this repository with a capacity of 20,000 m³ VLLW from the decommissioning of NPP A1 is in operation since 2016. From 2017, the 2nd part of VLLW repository is also available. The total capacity within the 1st and 2nd stage of VLLW repository is currently 29,000 m³.</p>		
80.		Article 22	Ref. in National Report Section F.2.1, p. 76
Question/ Comment	The report identifies the importance of safety assessment for a deep geological repository for spent fuel. Please describe any training or preparations for safety assessment for a deep geological repository.		
Answer	Currently none.		
81.		Article 28	Ref. in National Report Section J, p. 154
Question/ Comment	Regarding the import of disused sources, please describe any notifications required prior to the receipt of disused radioactive sealed sources and briefly explain the procedures for this notification.		
Answer	<p>Resulting from the Act No. 87/2018 Coll. on Radiation Protection, it is important to state out following:</p> <p>Disused sources are considered as RAW that cannot be imported within the legal limits.</p> <p>Operator, who performs activity leading to exposure, for which authorization or registration from ÚVZ SR is needed, is obliged without delay, 12 months at latest from the day; when the sealed source becomes unused source, give sealed source to supplier, manufacturer or organization which has permission for accumulation and storage of sources of ionising radiation.</p> <p>Permission from ÚVZ SR is also needed for distribution, sale and renting of source of ionising radiation, for which usage notification, registration and import of source of ionising radiation from third countries according to paragraph 28, section 6.</p>		

	Notification starts by sending the information (type of device/activity/...) via postal service or electronically. Responsible person then uploads the required information in the National Registry of Sources, which is held in the premises of ÚVZ SR.
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