

SÉPTIMA REUNIÓN DE REVISIÓN DE LA CONVENCIÓN CONJUNTA			
DOCUMENTO DE PREGUNTAS Y RESPUESTAS AL SÉPTIMO INFORME NACIONAL ESPAÑOL			
Country	Article	Reference	Question
Czech Republic	Article 16	16.2.4/181	The article describes system of WAC control prior to the disposal of RAW in El Cabril disposal facility. Does Enresa control the absence of free liquids in disposal waste package? If yes, please specify the measuring method.
Answer	Primary packages are cemented as conditioning method. Waste producers and Enresa control free liquids are below limits in such conditioning process.		
Czech Republic	Article 2	Table.1/31	The expected future volume of waste of LILW category is approximately the same as volume of waste already disposed/stored. It is declared that the capacity of El Cabril disposal facility will be increased. Does Enresa expect to increase limits and conditions, specifically total activity limits for disposal?
Answer	Enresa is currently discussing different feasible approaches with corresponding authorities for the enlargement of El Cabril LILW disposal capacities.		
Czech Republic	Article 24	24.2/113	Could you please describe how is the collaboration with neighbouring municipalities (if any such ones) maintained? What is the published scope of results (regularly updated public database of results or summary reports) of radiation monitoring of the environment?
Answer			<p>1) As regards collaboration with the State institutions, the Nuclear Safety Council (CSN, in the Spanish acronym) maintains a periodic and constant relationship with the town councils of the areas of influence of the nuclear power plants, both through its participation in the so called "Information Committees", in accordance with the standards governing Nuclear and Radioactive Installations, and through its relationship with the Association of Municipalities in Areas with Nuclear Power Plants (AMAC). The objective of these Information Committees, which are held annually, is to provide information to the neighbours, representatives of the stakeholders and the general public on the performance of the regulated activities at each of the nuclear power plants, in addition to jointly dealing with other issues of interest.</p> <p>2) The CSN has developed a computer application to provide public access to data from environmental radiological surveillance carried out in Spain, which can be accessed through CSN website. The results from 2006 to 2020 are currently available for consultation at the following link: <a href="https://www.csn.es/kprgisweb2/">https://www.csn.es/kprgisweb2/</a>. A summary of the results obtained in each annual campaign is included in the reports presented annually to the Parliament and in a specific publication on Results of Environmental Radiological Surveillance. Both documents are in electronic format in CSN website <a href="http://www.csn.es">http://www.csn.es</a>. Likewise, part of these data are also sent to the European Commission, the OSPAR Convention, and other national and international institutions. On the other hand, the CSN has a Network of Automatic Stations (REA) for dose rate measurement mainly designed for emergency situations, whose data are published in real time on the CSN website: <a href="https://www.csn.es/several/rear/index.html">https://www.csn.es/several/rear/index.html</a>. In addition, the CSN website provides information on the daily mean value and the monthly mean value of the gamma dose rate measured at each of the automatic stations of the Valencian, Catalan, Extremaduran and Basque networks. The hourly values of the REA stations are also published on the European Radiological Data Exchange Platform (EURDEP) <a href="https://remap.jrc.ec.europa.eu/Simple.aspx">https://remap.jrc.ec.europa.eu/Simple.aspx</a> and on the IAEA radiological monitoring system "International Radiation Monitoring Information System" (IRMIS). Finally, the General Directorate of Civil Protection and Emergencies of the Ministry of the Internal Affairs has a Radioactivity Alert Network (RAR, in the Spanish acronym) made up of 804 automatic dose rate measurement stations, distributed practically uniformly throughout the national territory whose data can be consulted on the following website <a href="http://www.proteccioncivil.es/que-hacemos/rar/presentacion">http://www.proteccioncivil.es/que-hacemos/rar/presentacion</a>.</p>
Germany	Article 19.1	Section 19.1, p. 71	In Section 19.1, page 71, of the National Report it is said that the main responsibility for the safe management of spent nuclear fuel and radioactive waste lies with the producer of the waste. On the same page, however, it is said that the management of radioactive waste, including spent nuclear fuel, constitutes an essential public service reserved for State ownership and that Enresa is entrusted with management of this public service. Could you please say something about this seemingly contradicting situation? Who is responsible for the different areas of spent fuel and radioactive waste management?
Answer			<p>Article 4 of Royal Decree 102/2014, of February 21st, on the responsible and safe management of spent nuclear fuel and radioactive waste states on its first paragraph that the main responsibility with regard to spent nuclear fuel and radioactive waste lies with those that produced it, which is different to the responsibility on the management, considered as an essential public service, that has been entrusted to Enresa, within the limits and the allocation of responsibilities established under the third paragraph of same Article: "The management of spent nuclear fuel and radioactive waste and the dismantling and decommissioning of nuclear installations are an essential public service reserved to the State, without prejudice to the responsibilities corresponding to the producers of these materials or to the holders of licences who have been entrusted with this responsibility, in accordance with the preceding paragraphs". Article 11 of said Royal Decree states that "the licensees of nuclear and radioactive facilities will be obliged to sign the technical and administrative acceptance specifications for their spent nuclear fuel and radioactive waste, with a view to their collection and subsequent management by ENRESA". Consequently:</p> <p>For LILW and VLLW:</p> <ul style="list-style-type: none"> <li>Generated at nuclear facilities: The waste generators must deliver their waste to Enresa already conditioned, following the procedures approved by ENRESA for the different waste types generated at the facility. Upon their arrival to El Cabril facility, ENRESA checks whether the waste acceptance criteria, as defined in their technical and administrative acceptance specifications, are complied. ENRESA becomes responsible for the waste once the conditioned waste leaves the generator facility.</li> <li>From small producers: Producers deliver their wastes to ENRESA in a form agreed on following their technical and administrative acceptance specifications; the personnel commissioned by ENRESA for the collection will only accept the waste that meets said acceptance criteria. ENRESA provides producers with the appropriate packaging for transport. ENRESA is responsible for collecting and transporting the waste to El Cabril facility. In the facility, ENRESA is responsible for treatment and conditioning in concrete containers. In both cases, services provided by ENRESA to the waste generators are governed by the technical and administrative acceptance specifications, based on the corresponding former "type contracts". It is key that the waste generators sign and apply the technical and administrative acceptance specifications which, according to article 11 of Royal Decree 102/2014, need to be approved by the Ministry for the Ecological Transition and the Demographic Challenge, with the prior report of the Nuclear Safety Council (CSN).</li> </ul> <p>For HLW and SF: during the NPP lifetime, the NPP operator holds the license for management of the individual storage facility located in the NPP site. ENRESA becomes license holder of the site only when a transfer of responsibility takes place, which occurs upon the terms of a Ministerial Order issued case-by-case after shutdown of the NPP in order for ENRESA to start de dismantling and decommissioning project.</p>
Germany	Article 9	Section 9.1.4, p. 148	In Section 9.1.4, page 148, of the National Report it is mentioned that the first commissioning application for the ITS at the Santa María de Garoña Nuclear Power Plant was submitted in April 2016. In the same paragraph it is said that the MITERD ultimately issued a decommissioning authorisation for the ITS on 7 August 2018. Is this a typing error, i.e., should it correctly mean "commissioning authorisation" instead of "decommissioning authorisation"?
Answer			That is correct. Where it states: "The MITERD ultimately issued decommissioning authorisation for the ITS on 7 August 2018, following a report by the CSN.". It should be stated: "The MITERD ultimately issued the commissioning authorisation for the ITS on 7 August 2018, following a report by the CSN."
Slovenia	Article 28	J	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			The introduction into the Spanish market of consumer products that incorporate radioactive materials (provided that their activity is exempted) requires, in accordance with Article 74 of the Regulation of nuclear and radioactive facilities, an authorization from the Directorate General for Energy Policy and Mines, following a report from the Nuclear Safety Council. Once they become a waste, they follow a conventional management.

France	Article 10	General	Despite the fact that the issuance of the authorization for the construction of the CTS was suspended pending for a strategic decision, the safe management of spent fuel was not negatively impacted by this delay as some individualised temporary storage facilities have been authorized during the period. This reflects a good adaptability of the radioactive waste management in place in Spain.
Answer	We thank the French delegates for this comment. Indeed, the strategy for spent fuel management has focused on the consideration that the delay in the construction and operation of the CTS should not negatively impact the safe management of spent fuel and high-level waste in Spain.		
Bulgaria	Article 28.1	A.3	What are the acceptance criteria for disposal of disused sealed sources in El Cabril Disposal Facility?
Answer	Sources with isotopes with a half-life less or equal than that of Co-60 must fulfill the same waste packages criteria than apply to other waste streams, either level I or level II. Sources with isotopes with a half-life greater than that of Co-60 and equal to or less than that of Cs-137 must fulfill waste packages level I acceptance criteria.		
Germany	Article 3	Section C, p. 41	In Section C, page 41, the scope of application is described. It is said that the scope of application extends to radioactive waste derived from the nuclear fuel cycle as well as to waste originating from past activities. Does this include also typical NORM wastes like the residues from uranium mining?
Answer	According to Article 3.2 of this Convention, naturally occurring radioactive materials (NORM) not originated from the nuclear fuel cycle are in principle exempted from it. Only NORM which are classified as radioactive waste derived from the nuclear fuel cycle fall under the scope of this Report, which has included some references to Quercus uranium concentrate manufacturing plant and other former facilities and sites, such as Elefant Plant, Lobo-G Plant and Andújar Uranium Plant, where only news and updates from previous Reports have been reflected.		
France	Article 32	Section D - page 53	Regarding the Vandellós I Nuclear Power Plant in decommissioning phase, it is indicated in the section D of the report that "This has a facility established in the pit of the reactor building for the temporary storage of low and intermediate level waste generated during the decommissioning process, as a specific intermediate solution for the temporary storage of graphite waste derived from the fuel element sleeves." There is no information on the further management of the fuel element sleeves.  Could Spain confirm that graphite waste is composed only of fuel element sleeves? Could Spain explain the further management steps, including long-term management, for the graphite waste (including fuel element sleeves)?
Answer	Regarding the Vandellós I NPP, the inventory of graphite waste currently stored in an on site store corresponds exclusively to waste arisen from the fuel elements sleeves. This graphite waste inventory will be increased by the amount still remaining at the reactor box awaiting for dismantling (deferred dismantling strategy). In terms of long-term management, Spain actively participates in a number of international initiatives aimed to define the best suitable management route for such graphite waste.		
France	Article 32	Section A - page 20	Regarding the management of disused sealed radioactive sources, it is mentioned in Section A that "Since 2014: Aside from the above, sources with isotopes with a half-life greater than that of Co-60 and equal to or less than that of Cs-137 are also managed, in accordance with fulfilment of level I storage unit acceptance criteria." and that "Disused sealed sources temporarily stored at the El Cabril Disposal Facility with a half-life greater than that of Cs-137 cannot be disposed of without prior authorisation of the Nuclear Safety Council."  Could Spain define the criteria for issuing such an authorization and management of disused sealed radioactive sources which do not comply with low and intermediate level radioactive waste acceptance criteria in El Cabril facility?
Answer	There are no other criteria more than those that apply to long term safety assessment.  Disused sealed sources which do not comply with low and intermediate level radioactive waste acceptance criteria are temporarily stored at El Cabril.		
Bulgaria	Article 32.2.3	A.3.	The report states: "... in 2018 Enresa set up its first plant for the treatment of contaminated soil associated with the José Cabrera Nuclear Power Plant decommissioning project, with the aim of reducing the inventory and volume of very low level waste (VLLW) by means of a washing process capable of achieving declassification levels." Questions: What decontamination factor is achieved for the significant radionuclides? What amount of soil is already treated?
Answer	By the end of 2019, the amounts of excavated soils and their destinations are as follow: – Total excavated soils: 15.961 t. – Candidate for clearance: 12.231 t. – Affected soils (RW): 309 t. – Soils for further treatment at the washing plant: 3.421 t. By now, the results show that 74% of the washed material is released while 26 % was managed as VLLW		
France	Article 32	Section B - page 33	In Section B.4.1 of the report from Spain, it is indicated that "the environmental documentation accompanying the draft Seventh GRWP allows for and analyses different technically and environmentally viable and reasonable alternatives: one single Centralised Temporary Storage (CTS) site, or several Decentralised Temporary Storage (DTS) sites. The analysis has therefore from the outset been approached from the perspective that with all options open, and the general public and various stakeholders having the opportunity to set out their arguments, a decision must be reached during the processing of the Plan as to whether to maintain the current strategy included in the current draft Seventh GRWP, or to opt for an alternative to this."  Could Spain provide information regarding the current status of the option to consider several Decentralised Temporary Storage (DTS) sites?
Answer	Currently, the stakeholders's consultations and public hearing, which are the first milestones in the process for the adoption of the Seventh GRWP, where stakeholders must have all options still open, have not been reached yet.		
France	Article 32	Section 1 - pages 13-14	In the section A.3 of Spain's report, it is mentioned that "One of the main ways to optimise existing capacity which Spain has been employing is to reduce waste generation to a level as low as reasonably possible, in terms of both activity level and volume, through the application of appropriate design measures and appropriate operational and decommissioning practices, including the recycling and reuse of materials, enshrined as a general principle in Royal Decree 102/2014, of 21 February 2014, on the responsible and safe management of spent nuclear fuel and radioactive waste, and in the General Radioactive Waste Plan (GRWP)."  Could Spain indicate what, if any, practices exist regarding the recycling and reuse of materials?

Answer	The practise for "reuse" is mainly applicable for equipment and items that, in the frame of decommissioning projects, are identified as candidates for potential reuse by the owner, Enresa or beyond. In the case of "recycling", Enresa applies a comprehensive approach for the identification of suitable recycling routes for any materials arisen from decommissioning activities. This is being successfully applied to a number of conventional material streams including scrap metal, copper, steel, rubish, plastics and wood.		
Japan	Article 24.2	P113-117	4)For an evaluation of exposure dose from tritium, if other than the radiological concentration factor of 1 is used for the evaluation, please provide the used radiological concentration factor and the basis for its use.
Answer	The methodology used for the calculation of doses due to Tritium is described in USNRC-Regulatory Guide 1.109		
Japan	Article 24.2	P.113-117	Is there a concept of generalized clearance threshold for gas and liquid waste from nuclear facilities ?
Answer	It is not explicitly set. However, as stated in the Report presented, the release of radioactive effluents into the environment must comply with the established limits, also seeking to be as low as reasonably possible, taking into account economic and social factors and the best available techniques. (CSN Instruction IS-26 on basic nuclear safety requirements applicable to nuclear installations)		
Bulgaria	Article 32.2.3	A.3; D.3	What is the capacity of the plant for the treatment of contaminated soil associated with the José Cabrera Nuclear Power Plant decommissioning project?
Answer	Such treatment plant has a capacity for 30-50 t/day while its operation is carried out by batches of 500 t		
Japan	Article 24.2	P113-117	<p>Referring to the third paragraph of 24.2.1, it is described that, at nuclear power plants, both during operation and during shutdown and decommissioning stage, an effective dose limit of 0.1 mSv/year is applied to radioactive liquid and gas effluent emissions as a whole. For the discharge limits set for gas and liquid radioactive wastes into the environment, please provide information on the following:</p> <p>1) Are there total annual discharge limits, that are only distinguishable between liquid and gas in Bq, set for radioactive wastes generated from nuclear facilities, i.e. NPPs, reprocessing facilities, etc.? If there are, do the total annual discharge limits for liquid and gas, consist of nuclides specific or groups of nuclides specific limits? Also, what are, the set limits per nuclides/groups of nuclides especially for tritium, as well as the basis for those set limits? For examples, discharge limits are set based on, expected annual release calculated from actual discharge amounts of previous years, calculation assuming upper limit of 1mSv over a year for each nuclides, committed effective dose received by the public of 1mSv over 70 years, etc. If there are discharge target values, recommended by a regulatory body for nuclear facilities licensees to be achieved, which are lower than the set limits, please provide the basis for the target values.</p>
Answer	There are no annual discharge limits defined in terms of activity for liquid and gas effluents		
Japan	Article 24.2	P113-117	2) Are there nuclides specific or groups of nuclides specific concentration limits set for each gas and liquid discharges into the environment? What are those discharge concentration limits and the basis for the set concentration limits, especially for tritium? For examples, discharge concentration limits are set based on, expected annual release calculated from actual discharge amounts of previous years, calculation assuming upper limit of 1mSv over a year for each nuclides, committed effective dose received by the public of 1mSv over 70 years, etc. If there are discharge target concentration values recommended by a regulatory body for nuclear facilities licensees to be achieved, which are lower than the set concentration limits, please provide the basis for the target concentration values.
Answer	<p>The radiological surveillance for public protection is mainly based on the assessment of accumulated doses over 12 consecutive months that members of the public can receive as a consequence of the discharges of radioactive material to the environment.</p> <p>In order to facilitate continuous surveillance and control, instantaneous concentration limits are established in liquid effluents and instantaneous dose rate limits in gaseous radioactive effluents that provide a sufficient margin to guarantee that the annual dose limit will not be compromised, while granting operational flexibility</p>		
Japan	Article 24.2	P113-117	3) Also, please provide the actual amounts of each gaseous and liquid radioactive wastes released or discharged annually into the environment from nuclear facilities between 2016 and 2020, especially, for annual discharge amounts of tritium and other nuclides in forms of gas and liquid, per types of nuclear facilities (NPPs with reactor types, reprocessing facilities, others)
Answer	The discharges during the years 2017 to 2019 from the Spanish nuclear power plants are shown in Table 7 of this Report. The discharges during the year 2016 are collected in Table 7 of the previous Report (Sixth National Report of Spain to comply with the provisions of article 32 of the Joint Convention on safety in the management of spent fuel and on safety in the management of radioactive waste), while the data corresponding to the year 2020 will be shown in the next Report. Tables 7 and 8 with the discharges between 2016 and 2020 are attached (See attached Word document: "Question 21326. Japan to Spain").		
China	Article 11	H.11.2P158para 4	The report mentioned that the annual output of all operating nuclear power plants has been successfully reduced from 1,430m3 in 1999 to about 800m3 at present. These figures are very close to the lowest level that can be technically expected, so it is not expected that there will be a significant reduction in the future. Please describe how to reduce and why there will be no significant reduction in the future.
Answer	A number of joint actions are being carried out between the utilities and Enresa to reduce -as far as reasonable- the radioactive waste being arisen from the operation of the nuclear reactors. Such reduction has been achieved by a combination of elements in which we should underline improvement of the treatment and conditioning processes, enhanced sorting and segregation and implementation of clearance methodologies		
China	Article 24	F24.2.3 P114 last para	According to Article 24.2.3, discharges during the years 2017, 2018 and 2019 from Spain's nuclear power plants are summarized in Tables 7, but the data of liquid carbon-14 is absent. Please describe the consideration on monitoring of liquid carbon-14 in your country.
Answer	As the contribution of C-14 in liquid radioactive effluents to the dose is much lower than that from gaseous effluents, the assessment of C-14 in liquid effluents is not required		
Japan	Article 24.2	P.113	The report states that the water from the irradiated fuel storage pools does not constitute an input into the liquid radioactive effluent treatment system. How are the water from irradiated fuel storage pool handled when they are to be discharged?

Answer	During operational life (including removal of SNF and reactor internals, vessel, etc) there are systems to purify/clean the water of the spent fuel pool, like resins and filters that later on are treated/conditioned in packages to be sent to El Cabril. After this, the water suffers several cycles of evaporation / condensation, the condensed water is analyzed, and when below the discharge limits it can be treated as clean water. The evaporator concentrates, usually experiences a further dried treatment to improve the final waste volume before conditioning in packages to send to El Cabril.		
China	Article 32	B.5 P36 para 2	The report mentioned improvements in radioactive waste characterization and packaging measurement technology. Please describe the specific methods for improving radioactive waste characterization and packaging measurement technology.
Answer	<p>We are trying to determine both activity and mass distribution in waste packages by passive methods. For every detected gamma radionuclide, activity distribution is achieved by using Gamma Cameras coupled to Computer Vision that provide a 3D image in the package. Passive mass distribution detection is now under investigation in EU R&amp;D projects by using muon tomography techniques. Other mass attenuation detection techniques are under research and not well developed yet.</p> <p>Active methods for mass distribution, tomography with transmission sources (e.g. Co-60), are not very operative for using on site in dismantling projects. The radiological protection linked issues will slow down the pace of the dismantling process that should be thought as an industrial one. Mainly for this reason, new passive techniques are being investigated.</p>		
China	Article 32	D.3 P55 para 2	According to the report, VLLW arrives at the El Cabril disposal facility in the form of barrels, bags or metal containers, and is sent directly to the vault or temporarily received into the technical building. Please describe the specific receiving process and operation details.
Answer	The transport to El Cabril of VLLW packages are carefully planned in advance with the producers, just to allow the direct disposal when arriving in the repository. Sometimes a Quality Control of some package is required and that package after arriving in the installation is deviated to the laboratory for measurements/Tests prior final disposal.		
China	Article 28	J.28.1, P196 last para	The report states that "the disused sealed sources meet the reception criteria of El Cabril and will be disposed of at the disposal site." Please introduce what type of disused sealed sources are suitable for disposal at El Cabril disposal facility.
Answer	Sources with isotopes with a half-life less or equal than that of Co-60 must fulfill the same waste packages criteria than apply to other waste streams, either level I or level II. Sources with isotopes with a half-life greater than that of Co-60 and equal to or less than that of Cs-137 must fulfill waste packages level I acceptance criteria.		
China	Article 7	G.7.3 ,P139 para 2	The Trillo and Almaraz nuclear power plants use ITS to store spent fuels temporarily. Please describe how to evaluate the transportation safety of the package when the final destination of the spent fuel is determined.
Answer	The dry storage casks and systems used in Spanish Nuclear Power Plants take into account future transportation needs, according to the strategy set at the GRWP (General Radioactive Waste Plan). The casks or systems need to be licensed for use in Spain by the Directorate General for Energy Policy and Mines of the Ministry for Ecological Transition and Demographic Challenge, provided there is a prior design approval by the Nuclear Regulatory Authority (CSN). The Regulatory body separately evaluates a safety assessment for storage and a safety assessment for transportation. As regards this specific question about transportation safety, the reference used is IAEA's SSR-6 Safety Standard, that is transferred into European (and Spanish) regulation through ADR and RID, that establish the regulation for transportation of dangerous goods by road or railway, respectively. The format and contents of the Safety Assessment Report follow the guidances set by the CSN at Regulatory Guide 6.4, the USNRC at RG 7.9. The contents are currently developed at NUREG-2216. For High Burnup SNF, the NUREG-2224 might also be applicable.		
China	Article 32	B.5P36 para 1	The report mentioned that the methods to be promoted in terms of volume reduction include, in particular, waste drying, processing by melting large equipment and components, and waste sorting projects. Please illustrate the specific practice experience.
Answer	<p>For homogeneous liquid waste, such as sludges and evaporated concentrates, one of the best volume optimization techniques is the drying under low pressure or high temperature, reducing the volume above a factor 5 regarding initial volume. In Spain, all the operating NPPs follow this approach for this type of waste.</p> <p>For heterogeneous metallic waste, the following activities could be used for volume optimization:</p> <ul style="list-style-type: none"> <li>-Classification (Non impacted/Clearable, VLLW, LLW)</li> <li>-Cutting to achieve a better classification</li> <li>-Decontamination for declassification.</li> <li>-Clearance methodology (cleared metals will go to a conventional melting facility)</li> <li>-Waste melting</li> </ul> <p>Each of the described activities produce a volume optimization for every classification of materials. In Spain we apply all of them. Waste melting is now under feasibility analysis.</p>		
China	Article 28	28.1, P195, Para.3	It is stated that ".....the possessing parties must arrange with the supplier the relevant agreements for the return there-of once it is disused, and establish a financial guarantee to cover its safe management at that time, even in the event of insolvency, cessation of operations, or any other contingency that might arise." Please give more details on the financial guarantee on disused sealed sources management, e.g., how to collect, use and manage.
Answer	Article 5.2.b of Royal Decree 229/2006, of February 24th, on the control of high-activity encapsulated radioactive sources and orphan sources states that: "This guarantee [the financial guarantee] may consist of an insurance, a blocked bank account, or another financial guarantee arranged with a duly authorized financial institution". In practice, a blocked bank account amounting the cost of the latter management of the source is the preferred option amongst licensees.		
China	Article 11	H.11.6, P162 para 3	The report states "The El Cabril Disposal Facility has a seepage control network which is required to verify the functioning of these barriers for a minimum of three hundred years after the closure of the facility". Please illustrate the specific contents on the seepage control network and other measures to improve the water proof performance of the facilities at the disposal site.

Answer	The seepage control Network (RCI, in the Spanish acronym) mainly consists of control galleries underneath the LILW disposal platforms. Inside the galleries two lines of pipes are installed to collect the water of the vaults; one pipe collects the water when the vault is empty (rainfall water) and the second one is used when the vault enters in operation and is covered by the mobile roof. The system collects and controls the water that may have come into contact with the disposed waste and that has reached the bottom floor of the disposal vault (support plates). These, the support plate, are built with low-permeability concrete, whose sealing function is complemented by a synthetic membrane. The water eventually collected in the plate is led through slopes to a central drain that discharges, through an individual control tank underneath each cell, into the pipes of the infiltration control network. This system is passive, and has been designed in the form of a mesh, so that it is possible to easily locate any anomaly.		
China	Article 15	H.15.2, P174 para 2	The report states "The events and scenarios analysed in the safety demonstration must be based on the Features, Events and Processes (FEP) that could affect performance and long-term safety of the facility". Please illustrate what the FEPslist mainly includes. And please describe the process of the events and scenarios analysis.
Answer	The licensee carries out the Safety Case of LLW disposal facilities. An important part of it is focused on the assessment of the radiological impact of the disposal system during the facility's three phases of life: the operating phase, the active institutional control phase and the passive control phase. The CSN's assessment of postulated events is based on IAEA ISAM methodology, the international list of FEP (NEA list), and comparison with reference and similar facilities. CSN Regulatory Guide 9.04 "Long-term safety assessment of LLW disposal facilities" includes guidance on the content of safety case for LLW disposal facilities and scenario selection. The methodology for the analysis is based on that which has been established in international forums, such as the ISAM and ASAM projects organized by the IAEA, and includes, among other elements, the identification and classification of the Features, Events and Processes( FEP) that could influence the long-term behaviour and safety of disposal system. An initial list of FEPs for the system will be established based on international FEP lists and those used in safety studies of other similar facilities, excluding duplicate entries. The resulting FEP are classified into different categories to ensure consideration of all significant factors for the evaluation. They should be explicitly indicated, with a sufficient degree of detail, to allow traceability of the process. FEP Selection: Starting from the initial list of FEP, a selection will be made of the relevant ones clearly defining the screening criteria, as well as the rationale for the selection or removal of each of them. The justification for the selection or elimination of FEPs should be documented, especially for those that have not been selected. Definition of the Reference System and construction of scenarios: the previously selected relevant factors are combined to form a number of limited and representative scenarios object of the analysis of consequences.– First, the Reference Scenario would be defined considering all the factors included in the limits of the system and their interrelationships that allow describing the release and transport of radionuclides and their impact. The Reference Scenario considers the expected internal evolution of the system (normal evolution), without incorporating external factors that could disturb it.– Alternative scenarios would be defined by considering external factors, which isolated or in combination, can affect the normal evolution scenario.There are different tools to integrate and organize the internal factors of the system and the relationships between them in the reference scenario, as well as to analyse the application of external factors to the system and generate alternative scenarios (diagrams of influence, interaction matrices). Any of these or other scenario generation methodologies is considered valid provided that the entire process is documented, including the factors and influences between them, as well as the description of the different scenarios with the sufficient degree of detail, allowing process traceability. A distinction is usually made between release scenarios to groundwater due to water infiltrating through the cover layers (previously called reference scenario), gaseous release scenarios and human intrusion scenarios. Additionally, depending on the characteristics of the site, it may be necessary to evaluate scenarios caused by natural events or induced by human activities (flood and "bathtub effect", plane crash, etc.). CSN Guide 9.4 includes in annex A some examples of scenario descriptions.		
China	Article 32	B.3, P32, Para.2	It is stated that "significant quantities of tailings have been produced in Spain as a result of uranium mining and the manufacturing of concentrates." Please illustrate how to handle and repair the significant quantities of tailings with a low radioactive content on site and restore the site.
Answer	A number of sites were affected by uranium mining and milling activities in last decades. Enresa and Enusa conducted corresponding decommissioning and remediation projects for the safe in situ disposal of corresponding tailings in order to safely isolate such material from people and environment. Most of the projects were related to relatively small facilities and associated sites. The Uranium Mining and Milling Facility (FUA) located at Andujar was the soley exception requiring relocating and isolating more than 1.000.000 m <sup>3</sup> of materials. Please see Third Spanish National Report for the JC (Table 7. Mining and process steriles, pg. 39) for a comprehensive list of sites affected.		
China	Article 32	D.3, P55, Para.2	It is stated that "Meanwhile, in 2018 Enresa set up its first plan for the treatment of contaminated soil associated with the José Cabrera Nuclear Power Plant decommissioning project, with the aim of reducing the inventory and volume of VLLW by means of a washing process capable of achieving declassification levels.The design of this plant was viewed favourably by the CSN." What is the volume reduction ratio of contaminated soil by washing? Will there be secondary pollutants during the process? Please illustrate how to dispose of the soil that is still very low level radioactive waste after washing?
Answer	By the end of 2019, the amounts of excavated soils and their destinations are as follow: – Total excavated soils: 15.961 t. – Candidate for clearance: 12.231 t. – Affected soils (RW): 309 t. – Soils for further treatment at the washing plant: 3.421 t. By now, the results show that 74% of the washed material is released while 26 % was managed as VLLW, Such VLLW is disposed of at the El Cabril LILW & VLLW disposal facility being operated by Enresa		
China	Article 32	D.5, P62, Para.2	It is stated that "As previously indicated in the Fifth National Report, as a result of the Ministerial Order of 1 February 2010 the facility was licensed to Enresa for decommissioning." Currently, has the facility of José Cabrera nuclear power plant been completely dismantled? What challenges have you encountered during the process? How is it confirmed that the site of the nuclear power plant has reached the release level?
Answer	By December 2020, the project for the decommissioning of the Jose Cabrera NPP reached 97% of its scope. Current activities include demolitions of some remaining building together with the site remediation. Thus site release status has not yet been reached.		
Australia	General	Page 12	Has the Nuclear Safety Council carried out its regulatory safety culture assessment as decided in January 2020? If yes, what are the strong, and less strong, aspects of the Council's safety culture?

	<p>The CSN conducted an external and independent safety culture assessment from 2020 to 2021. The assessment conducted was clearly impacted by pandemic for COVID-19 and it was a challenge for the organization to perform the interviews and focus groups meetings by videoconference. The initial report was submitted by the external company contracted to carry out this assessment in October 2021 and the final report was issued in March 2022.</p> <p>The report identified opportunities for improvement in the following areas related to safety culture of the Nuclear Safety Council:</p> <ul style="list-style-type: none"> <li>- The leadership for safety must be present in all CSN hierarchical levels</li> <li>- All CSN staff has the individual responsibility to demonstrate a behavior oriented to safety</li> <li>- An organizational culture promoting safety to improve cooperation and communication</li> <li>- To guarantee a holistic approach for safety with systematic work</li> <li>- To foster a commitment of continual improvement, learning and self-evaluation in all the CSN hierarchical levels.</li> </ul> <p>Currently the CSN is in the ongoing process to analyze in depth the before mentioned report findings to design an action plan to implement the improvements identified. The action plan will engage the whole organization for the coming four years and will conclude carrying out a new external independent assessment on safety culture.</p>		
China	Article 28	P20, Para.2	It is stated that "From 2000 to 2014: disused sealed sources temporarily stored at the El Cabril Disposal Facility with a half-life less than or equal to that of Co-60 were managed in accordance with compliance with the acceptance criteria for storage units, at either level 1 or level 2, for disposal in the low and intermediate level vaults as established in the operational authorisation." What are the main contents of the acceptance criteria of the storage units? What are the conditioning process and standards of disused sealed sources to meet the requirements of the acceptance criteria of the storage units? What are the differences of the conditioning process and standards of disused sealed sources between the acceptance criteria of the storage units and the disposal vaults?
Answer	<p>Acceptance criteria include general criteria as contact dose and surface contamination, mechanical criteria (mainly referred to the immobilization material, cement) and other specific criteria such as the activity limits.</p> <p>When waste packages level I, disused sealed sources are immobilized in a cement matrix</p> <p>When waste package level II, packages must include an internal envelope of mortar/concrete must be made with a nominal thickness of 5 cm and disused sealed sources are immobilized in a cement matrix</p>		
China	Article 10	A.3, P18, Para.5	It is stated that "In summary, spent fuel management now entails a temporary storage stage prior to disposal in a deep geological repository (DGR), which will extend for longer than initially planned." Currently, how long is it estimated to be stored? What challenges have been encountered during the storage process? And what has been done to establish deep geological repository?
Answer	<p>1) SF is estimated to be stored until a deep geological facility is available for operation. This is estimated to be, according to the current draft General Radioactive Waste Plan (GRWP), in 2073 (estimated year of start of operation of a DGF). Until that date, SF will need to be stored in storage facilities, either at the NPP sites or, should it be available, at a centralized temporary storage facility (CTS).</p> <p>2) The main challenge encountered has been the stagnation of the licensing process for a centralized temporary storage facility in the municipality of Villar de Cañas. In 2018, the Secretary of State for Energy of the former Ministry for Ecological Transition asked the CSN to suspend the issuance of the mandatory report regarding the request for authorization to build the CTS in Villar de Cañas, in order to be able to analyze the current circumstances and forecasts and have a planning adjusted to them, which would be specified in the upcoming Seventh GRWP. This suspension was motivated by the opposition to the works expressed by the regional government. The possible continuation of the licensing process is being decided in the context of the adoption of the new (Seventh) GRWP.</p> <p>3) Work has been done in several directions. A Site Search Plan was undertaken during the decade of 1980 and paralyzed in 1996, from which enough information has been compiled to ensure that there are abundant granitic, clayey and to a lesser extent saline formations in the subsoil of the Spanish geography, capable of hosting a DGR facility. Conceptual designs have been made for each of the indicated lithologies. Likewise, safety assessment exercises have been developed for the conceptual designs in granite and clay, in which the knowledge gained in the work and projects of the successive R&amp;D Plans carried out has been integrated. Enresa has developed successive R&amp;D plans addressing the challenges of geological disposal and has participated in national and international research projects and in demonstration projects in foreign underground laboratories. In 2020, a working group has been created with representatives of the MITERD, CSN and Enresa with the purpose to study and develop a proposal for a legislative, regulatory and procedural framework that allows supporting a DGR programme in Spain. The creation of this working group responds inter alia to the recommendations resulting of the ARTEMIS mission, performed in Spain in October 2018. The 7th GRWP in progress of issuing includes, as high priority, the programme of the Spanish Deep Geological Repository.</p>		
Australia	General	Page 204	Australia applauds Spain for holding the first-of-a-kind IRRS/ARTEMIS peer review
Answer	Thank you.		
Australia	General	Page 204	Would Spain recommend other CPs to invite joint peer review missions such as ARTEMIS/IRRIS? What was the added value of the combined mission?
Answer	<p>Undoubtedly. Some of the advantages of hosting a combined mission are detailed as follows:</p> <ul style="list-style-type: none"> <li>- There are significant synergies between both missions that may lead to an increase of effectiveness when preparing and executing both missions.</li> <li>- It is a way of reducing the overload added by the mission to regulatory authorities and operators.</li> <li>- Preparation of the mission and the subsequent Action Plan may be better integrated whether both missions are combined, since it is easier to share a unique roadmap.</li> <li>- An improved global overview of both missions is achieved for proper management and coordination.</li> </ul>		
Australia	Article 32	Page 32	Has the implementation of Individual Temporary Storage (ITS) facilities reduced the need for a Centralised Temporary Storage (CTS) facility, or changed public perceptions around the need for a CTS?
Answer	Not necessarily the need, but the urgency. As explained in the report, even though other options may be discussed during the Environmental Impact Assessment process, the preferred option in the draft 7th GRWP is still the building of a CTS.		
Russian Federation	Article 13	Article 13	Could you explain in what form the HLW will be stored in CTS? What are the CTS acceptance criteria for HLW?
Answer	<p>HLW is composed of Spent Nuclear Fuel and some Vitrified bundles coming from old reprocessing contracts. Both types will be stored at the CTS inside vaults:</p> <ul style="list-style-type: none"> <li>-Spent Fuel Assemblies (FAs) will be inserted into a canister (whose capacity depends on the specific FA type – i.e. 7 Fuel Assemblies 17x17 PWR or 15 Fuel Assemblies BWR). Two SNF canisters will be piled up one over the other in a tube inside a vault. Every vault has several tens of tubes. CTS has several vaults.</li> <li>-Vitrified bundles will directly be piled up into specific tubes of a vault. These tubes are of a smaller diameter and adapted to the HLW bundle dimensions.</li> </ul> <p>Acceptance criteria for HLW are being developed. In any case, the objective of the CTS is to host all the HLW produced in Spain, so the facility design will include all the inventories. The CTS also has a building for storing loaded casks if some further temporary storage is needed for HLW prior to be transferred to the vaults.</p>		
Australia	General	All	Is there a criteria in identifying legacy sites? If so, has a safety assessment been undertaken to understand the number of legacy sites in Spain and the radiological impact to the environment?

Answer	In Spain there are no established legal criteria for the identification of legacy sites. There is, however, a draft royal decree establishing the list of potentially soil-polluting activities and the criteria for the declaration of contaminated soil and soil with use restrictions for radiological reasons that has to be addressed and integrated into the Spanish legal framework. The sites that have already been identified as "legacies" have been classified based on a "case by case" analysis, making use of historical references of old accidents and incidents with some radiological implication and "ad hoc" controls on the site itself.		
Australia	General	N/A	Australia applauds Spain for a well-written and well-structured report
Answer	Thank you.		
Russian Federation	Article 32	Section B.4.1	Could you please clarify how long the SNF will remain in interim storage at the centralized SNF storage facility CTS planned to be constructed?
Answer	The design life of the Centralized Storage Facility would be 100 years, with an expected life of exploitation, as it appears in the current Sixth General Radioactive Waste Plan, of 60 years.		
Russian Federation	Article 14	Section H	Please explain what kind of radioactive waste (in what form, in what matrix) are accepted for disposal at the El Cabril RW disposal facility?
Answer	Radioactive waste accepted for disposal at the El Cabril disposal facility includes LILW-SL and VLLW. El Cabril possesses dedicated disposal areas for both waste classes. Radioactive waste needs to be solid or in solidified form. Cemented matrix is the only one accepted.		
Russian Federation	Article 14	Section H	Could you please outline regulatory requirements for the scope and timeframe of post-closure site monitoring at RW disposal facility (if any)? Will the RW disposal facility have physical protection after closure?
Answer	Applicable regulatory requirements to such case are still pending to be developed.		
Russian Federation	Article 14	Section H	Could you please describe the methodology applied to "the declassification of four streams of materials"?
Answer	Declassification plans must be approved by the authorities (Ministry for the Ecological Transition and the Demographic Challenge; and CSN, the Regulatory Body). Basically the methodology include the following: a) Origin, description and physical and chemical characteristics of RW b) Waste classification from a conventional point of view and description of pathway management based on current regulations c) Quantities candidate to be declassified d) Definition of clearance levels. Bases and justification e) Radiological characterization methodology f) Quality assurance applied in the whole process		
Russian Federation	Article 11	General	Given the large RW inventories generated from decommissioning, as well as the costs and risks associated with the transportation of such waste to the national decommissioning facility, whether any alternative options have been considered to manage the waste of this category?
Answer	Spain applies a volume reduction policy aimed to reduce, as far as reasonable, the volume of RW to be ultimately disposed. For such purposes, Spain has developed clearance system making use of segregation practices and decontamination techniques. This practice is being specially successful in ongoing decommissioning projects.		
Russian Federation	Article 18	Section 17.3	Section 17.3 of the Report states that following the closure of RW management facilities some areas may remain under radiological and other surveillance. Please indicate whether the degree of such surveillance has been accounted for (monitored parameters, frequency)?
Answer	In Spain, only one RW management facility remains under radiological surveillance after closure. This is a former uranium concentrate fabrication plant, Lobo G plant, located in Badajoz (south-west of Spain), which was restored and finally closed in 2004. The old in situ leaching piles were transported and compacted, together with the end-products from the plant's dismantling, on the tailings pile. The whole pile was then overlaid with a multilayer cover to minimize Rn-222 emission and erosion. Since its closure, land use restrictions were set and recorded in the National land registry (only use for grassland and forest resources), and the site is undergoing an institutional programme of long-term monitoring (for an undefined period), which includes the samples and frequencies shown in the table. See Attached Word document: "Question 19853. Russian Federation to Spain"		
Russian Federation	Article 18	Section E	Do the declassification levels set forth in the Order ETU/1185/2017 correspond to those established in the Directive 2013/59/Euratom?
Answer	Yes. The clearance levels correspond to those included in the Directive 2013/59/Euratom, Annex VII Table A1		
Russian Federation	Article 11	Section E	Are there any specific declassification levels (and corresponding requirements to certain materials) set forth in the provisions of national regulations (or by a competent authority)?
Answer	Specific declassification level for clearance and corresponding requirements are set forth by national regulations, transposing European Union regulation on this matter (Council Directive 2013/59/Euratom dated 5th December 2013, articles 30.2 a) and b)		
Russian Federation	Article 11	Section E	Could you please describe a model that can be used by the licensees to declassify solid waste material?
Answer	Declassification plans must be approved by the authorities (Ministry for the Ecological Transition and the Demographic Challenge; and CSN, the Regulatory Body). Basically the methodology include the following: a) Origin, description and physical and chemical characteristics of RW b) Waste classification from a conventional point of view and description of pathway management based on current regulations c) Quantities candidate to be declassified d) Definition of clearance levels. Bases and justification e) Radiological characterization methodology f) Quality assurance applied in the whole process.		
Russian Federation	Article 11	General	Please indicate whether the emergencies were calculated for?
Answer	Yes, the emergencies were calculated. We have considered accidents, or events, within and beyond the design basis, following the national and international standards. Designing interim dry storage facilities for HLW and SNF, aircraft impact including fire hazards among others, have been calculated. The analyses of these accidents result in a dose impact to the workers and public, which is the basis for the emergency response. Particularly, considering the LILW & VLLW repository at El Cabril, the emergency plans cover events related to physical security, fires, falling radioactive packages, damage to waste storage areas due to natural causes, impacts, earthquakes or other causes. Also events related to radiological protection such as high levels of radiation or contamination, failure of liquid effluent containment systems, failure of liquid and gaseous effluent control systems, etc.		

Russian Federation	Article 18	General	In the development of its RW management strategy, Spain relies on the French experience: goals and criteria set forth in the French standard RFS-I.2, the concept of near-surface disposal. What were the reasons behind the decision to adhere to the French experience as compared to the one of other countries considering more arid climate of Spain and no need for the arrangement of drainage structures?
Answer			The design for the El Cabril near surface LILW disposal facility was developed in the late 80' taking advantage of the existing and available state-of-art in the field of near surface disposal of LILW. It was considered as main factor for the design of the El Cabril facility the experience gained by ANDRA in the use of multibarrier systems in different environments as operator for centre L' Manche coupled with his further development of Cente L'Aube .
Russian Federation	Article 11	General	What computer codes are used for safety assessment purposes?
Answer			<p>oC.A. El Cabril for the disposal of LILW + VLLW : Commercial computer codes such as, ANSYS, AMBER, ORIGEN, DUST, MODFLOW, MODPATH, etc. " are used.</p> <p>oInterim storage of SNF and HLW : License applications typically use commercial computer codes, depending on the matter: ANSYS, FLUENT, LSDYNA, ORIGEN, SCALE, MCNP, etc.</p> <p>oD&amp;D: License applications typically use commercial codes such as ORIGEN-S, TGBLA06V, sequence CSAS25 (BONAMI-NITAWL-KENO V.a.) of SCALE system, PAVAN, MARMER, RASCAL, MCNP, MICROSHEILD, etc. Some particular calculations are supported by own developments in form of excel spreadsheets programmed.</p> <p>oUnderground Disposal for HLW and SNF: The performance assessment exercises prepared for the Spanish underground disposal concept (clayey formations in 2003, crystalline rocks in 2000) have been made using commercial computer codes (mainly ORIGEN2, CHEMSIMUL, MAKSIMA-CHEMIST, PHREEQC, MODFLOW, AMBER, Goldsim) and others developed in Enresa's R&amp;D plans (CORE-LE, CODE_BRIGHT) as well.</p>
Russian Federation	Article 11	D3	"Treatment and conditioning of radioactive facility waste. Waste produced by small-scale producers (radioactive facilities with industrial, medical, agricultural and research functions) is segregated by such sites on their own premises, and subsequently transported to El Cabril." How the compliance of the RW with waste acceptance criteria for disposal in El Cabril facility is checked?
Answer			Under this approach, Enresa's inspectors confirm, prior to collection, that the waste generated is in full compliance with sorting criteria and activity limits. Further preparation of waste package for disposal is being carried out by Enresa at the El Cabril facilities, who assumes responsibility for compliance of applicable limits and conditions
Russian Federation	Article 32	General	INF/CIRC/603/Rev7 presents the definition of a Good Practice stating the criteria of a significant contribution to the safety as its key provision. Please, indicate what criteria of significant contribution to the safety govern the decision-making on denoting some specific program, policy or practice as a Good Practice?
Answer			The review team of the combined IRRS-ARTEMIS mission hosted in 2018 identified a good practice, within the definition provided for it under the ARTEMIS guidelines, at Enresa, in connection with the design of the CTS facility: The design and usage of this resource as part of a spent fuel management strategy in Spain could make a significant contribution to the need to promote nuclear and radiological safety at an international level. This facility, which has been designed in accordance with best international practices, should provide the required flexibility so as to ensure continuous management of spent fuel and waste in the event of occurrences that would lead to an unavailability of storage capacity at those sites with a reactor, in addition to the possibility of researching the behaviour of the fuel as a phase prior to deep geological repository storage.
South Africa	Article 11	Section H.11.3, Page 160	What are the activity concentration and activity limits for LILW? Is there distinction made between LLW and ILW?
Answer			Spanish Radioactive Waste Classification System follows the approach proposed by IAEA General Safety Guide GSG-1 "Classification of the Radioactive Waste" in the sense that our National scheme defines conceptual boundaries between different classes of waste and provides guidance on their definition on the basis of long term safety considerations. Therefore, IAEA's "ILW class" is assimilable to the Spanish "Special waste class"
Russian Federation	Article 11	B2	"This includes Very Low Level Waste (VLLW), comprising a subset of low and intermediate level waste, and in general revealing specific activity levels of between one and 100 Bq per gramme, potentially rising as high as several thousand in the case of certain radionuclides with low radio-toxicity, or in the case of small amounts." Please, provide the lists of radionuclides with low radiotoxicity.
Answer			H-3, Be-10, C-14, Si-32, Cl-36, Ar-39, Ar-42, Ca-41, V-49, Mn-53, Fe-55, Fe-60, Ni-59, Ni-63, Se-79, Kr-81, Kr-85, Rb-87, Sr-90, Zr-93, Nb-91, Nb-93m, Mo-93, Tc-97, Tc-99, Pd-107, Cd-109, Cd-113m, Sn-119m, Sn-121m, I-129, Cs-135, La-137, Pm-145, Sm-145, Sm-151, Eu-155, Gd-153, Tb-157, Ho-163, Tm-171, Ta-179, Re-186m, Pt-193, Au-195, Tl-204, Pb-205, Np-235, Pu-241.
Russian Federation	Article 11	B2	"High Level Waste (HLW) contains long-lived alpha-emitters with a half-life of more than 30 years, in appreciable concentrations which generate heat because of the effect of radioactive disintegration, as they have a high specific activity". Could you please specify what concentrations are considered as "appreciable" (for example, by providing them in a tabular form)?
Answer			As stated at the beginning of B.2, "Waste in Spain is classified according to the management facilities authorised for a certain volume, radiological inventory and certain limits regarding specific activity concentrations based on the nature of the different radioactive elements in place. In practice, the different facility categories match the radioactive waste classification criteria adopted by the IAEA and the European Commission". In practice, HLW is that waste containing a significant concentration of alpha emitters and generating heat that cannot be disposed of in El Cabril.
South Africa	Article 32	Section B.1 , Page 25	This section speaks more about the GRWM than the policy and strategy. How are these interrelated?
Answer			Article 38-bis.2 of Law 25/1964, of April 29th, on nuclear energy, states that "The Government is responsible for establishing the policy on radioactive waste management, including spent nuclear fuel, and the dismantling and decommissioning of nuclear facilities, by approving the General Radioactive Waste Plan". Additionally, Article 5.2 of Royal Decree 102/2014, of February 21st, on the responsible and safe management of spent nuclear fuel and radioactive waste, establishes and details the content of the General Radioactive Waste Plan as follows: "The Plan shall contain the strategies, actions required and technical solutions to be implemented in Spain in the short, medium and long term, aimed at the responsible and safe management of spent nuclear fuel and radioactive waste, the dismantling and decommissioning of nuclear facilities and the other activities related to the above, including economic and financial forecasts and the measures and instruments needed to carry them out". Therefore, the national policy and strategies regarding the safe management of spent nuclear fuel and radioactive waste are established in the GRWP.
South Africa	Article 9.1	Section G.9.1.4 , Page 148	Are the ENUN 52B type casks in the ITS presently loaded?
Answer			Not yet. The first badge (5 casks) is expected to be loaded in 2022.

South Africa	Article 9.1	Section G.9.1.4 , Page 148	What type of casks will the ITS accomodate? What characteristics of fuel are permitted into the cask? How long will the casks be stored on the ITS?
Answer			Trillo: DPT and ENUN32P; and Santa María de Garoña: ENUNS2B. All these casks are dual purpose casks (storage and transportation) with bare fuel baskets. Cask contents are adapted to the corresponding NPP inventory: Trillo – KUW 16x16 FAs and Garoña – GE fuel of various designs. The casks will be stored at the ITS until availability of the Centralized Temporary Storage (CTS) facility, according to the current GRWP.
Korea, Republic of	Planned Activities	K2.2	K.2.2 states that the basic strategy for management of spent fuels and radioactive waste which cannot be managed at El Cabril is a temporary storage at a Centralised Temporary Storage until a disposal facility becomes available, and in this case the top priority is the plan of commissioning operation of the Centralised Temporary Storage in 2028 and mapping out the cask holding facility with operation planned for 2026. - Are there ways to ensure safety while transporting spent fuels to the Centralised Temporary Storage?
Answer			If the question refers to current situation until a CTS is set up, safety is ensured by the safe storage of spent nuclear fuel in the pools and in the Individual Storage Facilities in the site of those NPPs that have needed them. If the question refers to transports to the CTS once this is in exploitation phase, provisions regarding the safety of transporting spent nuclear fuel to the CTS are collected in the annex of the design authorisation of the transport cask, where it is stated: Transport of these casks through Spanish territory will require an expedition license following the Nuclear Safety Council Safety Guide 6.4. Provisions regarding security in transporting nuclear spent fuel can be found on Royal Decree 1308/2011, of 26 September 2011, on the Physical Protection of Nuclear Installations and Nuclear Materials and Radioactive Sources.
Korea, Republic of	Planned Activities	K2.2	Were there dissents and conflicts with residents near the CTS in the course of licensing and construction?
Answer			The process for the selection of a municipality to hold the CST carried out between 2006 and 2011 (please see 4th National Report) only called for volunteering candidates, a fact that ensures, up to a certain level, some initial support. In the case of the selected municipality, its candidature achieved the highest local consensus, since the whole City Council endorsed the decision to apply for the CTS, established an informative ad-hoc web page for reporting their citizens, reached agreements with most of the adjacent municipalities and obtained a strong support from its neighbours, as it was reflected in the surveys and was made visible with the setting up of the platform "Yes we want the CTS".
Korea, Republic of	Article 4.1	G.4.1	In 4.1, it is stated that the relevant technical standards consider the IAEA technical standards and relevant US codes (10CFR50-spent fuel management in the nuclear power plant storage, 10CFR72-dry storage system, 10CFR71). - Are regulations on transportation/handling of spent fuels to other sites such as wet-dry storage facilities defined separately? - Are requirements on spent fuel itself (mechanical integrity, transportability, retrievability after storage, etc.) defined separately, other than the facilities and systems?
Answer			Transport regulations also address the loading and direct transport to another facility (i.o. without intermediate storage in between). The loading also includes fuel handling. The regulation applied in Spain is IAEA's SSR-6 that is transferred into European (and Spanish) regulation through ADR and RID, that establish the regulation for transportation of dangerous goods by road or railway, respectively. Subsidiarily, 10CFR71 can be applied for transportation systems, as most systems deployed in Spain were designed according to US design basis. There is no difference between (shipments from or to) wet and dry facilities. The design, licensing and procedures must show safety is ensured depending on the proposed way, where applicable.  SNF requirements are included in storage or transport regulations. Regulations include safety instructions, safety standards, etc. and are developed into guidances. These guidances might also include recommendations for SNF. Finally, there can be other specific requirements set forth during the licensing process by the Regulatory Authority.
Korea, Republic of	Article 13	H.13.1	13.1 "Forecast of New RW Facilities" states that El Cabril Disposal Facility disposes low- and intermediate-level, short half-life nuclides. - How do you dispose of long half-life nuclides of low-and intermediate-level generated from nuclear cycle facilities? Do you dispose of them at the existing disposal facilities?
Answer			Long half-life nuclides of LILW are accepted at El Cabril disposal facility below the limits defined by corresponding Waste Acceptance Criteria.
Korea, Republic of	Article 16	H.16.2.1	It is stated that the improvement measures on the operation and maintenance of El Cabril Disposal Facility follow the design modification procedure. - In what direction are improvements made on what issues?
Answer			Improvement measures at the El Cabril LILW & VLLW disposal facility are intended to keep the facility at the state-of-art as well as to give response to new needs within the national program for RW management. Such improvements include adaptations for more easily and efficiently managing the large volumes of RW from the decommissioning, upgraded capacities for RW packages characterization and optimization of available disposal capacity.
Korea, Republic of	Article 11.5	H.11.5, 161	It is stated that biological and chemical risk factors of radioactive waste should be assessed. Also, the waste generator is responsible for presenting quantitative and qualitative biochemical risks. - Are there legal requirements for waste characterization? - What biochemical substances is El Cabril disposal facility most concerned about? What is the reason?
Answer			Relations between waste generators and Enresa are regulated by the "technical-administrative specifications" required by Article 11 of Royal Decree 102/2014, which define the responsibilities between parties for the transference of radioactive waste to Enresa. This includes that the waste generator is responsible for presenting quantitative and qualitative biochemical risks. On the one hand, Enresa is specially concerned about any substance that may require special attention during the treatment and conditioning processes that are carried out at the El Cabril premises. On the other, it is also interested in any substance that may have an impact into the environment in the long-term.
Korea, Republic of	Article 28	J, 196	It is stated in J that, according to Royal Decree 229/2006, the possessor of the disused source must establish a financial guarantee to cover safe management of the source - How are the costs that the licensee pays for financial guarantee calculated? (For example, the financial guarantee dues are decided depending on the number of sources or activities held by the owner.)

Answer	In practice, it is calculated in a per source basis, depending on how much its management would cost to Enresa in the event the owner of the source could not send it back to the supplier once it is disused. This cost, that is also the public price the licensee must pay Enresa in the aforementioned event, is reflected in the Sixth Additional Provision of Law 54/1997, of November 27th, on the Electrical Sector, where the levies for the provision of this service are set out.		
Korea, Republic of	Article 23	F.23.1	Regarding the QA program, - Are there ways to improve the comprehensive quality management system including nuclear safety requirements?
Answer	Enresa has a quality system that meets the requirements of the national standard UNE 73.401 "Nuclear facilities. Quality assurance". This standard is similar in terms of requirements to Appendix B of 10CFR50 and includes additional requirements to the ISO 9001 standard, for which Enresa is certified by an accredited entity. Additionally, integrated management systems have also been implemented at Enresa's facilities, following the guidelines of the "Safety Requirements" No. GS-R-3 "The Management System for Facilities and Activities", which in Spain the regulatory body transposed to the safety instruction number 19 (IS-19). The objective of the requirements of these integrated management systems is to ensure that safety is not compromised, considering the implications of all actions; not within the framework of different management systems separately, but integrating those aspects related to occupational risk prevention, environmental protection, physical protection, quality and economic aspects, all of them with respect to Nuclear Safety.		
Korea, Republic of	Article 19	E.19.2., 74~75	Section E Article 19.2 mentions Order ETU/1185/2017 as related to clearance. - Please elaborate how the regulatory body regulates the authorized parties' responsibilities for cleared waste traceability.
Answer	Order ETU/1185/2017 regulates the clearance of residual materials arising from nuclear facilities. Article 7 of said Order ETU/1185/2017 requires that the traceability of the process, until the delivery of cleared residual material to the final receptor, will be guaranteed by the licensee through the corresponding registration and recordkeeping system, which must be updated at all times and available to the Nuclear Safety Council (CSN). Article 5 of said Order ETU/1185/2017 requires the licensees of nuclear facilities the implementation of the corresponding technical documents that reflect the control methods and procedures implemented to carry out the classification, characterization and management of clearable residual materials, in accordance with the instructions established by the Nuclear Safety Council. Additionally, Article 6 of referred Order requires carrying out the management of clearable residual materials within the framework of a quality control system that guarantees the detection of possible deviations and ensures the implementation of the appropriate corrective measures.		
Korea, Republic of	Article 26.1	F, 121	It is stated that the licensee must have conditioned the radioactive waste from operation in accordance with the acceptance criteria of the storage facility before decommissioning approval. - Is approval for decommissioning impossible to obtain if the radioactive waste arising from operation is not conditioned? Are there legal standards for this?
Answer	Licensees are required to condition the radioactive waste from operation in accordance with waste acceptance criteria in force at the El Cabril LILW disposal facility. This is a pre-requisite to enable transfer of the nuclear power plant from the utility to Enresa who becomes licensee for dismantling process.		
Saudi Arabia	Article 25	Annex C, page 236	The GRWP pointed out that the Funding for the management of spent nuclear fuel and radioactive waste and building the CTS will be conduct by Enresa which is a non-profit organization. On the other hand, the Royal Decree 102/2014 stated that Enresa will be responsible to manage the spent nuclear fuel and radioactive waste with the cooperation of the competent authorities under the coordination of the CSN. Considering that CSN is an independent authority, what activities could be addressed as coordination in the management of waste and spent fuel? Are there other activities other than safety related matters?
Answer	Both Enresa and the CSN, in the context of emergency management, take part on the National Civil Protection and Emergency System and therefore, during the emergency, CSN does not act as the regulatory body itself. During the later post-emergency phases the CSN recover its fully functions and responsibilities as the only Spanish Regulatory Body on nuclear safety and radiation protection matters.		
Saudi Arabia	Article 32.1.5	B, page 29	The High-Level Waste (HLW) was defined by GRWP as a radioactive waste containing long-lived alpha-emitters with a half-life of more than 30 years in appreciable concentrations which generate heat because of the effect of radioactive disintegration, as they have a high specific activity. However, the Special Waste (SW) was defined "long-lived waste with a significant activity level, temporary storage and disposal of such materials is handled similarly to HLW". Taking into account that both HLW and SW are defined and treated similarly, what is the rationale behind this distinction?
Answer	The distinction is based not so much on the final destination of the waste as on the way it is generated. The distinction is important for inventory and generation forecasts purposes. High-level waste (HLW) constitutes mainly the spent fuel discharged from nuclear reactors which, given that Spain has opted for an open fuel cycle, is considered radioactive waste. Special waste (SW) includes nuclear fuel attachments neutron sources, used intranuclear instrumentation or substituted components from the reactor vessel system and internal reactor components, generally metallic in nature, which, due to their radiological characteristics, are not suitable to be managed at the El Cabril facilities. The current inventory is composed by the following streams: those generated in the reprocessing of spent fuel from NPP Vandellós I, those from the dismantling of the NPPs of José Cabrera and Vandellós I, and some disused sources.		
United Kingdom	Article 23	23.1	Section 23.1 of the national report focuses on the structure of Enresa Quality System. 1. Please can you clarify how quality programmes for other organisations with responsibility for spent fuel and radioactive waste management are established and monitored.
Answer	At a licensee level, there is a Radioactive Waste and Spent Fuel Management Plan (PGRRyCG, in the Spanish acronym), which is the reference document for the management of radioactive waste at nuclear facilities, and includes the criteria and methods that ensure that the management of radioactive waste and spent fuel generated at the facility is safe and optimized considering updates in regulations and technology, taking into account the existing situation in terms of generation, management and transfer; the identification of waste origins and spent fuel life; the study of the alternatives in the management processes and the possible improvements; the justification of the suitability in the management carried out and the planning of the implementation of the identified improvements. The PGRRyCG is an official operating document (DOE, in the Spanish acronym), approved by the CSN and subject to the quality assurance requirements established in the plant's Quality Assurance Manual (MGC), also a DOE-type document approved by the CSN. These quality assurance requirements include the performance of periodic audits, supervisions and documentary reviews of both the organization and the suppliers of products and services, based on their importance for safety and radiological protection.		

United Kingdom	Article 9	G,H (also Article 16)	<p>Section G9.5 of the national report identifies that following various incidents/events occurring at Spanish nuclear power plants licensees gave a commitment to conduct an overall analysis of the situation at each plant to identify possible improvements.</p> <p>1. Please clarify whether the requirement for licensees to undertake their analysis of operational experience is voluntary or mandatory.</p> <p>2. Please can you summarise the learning that has been derived so far.</p> <p>3. Please can you explain how the learning from the Spanish analysis, together with international operating experience, is being used by CNS?</p>
Answer			<p>The operating experience requirement is mandatory. The documents for which an analysis is required by the regulator are the following:</p> <ul style="list-style-type: none"> <li>o INPO (Institute of Nuclear Power Operations) documents: "Significant Event Reports" (SER), "Significant Operating Experience Reports" (SOER), "Incident Event Report" (IER Level 1 / IER Level 2) that are reported in the WANO website</li> <li>o Supplier documents, e.g. W-NSSS technical Bulletins and W-NSSS Nuclear Safety Advisory Letters (NSAL), technical bulletins and notifications under 10CFR21</li> <li>o Event Notification Reports of the Spanish NPPs or reports required due to the fact that you get into the Internal Emergency Plan of the plants</li> <li>o Other analyses required by the CSN</li> </ul> <p>Additionally, it is considered to carry out an analysis of the following documents (not mandatory):</p> <ul style="list-style-type: none"> <li>o Documents from WANO (World Association for Nuclear Operators), through its encrypted website: "Significant Event Reports" (SER), "Significant Operating Experience Reports" (SOER), "WANO Event Report" (WER)</li> <li>o NRC (Nuclear Regulatory Commission) documents, information notices</li> <li>o Analysis of events or documentation not covered in the previous sections, of special significance in the nuclear industry (e.g. from IAEA)</li> <li>o Analysis of non-notification events (Minor Incidents), generated as EOP of a Spanish Nuclear Power Plant, screened within the internal group of CEN-Foro Nuclear devoted to Operating Experience</li> </ul> <p>Among the conditions of the operating authorizations (ministerial order) there is a condition to perform an analysis of external and internal operating experience. This condition is developed in a detailed technical instruction, which requires the licensee to analyse the referred following documents each year:</p> <ul style="list-style-type: none"> <li>• SER/SOER of INPO</li> <li>• Notifications of suppliers and manufacturers to the NRC (10 CFR 21)</li> <li>• Recommendations of SSC suppliers</li> <li>• Event reports from other Spanish NPP</li> </ul> <p>IAEA IRS reports are analysed by CSN and if considered applicable to any plant, a letter of the Technical Director is sent requesting the analysis of the IRS. Besides the external OE, all licensees have to revise their internal events looking for patterns, etc. In the first quarter of each year, each licensee sends a summary report to CSN with the operating experience analysis that is used in the OE inspections performed on each licensee every two years. In addition, a committee meets monthly with all the technical branch heads to review the reported events of the Spanish plants and quarterly for the review of the external OE. With these sources of information, the CSN is aware of the performance of the plants with respect to others in the world, the corrective actions applied at each facility, trends in the respective causal factors, etc.</p>
United Kingdom	Article 32	D3	<p>Section D3 page 55 identifies that in 2018 Enresa set up its first plan for the treatment of contaminated soil associated with the José Cabrera Nuclear Power Plant decommissioning project, with the aim of reducing the inventory and volume of VLLW by means of a washing process capable of achieving declassification levels.</p> <p>1. Please can you provide more information on the washing process being used and its effectiveness?</p>
Answer			<p>By the end of 2019, the amounts of excavated soils and their destinations are as follow:</p> <ul style="list-style-type: none"> <li>- Total excavated soils: 15.961 t.</li> <li>- Candidate for clearance: 12.231 t.</li> <li>- Affected soils (RW): 309 t.</li> <li>- Soils for further treatment at the washing plant: 3.421 t.</li> </ul> <p>By now, the results show that 74% of the washed material is released while 26 % was managed as VLLW, Such VLLW is disposed of at the El Cabril LILW &amp; VLLW disposal facility being operated by Enresa</p>
United Kingdom	Article 32	D3 (also Article 4)	<p>In Section D3 page 58 of the national report, it is stated that very low level waste arrives at the El Cabril Disposal Facility in drums, bags or metal containers, and is sent directly to the vault or temporarily received in the Technology Building. This has systems in place for stabilisation by means of inerting and cavity filling.</p> <p>1. Please can you explain how it is ensured that donor facilities have minimised waste prior to consignment to the El Cabril Disposal Facility?</p> <p>2. Please explain what volume reduction techniques, if any, are used at the El Cabril Disposal Facility prior to disposal (e.g. compaction, incineration, etc.)</p>
Answer			<p>1. All shipments are subjected to inspection and approval of Enresa prior its consignment. Therefore, Enresa has the capability to confirm the waste generator has properly followed applicable procedures, including waste sorting and minimization. 2. El Cabril LILW &amp; VLLW disposal facility counts with an incinerator for dedicated LILW streams and also with a supercompactor serving for both LILW and VLLW 220 l drums.</p>
United Kingdom	Article 19	19.1	<p>Section 19.1 page 70 identifies that Law 25/1964 provides for empowerment for the Nuclear Safety Council (CSN) "directly to adopt coercive measures, such as disciplinary notices, with the corresponding fines associated with these, and warnings".</p> <p>1. Please can you clarify the differences between the enforcement options available to the CNS and the Spanish judicial system.</p>

Answer	<p>The disciplinary regime regarding breaches of legal framework of nuclear energy established in the Nuclear Energy Law 25/1964, of April 29th, on nuclear energy, is of an administrative nature, providing for two alternatives administrative procedures, neither of them are embedded or part of any judicial procedure. Once the administrative procedure is finished, if the concerned party does not agree with its resolution can claim its rights by judicial proceedings.</p> <p>The general procedure is established under Article 91.2 of Law 25/1964, of April 29th, on nuclear energy. The Nuclear Safety Council will propose, where appropriate, the initiation of the corresponding sanctioning file regarding those facts that could constitute an infringement in matters of nuclear safety, radiological protection or physical protection, informing the body to which it corresponds to initiate the file (most times the Directorate General for Energy Policy and Mines) about both the facts constituting the infringement assessed and the relevant circumstances that are necessary for its proper classification. Likewise, once a disciplinary proceeding regarding nuclear safety, radiological protection or physical protection has been initiated, the Nuclear Safety Council shall issue a mandatory report within a period of three months, for the proper classification of the facts that are the subject of the procedure. This report will be issued when said initiation is not at the proposal of the Nuclear Safety Council, or in the event that, having been, other information is included in said procedure in addition to that communicated by said entity. Said report from the Nuclear Safety Council will lead to the suspension of the resolution period of the sanctioning procedure, until its issuance, and in any case, up to a maximum period of three months from when it was requested. In the sphere of the State Administration, the sanctions for very serious infractions committed by the licensees of nuclear or first-class radioactive facilities will be imposed by the Cabinet of Ministers, the serious ones by the Minister for the Ecological Transition and de Demographic Challenge, and the minor ones by the Director General for Energy Policy and Mines. In the case of sanctions for very serious infractions committed by the licensees of second and third category radioactive facilities and other activities regulated by the referred Law or its development regulations, they will be imposed by the Minister for the Ecological Transition and de Demographic Challenge, and by the Director General Policy on Energy and Mines in cases of serious and minor infractions.</p> <p>As an alternative procedure, and only for minor infringements, Article 91.3 states that the Nuclear Safety Council, as an alternative to the proposal to open general sanctioning proceedings, may warn the licensee of the activity and require the corresponding corrective measures, when the circumstances of the case so advise and provided that no direct damages are derived to people or the environment. If this requirement is not met, the Nuclear Safety Council may impose coercive fines for an amount that will be, the first time, ten percent, and the second and successive ones, twenty percent of the average value of the sanction that should be imposed, in its medium degree, in order to obtain the cessation of active or omissive behaviors that are contrary to the prescriptions of the Law 25/1964 or of Law 15/1980, of April 22nd, on the creation of the Nuclear Safety Council, and its development provisions.</p> <p>The Sanctioning Procedures Review Committee of the Nuclear Safety Council evaluates whether to request the Ministry to start the general procedure or to directly warn the concerned licensee.</p>		
United Kingdom	Article 23	F	<p>Section 23.1 identifies that work at Enresa continues in connection with CSN Instruction IS-19 and Integrated Management System on the implementation of a strong safety culture based upon eight principles defined by Enresa.</p> <p>It is not clear how the safety culture improvement programme initiated in 2016 has been delivered or if it has yielded any benefit.</p> <p>1.What are the 8 principles defined by Enresa and what actions have been taken to implement the principles?</p> <p>2.Please can you explain how you have sought to assess the effectiveness of the safety culture programme at Enresa and explain what has been learnt?</p> <p>3.To what extent are the quality assurance arrangements (with respect to safety culture) applicable to spent fuel and radioactive waste management applied to other licensees including those with individualised temporary storage facilities?</p>
Answer			<p>1. The eight principles are:</p> <ol style="list-style-type: none"> <li>1. All ENRESA workers and collaborators are personally responsible for safety.</li> <li>2. Leaders demonstrate their commitment to safety.</li> <li>3. A climate of openness and trust is established and maintained throughout the organization.</li> <li>4. Decision making reflects that safety comes first.</li> <li>5. The specificity of ENRESA's activities is recognized.</li> <li>6. A constructive critical attitude is encouraged at all levels in matters relating to safety.</li> <li>7. Learning and continuous improvement are present throughout the organization.</li> <li>8. Safety requires constant monitoring.</li> </ol> <p>These principles are the pillars to evaluate the safety culture in Enresa and propose actions for improvement.</p> <p>The system established in safety culture responds to the need to comply with a standard issued by the Nuclear Safety Council: CSN Safety Instruction "IS-19" on the requirements of the nuclear facilities management system, issued in 2008. Following this standard, Enresa implemented its "Integral Improvement System" (Sistema Integral de Mejora, SIM), which is a normative application in force to manage all incidents in the areas of quality, environment, occupational risk prevention, radiological protection and physical safety. SIM was fully implemented in Enresa in 2010. In short, SIM allows every employee to identify mistakes and deficiencies in these areas and to propose actions to correct them. In more than ten years, some 3000 specific actions have arisen out of the use of SIM. The contents registered in SIM are subject to self-assessment by Enresa and assessment by the CSN.</p> <p>As a result of the implementation of the IS-19 requirements, Enresa adopted an internal document called "Improvement Plan for Safety Culture in Enresa". The first edition of this Improvement Plan corresponded to the period 2014-2016; the current edition covers the period 2021-24 and is based on the results of a second round of assessments (a second external assessment on the Enresa's safety culture was undertaken during 2020). This Plan identifies a series of aspects to improve safety culture for each of the eight principles mentioned. The actions proposed apply to the entire company (corporate actions); however, more specific actions have been set for the facilities of El Cabril and decommissioning of NPP José Cabrera). Some examples for actions would be: encouragement to all workers in the use of SIM, creation of a safety culture mailbox that allows the dissemination and issue of communications, promotion of meetings between the different work centers to discuss issues of safety culture, etc.</p> <p>3.To what extent are the quality assurance arrangements (with respect to safety culture) applicable to spent fuel and radioactive waste management applied to other licensees including those with individualised temporary storage facilities?</p> <p>The Spanish NPPs also apply the standard IS-19 and therefore they also have NBCUniversal for continuous improvement of the safety culture.</p>
United Kingdom	Article 32.1.1	B4	<p>Section B identifies the policies and practices for spent fuel management including individualised temporary storage facilities (ITS) at power plants, a centralised storage facility (CTS) whose location and criteria have still to be agreed and a deep geological repository (DGR) whose location and criteria have also still to be agreed.</p> <p>1.Pleas can you clarify how Spain is seeking to ensure that any spent fuel packaging or conditioning does not hinder options for subsequent storage or disposal?</p>

Answer	<p>The consideration given to the interdependencies between the different stages of radioactive waste and spent fuel management has been an intrinsic element of the legal and regulatory framework in Spain for decades. The consideration given to interdependencies is included among the general management principles listed in Royal Decree 102/2014 for the safe and responsible management of spent nuclear fuel and radioactive waste. CSN Instruction IS-26, on basic nuclear safety requirements applicable to nuclear facilities, requires with reference to radioactive waste management that the licensee identify and acknowledge in advance the interactions and relationships with other stages when reaching decisions in each radioactive waste management stage, so as to achieve a balanced equilibrium of safety and overall effectiveness. In practice, the Radioactive Waste and Spent Fuel Management Plan (PLAGERR, in the Spanish acronym) is an essential document of every nuclear facility for the application of this principle. The PLAGERR, an official document for the operation of nuclear facilities, is approved by the MITERD following a report by the CSN, as part of the facility licensing process. The objectives, criteria and content of the PLAGERR are governed by CSN Safety Guide 9.03, dating from the year 2008. The respective PLAGERRs of the nuclear power plants in operation have been aligned with this guide. The consideration given to interdependencies is directly reflected in the adoption of criteria for the acceptance of radioactive waste and spent fuel which must be signed by the licensees of nuclear facilities for subsequent management by Enresa, as indicated in Article 11 of Royal Decree 102/2014, regarding technical or administrative specifications. These specifications will be valid until the end of the life of the facilities, including dismantling and decommissioning, and must have been approved by the MITERD, with a prior report by the Nuclear Safety Council. The standard contracts that have been established over time with regard to spent fuel and radioactive waste between Enresa, as the waste manager under Spanish regulations, and the licensees of nuclear facilities, have the status of technical administrative acceptance specifications. It should lastly be pointed out that the reporting obligations of Enresa with regard to the CSN brought in by Royal Decree 102/2014 include the requirement to submit information during the first quarter of each year as to interdependencies, agreements and interfaces of responsibilities with the licensees of other spent nuclear fuel and radioactive waste management facilities (Article 12.2 of the aforementioned Royal Decree).</p>		
United Kingdom	Article 32	D1	<p>Section D1 identifies that a number of the power plants (e.g. Ascó) hold spent fuel in both ponds and dry individualised temporary storage facilities (ITS).</p> <p>1. Please can you explain how Spain determines which interim storage method is adopted (e.g. considering the optimisation between relative risk, space, future conditioning requirements, etc.)</p>
Answer	<p>After extending the capacity of existing facilities at the NPPs (pools) by means of reracking, it was decided that, in the cases that may be needed, such storage capacity would be complemented by means of SF on site dry interim storage facilities. Such facilities would bridge the needs at the NPPs with the future construction of a Centralised Temporary Storage (CTS) facility which will serve to the National SF inventory. Several factors are considered: technical compatibility between such on site dry interim storage facilities and the foreseen Centralised Storage Facility, maturity of the technology, size of the needed supply, constraints of the NPP and available storage site...</p>		
Argentina	Article 17	Section- H , Pag. 183	<p>Is it stipulated the moment when the responsibility for RW placed in El Cabril will be transferred to the Government?</p>
Answer	<p>As it is stated in Article 38-bis.4 of the Law 25/1964, of April 29th, on nuclear energy, the responsibility for RW placed in El Cabril will be transferred to the State once they are disposed of.</p>		
Argentina	Article 32	Section- k , Pag. 207	<p>You said that "...The prior studies required in this regard were conducted in 2018 and 2019, following on from which the documentation will be prepared to apply for the authorisation or licence, and the procedure for the issuance thereof will begin"</p> <p>Could you please explain the progress regarding said mentioned documentation?</p>
Answer	<p>Enresa is currently discussing different feasible approaches with corresponding authorities for the enlargement of El Cabril LILW disposal capacities</p>		
United Kingdom	Article 19.2.6	B,E,F	<p>The national report identifies that Enresa is responsible the safe management of spent fuel and radioactive waste. Page 104 indicates that Enresa is also responsible for the decommissioning of nuclear facilities.</p> <p>Page 71 indicates that Royal Decree 102/2014, on the safe and responsible management of spent nuclear fuel and radioactive waste, establishes that the main responsibility with regard to spent nuclear fuel and radioactive waste will lie with those that produced it or, where applicable, the licensee of the authorisation to which this responsibility has been entrusted.</p> <p>1. Could you please clarify the interfaces and formal handover of responsibilities between Enresa and those who produce spent nuclear fuel and radioactive waste.</p> <p>2. Please can you clarify the timescales associated with any handover of responsibility.</p>
Answer	<p><b>For LILW and VLLW:</b></p> <ul style="list-style-type: none"> <li>Generated at nuclear facilities: The waste generators must deliver their waste to Enresa already conditioned, following the procedures approved by ENRESA for the different waste types generated at the facility. Upon their arrival to El Cabril facility, ENRESA checks whether the waste acceptance criteria, as defined in their technical and administrative acceptance specifications, are compiled. ENRESA becomes responsible for the waste once the conditioned waste leaves the generator facility.</li> <li>From small producers: Producers deliver their wastes to ENRESA in a form agreed on following their technical and administrative acceptance specifications; the personnel commissioned by ENRESA for the collection will only accept the waste that meets said acceptance criteria. ENRESA provides producers with the appropriate packaging for transport. ENRESA is responsible for collecting and transporting the waste to El Cabril facility. In the facility, ENRESA is responsible for treatment and conditioning in concrete containers.</li> </ul> <p>In both cases, services provided by ENRESA to the waste generators are governed by the technical and administrative acceptance specifications, based on the corresponding former "type contracts". It is key that the waste generators sign and apply the technical and administrative acceptance specifications which, according to article 11 of Royal Decree 102/2014, need to be approved by the Ministry for the Ecological Transition and the Demographic Challenge, with the prior report of the Nuclear Safety Council (CSN).</p> <p>For HLW and SF: during the NPP lifetime, the NPP operator holds the license for management of the individual storage facility located in the NPP site. ENRESA becomes license holder of the site only when a transfer of responsibility takes place, which occurs upon the terms of a Ministerial Order issued case-by-case after shutdown of the NPP in order for ENRESA to start de dismantling and decommissioning project.</p> <p>Timescales.</p> <p>For LILW and VLLW, the handover of responsibilities is connected with the collection of the waste by ENRESA for transfer to El Cabril disposal facility.</p> <ul style="list-style-type: none"> <li>For waste from nuclear facilities: An annual plan for the waste removal is carried out, which is ratified month by month.</li> <li>For waste from small producers: A monthly campaign is prepared according to removal demand.</li> </ul> <p>For the SF allocated in the in site temporary storage facility, and for the NPP site after shutdown: the dismantling strategy for the Spanish NPPs is foreseen in general terms in the draft General Radioactive Waste Plan. After shutdown, a transition period of three years is estimated in which the NPP owner still holds the license of the facility; during this time, the NPP owner and ENRESA will collaborate preparing the necessary works and documentation to start decommissioning. The transfer of ownership to ENRESA takes place only after this three years transition phase and it is determined by the adoption of said Ministerial Order.</p>		

Argentina	Article 44	Section- G , Pag. 135	You mention this: "For design specification accidents, the acceptance criteria are established in terms of an effective dose less than 50 mSv, an equivalent skin dose less than 500 mSv and an equivalent crystalline lens dose less than 150 mSv, the same applying for any member of the public located beyond the controlled area". The last part (the same applying for any member of the public located beyond the controlled area) would not be understood, you said that you use the same limits for public and for workers?
Answer	The values collected in Section G apply to members of the public in the event of an accident and should not be confused with the dose limits for workers in normal operation.		
Argentina	Article 9	Section- G , Pag. 147	In relation to "Re-racking of the Vandellós II pool", could you describe the current situation?
Answer	Once the modification was authorized, it was mainly carried out during the second half of 2020. The works consisted of the assembly of a temporary crane to lift the pool racks, the movement of the spent fuel to release the positions in every rack to be replaced, and the replacement itself of the racks, which were taken from the Fuel Building to their current storage position in the Radioactive Waste Warehouses. Following the disassembly of the temporary crane in the 1Q2021, the original configuration of structures, systems and components (SSC) of the Fuel Building was restored, as planned, in order to receive the new fresh fuel in May 2021 to carry out the Refueling Outage number 24 of Vandellós II NPP. This increase in positions makes it possible to accommodate the fuel assemblies for at least three additional operating cycles, during which time a new strategy for storing spent fuel elements in the plant will be developed, by means of licensing an Individualized Temporal Storage Facility (ATI).		
Argentina	Article 9	Section- G , Pag. 147	You wrote this: "The arrangement comprises five manufactured casks of the ENUN 52B type, along with equipment for the loading of the casks, which will be used to store spent fuel of models GE-6 and GE-7, to be deposited in the ITS facility in late 2020 or early 2021" Could you mention if the tasks are finished?
Answer	Not yet. The schedule has been impacted by the Covid pandemic and the current schedule expects the loadings in 2022.		
Argentina	Article 19	Sección- A3 , Pág. 15	Could you extend in Spanish experience in clearance of materials using surface contamination values? (IET/1946/2013, October 17th )
Answer	In Spain, as in many other countries, a number of industrial activities which use and process raw materials with radioactive content of natural origin take place, thereby generating waste materials with radioactive contents. In accordance with EU standards, the Spanish regulations in the radiological field allow for this type of activity and establish the conditions under which some type of control is required on radiological grounds. Order IET/1946/2013, of 17 October 2013, governing the management of waste generated in activities using materials containing natural radionuclides, thus establishes the values for concentrations of activity (exemption/declassification levels) which, if they are not exceeded, allow such waste to be managed conventionally, or otherwise require that the licensee of the operation conduct a radiological impact study in order to ascertain the resulting effective annual dose for members of the public and for employees. The Order establishes that if certain values are exceeded, such materials must be managed by Enresa as radioactive waste.		
Argentina	Article 24	Section- F , Pag.114	Is it evaluated to incorporate the concept of representative person instead of critical group? Although this concept was recommended in ICRP 60, in ICRP 101 this changed to a representative person
Answer	In the revision that is being carried out of the regulation for health protection against ionizing radiation (RPSRI), the concept of representative person is incorporated		
Argentina	Article 24	Section- F , Pag. 111	You mention: "Crystalline lens dose limit: 150 mSv per official year" Have you considered the possibility of lowering the limit to 20 mSv?, as recommended by ICRP 103
Answer	The ongoing review of the RPSRI sets an equivalent dose limit for the lens of 20 mSv per official year.		
Argentina	Article 24	Section- F , Pag. 113	For the limitation of discharges at nuclear facilities, do you use a dose constraint or do you use the dose limit? In case it is the dose constraints, what is the one used?
Answer	According to the Technical Operating Specifications, the effective dose for members of the public, due to liquid and gaseous radioactive effluents, must be less than 100 µSv, in 12 consecutive months. This value is lower than the legal dose limit for the public and the maximum value established by the Administration in accordance with Article 6, Title II, of the Regulation for health protection against ionizing radiation (RPSRI) in the optimization process of radioactive effluents in a nuclear power plant.		
Argentina	Article 32	Section- F , Pag. 114	Regarding decommissioning of Central Nuclear Santa María de Garoña, did CNSN require the presentation of the Final Decommissioning Plan previous of the cease of operation of the NPP?
Answer	No. In accordance with the Regulation on Nuclear and Radioactive Facilities (RINR), the Final Decommissioning Plan was presented in support of the decommissioning authorization application, currently under evaluation by CSN. According to RINR, the Final Decommissioning Plan is composed of a set of documents, as listed on pages 223 and 224 of Annex B of the Report. In January 2022, a new CSN Instruction was published in the Spanish Official Gazette. Instruction IS-45, of 17th November 2021, establishes basic safety requirements during design, construction, and operation of nuclear installations in order to facilitate its future decommissioning. In accordance with this Instruction, the Spanish NPP still in operation shall present a preliminary decommissioning plan within 18 months after the Instruction publication date. This Instruction establishes the structure and content of the preliminary decommissioning plan, as well as its updating regime. For facilities into definitive cessation of operation, the operator of the NPP and the responsible for the decommissioning activities (Enresa in the case of NPP) shall review the preliminary plan as needed, and send it to the CSN, for approval, within a year after obtaining the cease of operation statement from the MITERD. This decommissioning plan will be in force until the decommissioning authorization is granted. The CSN also elaborated an instruction on the safe decommissioning, and where appropriate, safe closure of nuclear and radioactive fuel cycle facilities, which is currently in draft state, pending of the approval of the draft RINR revision transposing, among others, the 2013/59/Euratom Directive. This Instruction will be applicable to the NPP both under decommissioning and in the process of obtaining the decommissioning authorization. This draft Instruction establishes the final decommissioning plan as the director document of the process of dismantling in which, in accordance with the chosen strategy, detailed planning and the planned development of dismantling shall be described. This final decommissioning plan, along with the documents listed on pages 223 and 224 of Annex B of the Report, shall be presented in support of the decommissioning authorization application. It is expected that this draft Instruction will be issued in the near future. Thus, the next NPP entering in the cease of operation period shall fully comply IS-45 requirements. When applying for the decommissioning authorization, a final decommissioning plan shall be presented in accordance with the abovementioned draft Instruction, and along with the rest of the documents listed on pages 223 and 224 of Annex B of the Report.		

Argentina	Article 2	Section- D , Pag. 55	In relation to José Cabrera Nuclear Power Plant in the decommissioning phase, you said: "The design of this plant was viewed favourably by the CSN on 13 July 2016, along with the results of the commissioning tests on 6 June 2018". Could you explain what the commissioning tests consisted of and what was the results?
Answer			Before installing the plant, a technical feasibility demonstration was carried out by means of a laboratory pilot test. Once installed on site, additional test were carried out with clean material with the aim to define the operational parameters for the processes. Later on, additional test were carried out with 500 t of contaminated soil to demonstrate the effectiveness of the decontamination process.
Argentina	Article 20	Section- E , Pag. 91	In relation to "Communication on the international stage" You mention international forums, but could you explain what other activities do you carry out to strengthen the communication aspect?
Answer			In addition to participating in international forums, a relevant activity for the CSN is fostering bilateral agreements, memorandums of understanding or other commitments between peer organisations that allow for the agile and flexible exchange of information and cooperation in communication and public information, among other matters.
Argentina	Article 24	Section- F , Pag. 110	You mention that you implement ICRP 60. Could you please explain if you are take into account ICRP 103?,
Answer			The Regulation for health protection against ionizing radiation (RPSRI) in force takes into account the recommendations of ICRP 60. This Regulation is currently being reviewed taking into account, among other international standards, the new recommendations of the ICRP, particularly those in ICRP Publication 103.
Argentina	Article 32	Section, D Pag. 49	You said that the transport licence is being reviewed in order to include fuel of the same degree of burnup as that authorised for storage (up to 55 GWd/tHM). Could you mention what is the current status of the transportation license, was it consistent with the storage license?
Answer			The Spent Fuel arisen from Trillo NPP is currently stored on site (pool + dry casks). Dry cask storage license allows for storage of fuels up to 65 GWd/tU and transport license allows for transport of specific Trillo fuel assemblies up to 58 GWd/tU. A modification of the transport license is being assessed by the Regulatory Body to include the whole inventory of fuel assemblies at Trillo NPP.
Argentina	Article 32	Section D , Pag. 51	You said that: "A reassessment of the dry storage facility in order to house the complete inventory from the pool will therefore be required" Could you mention what is the current status of the reevaluation?
Answer			The documentation for storing the whole inventory of the NPP at the dry storage facility was presented for evaluation in 2020, within the D&D Licensing Documentation. The cask licensing documentation to store and transport the whole inventory will be sent for evaluation in 2022. The manufacturing of the remaining casks is ongoing.
Argentina	Article 2	Section- D.3. , Pag. 53	You said that: "Vandellos I Nuclear Power Plant in decommissioning phase building for the temporary storage of low and intermediate level waste specific intermediate solution for the temporary storage of graphite waste derived from the fuel element sleeves". Could clarify what is the decommissioning strategy adopted and what is the current phase of the decommissioning?
Answer			The decommissioning strategy for the Vandellos 1 NPP is deferred dismantling. The decommissioning project is being implemented in two stages: 1998-2003 for the dismantling of auxiliary facilities and systems (former IAEA's Level 2). After a dormancy period, Enresa foresees the initiation of additional works beyond 2028 with the aim to dismantle the remaining reactor box and so to release the site from the regulatory control. Today the facility is in safe storage condition.
Hungary	Article 8	8.2. - p. 141.	Could you highlight some modifications connected with the instrumentation of the spent fuel pool?
Answer			The operators have implemented modifications to provide the spent fuel pool instrumentation with portable level and temperature monitoring capability, seismically qualified, either through battery-powered cards or through connections to the portable electrical and/or pneumatic supply. They have also made design modifications to incorporate wide-range level instrumentation, with the capability to measure from the bottom to the surface of the spent fuel pool.
Argentina	Article 16	Section B5, Pag. 35	Which are the Waste acceptance criteria for the complementary facility for RRBA at El Cabril? Which is the institutional control period after closure foreseen for this facility?
Answer			This includes Very Low Level Waste (VLLW), comprising a subset of low and intermediate level waste, and in general revealing specific activity levels of between one and 100 Bq per gramme, potentially rising as high as several thousand in the case of certain radionuclides with low radio-toxicity, or in the case of small amounts. Institutional control period after closure is foreseen for 60 years.
Argentina	Article 38	Section B, Pag. 35	You mention that in December 2019, 21 of the 28 vaults are full and that represents 76% of the LILW storage capacity, so could you explain what is projected based on this need?
Answer			For the disposal of all the LILW expected to be generated in the coming decades, the construction of new cells in El Cabril was already foreseen in the 6th version of the General Radioactive Waste Plan (GRWP, dated 2006) and continues to be an objective in the current draft 7th GRWP. In this draft, the analysis of the capacity of the 28 cells currently in existence concludes in the need to have new cells in the year 2028, so as not to affect the planning of operation and dismantling of the NPPs and to be able to continue with the disposal of this type of waste. The construction of the new cells will be undertaken in phases, contemplating in the first phase the construction of 12 cells and, subsequently, additional cells (in principle, 15) that will be built as they are needed, according to the development of the dismantling of the NPPs. This planned enlargement of the disposal capacities must be accompanied by measures of optimization in the management of this type of waste.
United States of America	Article 22	A.3, p. 18-19	The report states that progress has not been made at this time in developing a deep geological repository for spent fuel and that research activities will focus on increasing knowledge of the behavior of spent fuel, of engineering barriers, and of techniques for site characterization, as well as modelling of radionuclide migration. Please describe the extent of the current research activities and how these activities will support the deep geological repository program.

	<p>The initial Enresa's Underground Geological Repository Programme consisted of: a site selection process (1986-1996), development of generic reference concept for a repository in three possible host rocks clayey formations, crystalline rocks and salt (1994-2006), performance and safety assessments of the repository in clay and granite (1997-2003) and related R&amp;D activities. After 2006, only R&amp;D projects on different issues related to the underground disposal of HLW and SF were considered in the Spanish Programme. The draft 7th General Radioactive Waste Plan (now in process of approval) has included again the Underground Disposal as a priority in Enresa's actions.</p> <p>The main R&amp;D current projects dealing with DGR issues are:</p> <ul style="list-style-type: none"> <li>•Concerning SF and HLW: national projects, in collaboration with research centers and technological companies on nuclear fuel, concerning stability of SF in the short and long term ; characterization of irradiated fuel in the European Joint Research Center in Karlsruhe (Germany) and within Euratom EURAD Programme in the Spent Fuel Characterization Work Package.</li> <li>•Concerning engineered barriers: Euratom project BEACON on bentonite clay barrier properties on the long term; dealing with the possibility to consider higher temperature in a DGR (higher than 100°C) are two projects, one of them performed in the Grimsel Underground Laboratory (Switzerland), and the second one within the EURAD programme; also other projects performed in the Mont Terri Rock Laboratory in Switzerland.</li> <li>•Modeling disposal cells and studies about modelling at different scales, as well as how to consider the uncertainties related to the DGR, are conducted within the already mentioned EURAD.</li> </ul> <p>These activities allow Enresa's staff as well as other Spanish research institutions (universities and research centers) to reach an adequate level as to restart the DGR programme again, as it was recommended by the ARTEMIS Mission in October 2018.</p>		
United States of America	Article 22	K, p. 205	The report states that it is advisable to review the Spanish Nuclear Safety Council's training programme to ensure that the programme "is based on an analysis of the skills and abilities that will be needed over the coming years." Please describe the approach to human resource strategies in place to ensure that qualified staff are available for safety-related activities over the coming years.
Answer	<p>Spain hosted a combined IRRS-ARTEMIS mission in 2018. The IRRS team identified, as a suggestion, that the CSN should consider creating a consolidated and comprehensive Human Resource Plan, to include the job descriptions and carry out a Plan to maintain CSN competences available at short and long term. After this mission, the CSN drafted an action plan to carry out activities aimed at answering all recommendations and suggestions identified by the IRRS team. Regarding this suggestion the CSN has developed a project from 2020 to 2021 to design and implement a Systematic approach to training. At the same time, the CSN developed an Strategic Plan for 2020-2025. To draft this plan, an analysis of the short and long term needs of the regulatory body, taking into account National Integrated Energy and Climate Plan for 2021-2030 approved by the Government, was performed.</p> <p>This National Integrated Energy and Climate Plan defines the orderly cease of operation of Spain's nuclear power plants over the timeframe 2027-2035. With this scenario, the basis for the analysis performed by the CSN to define its new Strategic plan considered issues such as:</p> <ul style="list-style-type: none"> <li>- Regulatory body generational turnover and knowledge management.</li> <li>- Increasing competences demand oriented to dismantling and decommissioning of NPP – (Techniques, new technologies, equipments, etc ).</li> <li>- Increasing competences demand oriented to radioactive waste and spent fuel management.</li> <li>- Maintenance of existing competences on nuclear safety and radiation protection specialized for the different type of facilities and activities.</li> <li>- Reinforce the skills for programme and project management. (long term strategic planning).</li> <li>- Reinforce the knowledge on safety case and licensing process.</li> </ul> <p>The effective implementation of the SAT will lead to preserve the knowledge and train technical staff to cope with the challenges to be faced by the regulatory body over the coming years.</p>		
Hungary	General	Sec. A.3. - p. 14.	What are the main features of the plant for the treatment of contaminated soil?
Answer	<p>Such treatment plant has a capacity for 30-50 t/day while its operation is carried out by batches of 500 t. By the end of 2019, the amounts of excavated soils and their destinations are as follow:</p> <ul style="list-style-type: none"> <li>- Total excavated soils: 15.961 t.</li> <li>- Candidate for clearance: 12.231 t.</li> <li>- Affected soils (RW): 309 t.</li> <li>- Soils for further treatment at the washing plant: 3.421 t.</li> </ul> <p>By now, the results show that 74% of the washed material is released while 26 % was managed as VLLW, Such VLLW is disposed of at the El Cabril LILW &amp; VLLW disposal facility being operated by Enresa</p>		
Switzerland	General	Section A.2, page 8, and section B.1	On 10 March 2020, Enresa submitted a proposal for the seventh General Radioactive Waste Plan (GRWP) to the Secretary of State for Energy at the METERD. Is this proposal available for the public? Is it possible to send us a copy of the sixth GRWP?
Answer	<p>Yes. It is available to the general public in: <a href="https://energia.gob.es/nuclear/Residuos/Paginas/plangeneral.aspx">https://energia.gob.es/nuclear/Residuos/Paginas/plangeneral.aspx</a>. When it comes to the current Sixth GRWP: <a href="https://www.enresa.es/documentos/ing_6pgrr_indexed.pdf">https://www.enresa.es/documentos/ing_6pgrr_indexed.pdf</a></p>		
Switzerland	Article 20.2	Section 20.2, page 82	How many employees work in the Research and Knowledge Management Unit of CSN?
Answer	<p>Currently the Research and knowledge management Unit consists of 8 members.</p> <p>As it is established in Article 18 of Royal Decree 1440/2010 approving the Statute of the Nuclear Safety Council, concerning the Research plans, It falls to the Nuclear Safety Council to set up and monitor research plans as regards nuclear safety and radiation protection, however the development of the research activities is carried out by external entities financed by CSN, such as; Universities, Laboratories, specialized enterprises, international organizations (NEA/OCDE and others), etc.</p> <p>Regarding the programme for the preservation of critical knowledge and the continuous improvement of capabilities, the CSN issued an action plan focused on the preservation/recovery of the knowledge and experience of CSN technicians born before 1952. Currently the CSN is reanalyzing its policy for knowledge management at same time that follows with before mentioned action plan.</p> <p>Additionally, it is relevant to point out that the Research and knowledge management unit is in charge of all training activities of CSN' staff. This unit is responsible of drafting and issuing the CSN's Annual training programme and to coordinate, to monitor, and to implement the training annual programme for all the CSN' staff. This activity is carried out by 3 members of this unit.</p>		
United States of America	Article 17	A.3, p. 20	The report discusses the restoration and rehabilitation of uranium mining and milling facilities. Please elaborate on the tailings impoundment design and on the long-term monitoring program for the sites.
Answer	<p>See attached Word document: "Question 17210. USA to Spain"</p>		
Slovakia	Article 20	E, p. 87	Spain stated in the report: The management of radwaste management has been certified by ISO 9001:2008 (quality management system). Why does Spain report an ISO certification by standard 9001:2008 that is already invalid?
Answer	<p>The Nuclear Safety Council (CSN) Management System is based on IAEA document GSR part 2-Leadership and management for safety but without loss of main aspects of GSR-3 "The Management System For Facilities And Activities, Requirements" on the latest version of the UNE-EN-ISO 9001:2015 standard "Quality Management Systems. Requirements", UNE-EN ISO 14001:2015 "Environmental management systems - Requirements with guidance for use ", ISO 45001:2018 "Occupational health and safety management systems — Requirements with guidance for use", UNE-EN ISO 50001:2018 "Energy management systems — Requirements with guidance for use" and on the IAEA general safety guide GSG-1.2 Organization, Management and Staffing of the Regulatory Body for Safety</p>		

Slovakia	Article 17	H, p. 184	Levies collected from the production of electricity are used for the management and disposal of radioactive waste and spent fuel and also for the dismantling and decommissioning of nuclear facilities, as well as structural and R&D costs, the taxes derived from radioactive waste or spent nuclear fuel storage activities, and budgetary allocations to municipalities affected by nuclear power plants or the aforementioned waste storage facilities, is endowed through income derived from the levies indicated below, including the financial returns generated by the funds. There is no information if the levies cover the costs for final closure of radwaste disposal facilities as well for the institutional control after closure and monitoring as some information is provided in Chapter 17.3 on Pg.184, but without financial information.
Answer			Article 7 of Royal Decree 102/2014, of February 21st, on the responsible and safe management of spent nuclear fuel and radioactive waste establishes the nature of the Fund for the financing of GRWP activities. All activities included in the GRWP are and will be financed by the Fund upon the principle that no financial undue burden is imposed on future generations, and are covered, in accordance with the updated estimations, by the levies imposed, including the closure of the disposal facilities as well as the institutional control afterwards.
Slovakia	Article 26	F, p. 121	We have several questions regarding the transfer of facility to Enresa, as well as the technical and administrative approval specifications between Enresa and nuclear facility owners, which must be approved by MITERD: 1. Could you indicate who is responsible for submitting the application to MITERD, the owner or Enresa? 2. What is the formal outcome of MITERD's approval, is it a decision or any opinion? 3. What is the general role of CSN in the process of transferring a facility to Enresa for decommissioning purposes? 4. Does CSN set out any requirements on such a process or contract?
Answer			1. According to Article 31 of Regulation on Nuclear and Radioactive Facilities, approved by Royal Decree 1836/1999, if the licensee of the dismantling activities (in the case of nuclear facilities, Enresa) is to be different from the operator, the former shall submit the corresponding application. The transfer of its holdship shall be authorised jointly with the dismantling authorisation, provided that the operator has met the previous requirements for the cease of operation and the management of spent fuel and RW imposed by Article 28 of said regulation. When it comes to the technical and administrative specifications, Enresa is responsible for submitting the proposals for the referred specifications to the Ministry for the Ecological Transition and the Demographic Challenge who, in accordance with Article 11.4 of Royal Decree 102/2014, of February 21st, on the responsible and safe management of spent fuel and RW, is responsible for their approval after the report from the Nuclear Safety Council. Licensees are obliged to subscribe them, in accordance with Article 11.1 of said Royal Decree. 2. When it comes to the decommissioning authorization and the transfer of holdship of the facility, as well as regarding the endorsement of the technical and administrative specifications, the Ministry for the Ecological Transition and the Demographic Challenge shall issue a decision. 3. CSN's general role in this process is the role assigned by the Regulation on Nuclear and Radioactive Facilities, approved by Royal Decree 1836/1999, in its Article 6.1 where it is stated: "The reports of the Nuclear Safety Council for the granting of authorisations for nuclear and radioactive facilities [...] shall in all cases be mandatory and, furthermore, binding when negative or denying such authorisation or as regards the conditions established when positive". 4. Regarding the authorisation process please refer to previous point 3. Regarding the technical and administrative specifications, the role of the CSN is established in article 11.4 of Royal Decree 102/2014, of February 21st, on the responsible and safe management of spent fuel and radioactive waste, where it is stated that approval of these specifications is reserved to MITERD subject to a mandatory report issued by the CSN.
Slovakia	Article 17	H, p. 184	In this chapter is stated that: "Article 12 of the RINR establishes the need for authorisation to be held for the dismantling and closure of spent nuclear fuel and radioactive waste disposal facilities. The process of dismantling and closure of disposal facilities will end with a closure declaration which will ultimately serve to define any areas which must be subject to subsequent control and radiological or other surveillance, for a specified time period, and the release from control of all other areas of the site." 1. Would you please describe how is authorized the beginning of closure operations for VLLW and for LLW parts and what documentations has to be submitted to Regulatory Body for approval? 2. Is considered also the trial closure period?
Answer			The licensee must request the dismantling and closure authorization, which will include, among other documents, the following: - A Site Restoration Plan with the proposal and justification of the methodology to be used for the final radiological characterization of the site, with the aim of demonstrating compliance with the radiological criteria established for the total, partial or restricted release of the site, and the means for establishing and maintaining institutional legal controls to ensure compliance with the radiological criteria. - Economic study of the dismantling process, financial investments and expected costs to carry out the dismantling operations until decommissioning and the technical and economic provisions for the closure of the site that guarantee its safety conditions. Once the decommissioning activities have been completed, the licensee must request the closure statement as follows: - When compliance with the forecasts of the site restoration plan has been verified, as well as the other technical conditions established in the decommissioning program, the Ministry of Ecological Transition and Demographic Challenge shall issue the closure statement, following a report from the Nuclear Safety Council. - This Ministry, prior to the closure statement, will transfer, for the purpose of formulating arguments within a period of one month, to the corresponding Autonomous Communities with competences in matters of territorial planning and the environment in whose territory the installation is located, in accordance with Article 28 of Law 25/1964, of 29 April, on nuclear energy. Where necessary, the Ministry of Ecological Transition and Demographic Challenge, following a report from the Nuclear Safety Council, may agree the establishment of restrictions on use on the land on which the decommissioned nuclear installation was located, and such land shall be inventoried in accordance with Article 81 (contaminated land) of the Regulation on nuclear and radioactive facilities.
Slovakia	Article 26	F, p. 121	What is the procedure for objects/buildings reclassification between nuclear facilities in a site?
Answer			CSN Instruction IS-31, of 26th June 2011, on the criteria for the radiological control of residual materials generated in nuclear facilities, specifies the technical and administrative criteria to which residual materials must be subjected prior to their potential conventional management and defines the technical documentation that must be submitted by nuclear facility licensees to support the applications for clearance authorisation. The residual materials generated in controlled areas of the nuclear facility are submitted to a first categorisation process with the main objective of determining whether the material is impacted or non-impacted. Residual materials with no reasonable potential for containing radioactivity (excluding inherent levels) in detectable quantities are initially categorised as non-impacted. This categorisation process is based on the analysis and assessment of existing information as well as the knowledge of the process where the materials were involved. Before the release of the material, the non-impacted category needs to be confirmed by control measurement following specific procedures. Impacted residual materials are then classified according to the different management routes: potentially clearable materials, materials that can be decontaminated and radioactive wastes. Objects and buildings to be reused are not considered residual materials. The rules concerning the free reuse of lightly impacted objects (tools) and buildings are included in the official document Radiation Protection Manual of each nuclear facility.
Slovakia	Article 25	F, p. 120	What is the emergency response plan or management system for solving non-nuclear radiological emergency situations involving orphan sources of ionizing radiation or contaminated materials in scrap yards?
Answer			According to the Basic Directive for Civil Protection against Radiological Risk, the management of non-nuclear emergencies is assigned to the Autonomous Communities authorities, no matter what the cause of the emergency is. This has also been ratified by the recently approved Royal Decree 451/2020 on control and recovery of Orphan Sources. According to such references, every Autonomous Community must have developed a plan to cope with non-nuclear radiological emergencies that must also consider the potential emergencies caused by orphan sources or contaminated materials out of regulatory control.
Slovakia	Article 25	F, p. 120	Are there any protective measures for the public established in the case of an emergency situation mentioned above from the aspect of radiation protection?

Answer	The available protection measures are established in the Basic Directive on Civil Protection against Radiological Risk and must be considered by the plans to cope with non-nuclear radiological emergencies by the Autonomous Communities. Such plans contain criteria to implement different protection measures according to the results of the situation assessment and prognosis. Emergencies that result out of findings of orphan sources or contaminated materials will be assessed against the criteria for each of the protection measures and authorities will act accordingly.		
Slovakia	Article 28	J, p. 193	Is required any financial guarantee from the operators of HASS?
Answer	Royal Decree 229/2006, of February 24th, on the control of high-activity encapsulated radioactive sources and orphan sources, establishes the obligation of the licensee to arrange with the supplier of the source the relevant agreements for its return once it is disused, and also to establish a financial guarantee to cover its safe management, in the event of insolvency, cessation of operations, or any other contingency that might arise regarding the supplier. Article 5.2.b of the aforementioned Royal Decree states that: "This guarantee [the financial guarantee] may consist of insurance, a blocked bank account, or another financial guarantee arranged with a duly authorized financial institution". In practice a blocked bank account amounting the cost of the latter management of the source is the preferred option amongst licensees.		