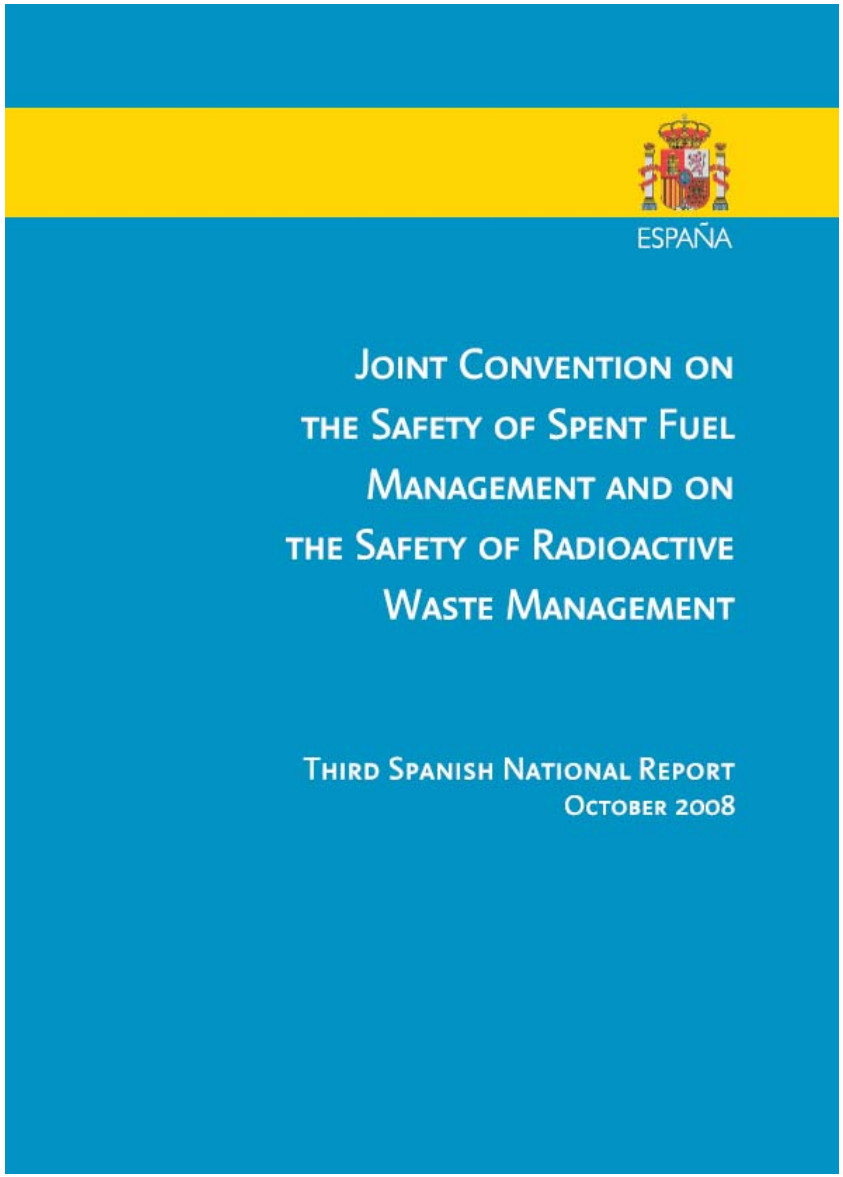
TERCERA REUNIÓN DE REVISIÓN DE LA CONVENCIÓN CONJUNTA

PREGUNTAS AL INFORME NACIONAL



RESPUESTAS A LAS PREGUNTAS FORMULADAS POR EL RESTO DE PARTES CONTRATANTES AL TERCER INFORME NACIONAL DE LA CONVENCIÓN COMJUNTA DE SEGURIDAD EN LA GESTIÓN DEL COMBUSTIBLE GASTADO Y LOS RESIDUOS RADIACTIVOS

-11 DE ABRIL DE 2009-

NOTA ACLARATORIA: ESTE DOCUMENTO SÓLO SE ENCUENTRA DISPONIBLE EN INGLÉS POR SER EL IDIOMA DE TRABAJO DE LA CONVENCIÓN CONJUNTA

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Q.No 1	Country France	Article Planned Activities	Ref. in National Report K - p. 200
Question/ Comment	The process of appointing the site to house the CTS facility will use the COWAM project (which draws up a methodology for decision-making in agreement with all the social stakeholders). Could Spain detail the implementation of the COWAM project ?		
Answer	Spain has been a participant in the different COWAM initiatives since their very start. Presently is participating in the last phase of them, the project Cowam in Practice (CIP). In parallel with Phase 2 of COWAM (COWAM2) a group of Spanish institutions, under the leadership of the Association of Municipalities close to Nuclear Power Plants (AMAC), decided to implement COWAM in a specific Spanish case: to formulate a methodology to agree the place to site a centralised storage facility (CTS) for spent fuel and high level waste. After roughly two years of work, COWAM–España presented a detailed report where the main recommendations for decision-making on the CTS were drawn out. The Government, taking into account COWAM-España output, set up the rules for the Interministerial Committee for the establishment of the criteria that must be met by the site of the centralised spent nuclear fuel and high-level waste temporary storage facility and of its associated technology centre. The main actions involved in this piece of legislation are the following: • A Interministerial Committee is created that will be responsible for establishing the criteria that must be met by the site of CTS facility, and for drafting a proposal of possible sites candidates, for submission to the Government. • The Committee will report to the Ministry of Industry, Tourism and Commerce, through the Secretariat General for Energy. • The members of the Committee will be seven, all high-rank officers of the different Ministries involved. The Committee will be assisted by Technical Advisory Committee formed by people of recognised academic and professional prestige in matters involving radioactive waste management, in order to prepare any pertinent opinions, evaluations and technical studies that the Committee requests from them to meet its objectives. Also following COWAM advice, the process of siting the CTS will be a volunteer process for the communities, all the communities in Spain could be involved and a package of social-economical benefits will be destined for that community finally chosen. More detailed information on the CTS site selection process could be found at www.emplazamientoatc.es/		
Q.No 2	Country Belgium	Article General	Ref. in National Report Section A2 (p. 4)
Question/ Comment	In this Section the Spanish national system for SF and RW management is described. In this paragraph, the role of the Ministry of Industry, Tourism and Trade (MITYC) is described. Amongst other thinks, it describes that MITYC is responsible for issuing		

	authorisations for nuclear and radioactive facilities and that MITYC is currently the ministerial department in charge of arrangements for and the submittal of legislative proposals in the field of nuclear energy. Does MITYC have no roles (as Ministry of Industry) that might cause a conflict of interest with its responsibility for authorization and for issuing legislation concerning nuclear installations?		
Answer	The basic procedures of the framework regulating nuclear energy, which establish the distribution of administrative functions among the different competent authorities, prior to granting any authorisation for a nuclear or radiactive facility, the MITYC must request reports from all the competent authorities involved. In this specific case of nuclear safety and radiological protection, the report issued by the Nuclear Safety Council (CSN), which is mandatory, is binding if rejecting the request and may establish binding limits and condition if favourable. Also, the approval of the Environmental Impact Statement for projects so requiring is the responsability of the Ministry of the Environment and Rural and Marine Environments. And finaly, the MITYC currently being the ministerial department in charge of arrangements for and the submittal of legislative proposals in the field of nuclear energy, but the drawing up of proposals for regulatory developments relating to nuclear energy is appropriately coordinated between the MITYC and the CSN. When proposals refer to matters potentially affecting nuclear safety or radiological protection, the initiative corresponds to the CSN, which transfers proposals to the MITYC for proceedings with the Government.		
Q.No 3	Country China	Article General	Ref. in National Report A.2, 4
Question/ Comment	Please explain the responsibility of The Ministry of Industry, Tourism and Trade (MITYC) in authorization a nulear facility?		
Answer	The Ministry of Industry, Tourism and Trade to grant the permits requieres: a) Preliminary or site permit, it is an official recognition of the proposed objetive and the suitability of the chosen site. B) Construction permit. C) Operating permit, it entitles the holder to load nuclear fuel or to introduce nuclear substances in the facility, to carry out the nuclear testing programme and to operate the facility under the conditions established in the permit. Likewise, this permit entitles the holder to perform, once the operation for which the facility was conceived has ceased, the operations imposed to it by the Administration prior to obtaining the dismantling permit. d) Modification authorisation, e)Modification execution and assembly permit. f) Dismantling permit. Additionally, it must be authorised : g) The temporary storage of nuclear substances at a facility in this construction phase that does not have an operating permit. h) the title transfer of nuclear facilities. All these permits shall be granted following a report from the Nuclear Safety Council.		
Q.No	Country	Article	Ref. in National Report

4	China	General	B.1.3, P.15
Question/ Comment	In the contract between ENRESA and waste producer, how to determine the waste disposal price?		
Answer	There are two situations: • Large producers (NPPs, fuel manufacturing, etc.): The price established in the contract is the one resulting from the application of the quotas as set up in the General Radioactive Waste Management Plan and subsequent annual revisions as issued in the annual legislation (Royal Decree) on electricity tariffs and prices. • Institutional producers: They pay a tariff in the form of a lump sum when their waste is collected. The amount of the tariffs is periodically reviewed and set up by the MITYC.		
Q.No 5	Country China	Article General	Ref. in National Report D.3, P.33
Question/ Comment	What kind of treatment and conditioning facility has been built in El Cabril site?		
Answer	El Cabril has a high pressure compactor (1200t) for 220l drums, an a shreder and incineraton facility. Besides, wastes are conditioned with mortar in cubic armed concrete containers. The VLLW facility has a stabilizing system for mixed wastes with leaching rates higher than allowed.		
Q.No 6	Country Croatia	Article General	Ref. in National Report page 199
Question/ Comment	Multiple Articles At present the data contemplated for the construction of centralized temporary storage facility is around 2012. Have you already conducted the research activities for possible location of this facility?		
Answer	No research activity regarding storage facility location has has been undertaken. As indicated in the report, the location will be decide by the Government among municipalities that will volunteer following the Government call.		
Q.No 7	Country Denmark	Article General	Ref. in National Report
Question/ Comment	During decommissioning of nuclear facilities a large amount of material may be expected to be cleared without restrictions and a competent clearance function is needed in order to assure compliance with the given clearance levels. However, compliance with clearance levels is usually based on complex measurement programmes and statistical tests in order to ensure a high probability of		

	correct clearance of materials. It is therefore important to ensure the necessary competence of the clearance function. For instance: The clearance function (lab, procedures and personnel) could be accredited by an independent institution, with reference to an international standard such as e.g. the EN ISO/IEC 17025:2005 (General requirements for the competence of testing and calibration laboratories) and special emphasis on particular functions such as measurements on surface contaminated objects or objects with a radioactive content. Please describe how the necessary competence of the clearance function is ensured and how the clearance levels were determined.
Answer	During the decommissioning of a nuclear facility the competency of the different functions, including clearance, is assured through an approved "Quality Assurance Programme" based on Safety Guide10.13 "Quality assurance guideline for the decommissioning of nuclear facilities". A completely documented decision process with a quality control program is required to guarantee that the authorised clearance levels will be properly implemented by qualified personnel. During the decommissioning of nuclear facilities the clearance procedure itself, the management and the control of cleared materials, is established in the "Clearable Materials Control Program". This official document must include all technical issues and organisational aspects which may affect the safety of the overall clearance process that should be also approved before the actual clearance of any material. The licensee is responsible for ensuring that a quality assurance programme is established and implemented and may contract other organisation or specialists so that establishing and putting into practice such a programme. In addition to independent evaluations, self- assessment is introduced by the licensee or specifically required by CSN to improve the efficiency of the programme. The clearance system for residual materials generated in regulated practices in Spain is based on: - The need of an authorisation granted by The Ministry of Industry Tourism and Trade. - Radiological criteria prescribed by the 96/29 EURATOM Directive for the clearance of materials. - Recommendations RP-89, RP-113 and RP-122 p1. from the Group of Experts established under Art.31 of the Euratom Treaty. - Pathway analysis and impact studies considering the existing conventional waste management framework implemented in Spain for some specific waste streams like used oils, spent resins, active charcoal and others. - The use of a conservative approach in order to obtain derived clearance levels for a wide range of disposal options, considering the most restrictive situation. - Sometimes a realistic approach could be considered in order to obtain specific derived levels to be applied in specific disposal facilities.

	- Time-frame considerations usually based on prescriptions related to institutional control periods in landfill disposal or hazardous disposal facilities. - Dose Criteria. - 10 microSv/year to the most exposed individual of the critical group in case of scenarios of normal occurrence. - Below 1 mSv/year to the most exposed individual of the critical group in case of accidental (low probability scenarios). Intruder construction, intruder well and intruder agricultural are considered as future use of landfill disposal sites after institutional control period is finished.		
Q.No 8	Country Netherlands	Article General	Ref. in National Report table of contents
Question/ Comment	The general structure of the report follows closely the guidelines as suggested in the Guidelines. All Sections and Articles that have been suggested in the Guidelines have been addressed in consecutive order. The list of Annexes, suggested in Section L of the Guidelines, has been addressed either in the Annexes of the National Report (NR), or in the main text.		
Answer	The Report has been drawn up following all the documents relevant to the Joint Convention.		
Q.No 9	Country Netherlands	Article General	Ref. in National Report whole report
Question/ Comment	Throughout the report, there is a lack of references to important documents and reports that are mentioned in the text. Only in some cases references were indicated as footnotes.		
Answer	References should be found at least once in the Report, as footnotes or in Annex A. Any other case can be considered as an absent-mindedness.		
Q.No 10	Country Netherlands	Article General	Ref. in National Report table captions
Question/ Comment	Not all tables have a table caption text.		
Answer	Table 2: Existing Spent Fuel Storage Facilities. Table 3: Capacity and total amounts of Spent Fuel existing in Spain as of December 31st 2007. Table 4: List of the different radioactive waste management facilities. Table 5: Inventory of radioactive wastes as of December 31st 2007. Table 9: Summary of applicable sanctions. Table 10 : Dosimetry results for 2007 at the Spanish nuclear power plants. Table 11: Dosimetry results for 2007 at the Juzbado fuel assembly manufacturing facility. Table 12: Dosimetry results for		

	2007 at the El Cabril radioactive waste disposal facility.		
Q.No 11	Country Netherlands	Article General	Ref. in National Report A4, p.9
Question/ Comment	Section A.4 (page 9) refers to a cost study as part of the study of dismantling and decommissioning plans. What are the criteria for such a cost study? Is there a prescribed method for the cost calculation? If so, can you elaborate on that method?		
Answer	The cost study, in fact cost studies, refered in in Section A.4b) is a requirement of the RNFR prior to licensing any nuclear facility. In Section L, Annex B.1, the main actions to be undertaken by the operator in the three steps of the licensing procedure are indicated: Preliminary authorisation, Construction permit and Operation permit. In paragraph f) of Construction permit and i) of Operating permit, it stands what should be included by the utility, in the corresponding application, regarding economics of decommissioning and dismantling, in order to guarantee at this stage decommissioning, but regulation does not require a specific calculation method.		
Q.No 12	Country Netherlands	Article General	Ref. in National Report B.1.2, p.14
Question/ Comment	Footnote 1 is in Spanish		
Answer	Footnote should read: "Articles 2 & 6 from Royal Decree 1349/2003, of October 31st, on the ordering of the activities of the Empresa Nacional de Residuos Radiactivos, S.A. (ENRESA) and their financing (Official State Gazette 08.11.2003)		
Q.No 13	Country Netherlands	Article General	Ref. in National Report B.2, p.15
Question/ Comment	Compare p.13 2nd national report, more strict definition of HLW was given, also in terms of concentration. What is the reason for changing the definition of HLW?		
Answer	The General Waste Management Plan (GRWP) classifies radioactive wastes attending to its foreseen via of management. As a consequence, radioactive waste to be disposed of at El Cabril facilitiy are considered as Low and Intermmediate Level Waste (LIMW) and those other that, for their characteristics cannot be disposed of at El Cabril, will have to be managed in a similar way than High Level Waste (HLW). The operational limit in force for El Cabril facility was set up, in the case of Long Lived alpha bearing, at 0.37 GBq/t. This means that there was no change in the criteria to classify radioactive waste in Spain.		
Q.No	Country	Article	Ref. in National Report

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14	Netherlands	General	B.2, p.15
Question/ Comment	In 2nd national report the definitive route to geological disposal was mentioned, but in 3rd report this has not been mentioned in Section B.2.		
Answer	The 3rd Report Section B,4.2, Policies and Practices: The current GRWP does not contemplate any definitive management option. It does indicate, however, that work will continue on the consolidation and updating of the knowledge acquired, with advantage taken of international developments in this area.		
Q.No 15	Country Netherlands	Article General	Ref. in National Report B.4.1, p.18
Question/ Comment	In the 2nd National Report, “Table 2 – Saturation of Spent Fuel Pools” provided a nice overview for the different facilities. Unfortunately this table has been skipped in the 3rd NR		
Answer	Please see attached table in the support document		
Support Documents	» Spanish Answer support document		
Q.No 16	Country Netherlands	Article General	Ref. in National Report B.4.2, p.20
Question/ Comment	Are there discussions going on for the future disposal the SF/HLW in a regional repository, not necessarily located in Spain?		
Answer	At present there are not discussion on this respect but Spain follows international developments on regional repositories.		
Q.No 17	Country Netherlands	Article General	Ref. in National Report B.5, p.21
Question/ Comment	In section B.5 (page 21) it is mentioned that a new complementary installation at “El Cabril” for Very Low Level Decommissioning Waste has been licensed in 2008. Does this waste need further conditioning? If so, how is it conditioned?		
Answer	As part of the new complementary facilities developed at the El Cabril site for Very Low Level Waste, a new building housing the treatment, stabilizing and conditioning systems for this type of waste has been authorised and started operation at the end of 2008. The stabilisation system will be used for mixed wastes with leaching rates higher than allowed, and the void backfilling system may use either aggregates or cement grout.		

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Q.No 18	Country Netherlands	Article General	Ref. in National Report B.5
Question/ Comment	A few times the General Radioactive Waste Plan is mentioned, which should be approved by the Government. What are the approval-criteria?		
Answer	The General Radioactive Waste Plan should address the strategies, the necessary actions and the technical solutions to be developed in the short, medium and long term, aimed at ensuring the adequate management of radioactive waste, the dismantling and decommissioning of nuclear and radioactive facilities and the rest of the activities relating to the above, including the economic and financial measures required to carry them out.		
Q.No 19	Country Netherlands	Article General	Ref. in National Report
Question/ Comment	Specific information about activity limits for individual radio-isotopes as well as numerical values of waste acceptance criteria are not mentioned in the NR.		
Answer	Referring the answer to El Cabril disposal facility, the specific information about activity limits for individual radio-isotopes as well as numerical values of waste acceptance criteria is included in the authorisation granted by the MITYC and also in the official documents governing the operation of the facility. The official document “Waste Acceptance criteria” establishes the limits and criteria that need to be accomplished by the Disposal Unit (DU) in order to be accepted and consequently disposed of in the disposal cells. As example, the basic LILW Disposal Unit (DU) of El Cabril is a prismatic container able to accept 18, 220l drums of conditioned wastes, and includes the conditioned wastes and the filling and sealing mortar. There are two Levels with different acceptance criteria, depending essentially on mass activity limits and activity distribution criteria. In addition Level 2 DU needs to meet confining objectives. All have to meet non radioactive contain criteria, and recoverability and transportability criteria. Regarding the conditioned wastes, there are also two levels with activity limits derived from those of the corresponding DU. Matrices of immobilised wastes have to meet different criteria and quality objectives for compression and immersion tests. In addition matrices for Level 2 packages need to demonstrate its capacities to leaching and thermal cycles. If wastes are conditioned with a hydraulic agglomerate wall, this is also subject to diffusion tests. Mass activity limits are established for individual radioisotopes. In the table below, limits for some specific isotopes are given (kBq/g) as example:		

	Isotope / DU Level 1 / DU Level 2 H-3 / 7.4 / 1000 Co-60 / 3.7 / 50000 Cs-137 / 3.7 / 330 Total â-ã / 37 / n.a Total á (at 300y) / 0.185 / 3.7		
Q.No 20	Country Netherlands	Article General	Ref. in National Report Question 37 about the 2nd NR
Question/ Comment	"Could Spain provide indication on the inventories of waste generated out of the nuclear industry (methodologies for building up the inventories, data, etc.)" This question seems not to be addressed in the 3rd NR		
Answer	The question was effectively addressed in the 2nd NR and the explanation in the 3rd NR follows the same pattern. Inventory of waste is not compulsory in Spain, although ENRESA requires the main producers (NPPs, fuel manufacturing plant, CIEMAT) to periodically provide data of their waste stocks. This means that out of a total amount of roughly 600 m3 of LILW annually produced, only 10 to 15 m3 are not inventoried in advance. On the other hand, this small amount is distributed among 400 producers which are mainly generating liquids and disused sealed sources. Before this material becomes a waste, the regulatory authority (CSN) provides licenses for its holding and supervises that is handled in the ways required by the corresponding legislation.		
Q.No 21	Country Netherlands	Article General	Ref. in National Report Question 39 about the 2nd NR
Question/ Comment	Could Spain provide information on the observed doses? (maximal doses and bar charts) The answer to this question has not been taken up into the 3rd NR		
Answer	Please see attached graph in the support document.		
Support Documents	» Spanish Answer support document		
Q.No	Country	Article	Ref. in National Report

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22	Netherlands	General	Question 44 about the 2nd NR
Question/ Comment	Could Spain provide information on the mentioned authorized clearances (selected levels, associated QA, impact studies, etc.) ? The answer to this question has not been taken up into the 3rd NR		
Answer	The question was formulated by France in the 2nd NR (nº 44) The clearance system for residual materials generated in regulated practices in Spain is based on: - The need of an authorisation granted by The Ministry of Industry Tourism and Trade. - Radiological criteria prescribed by the 96/29 EURATOM Directive for the clearance of materials. - Recommendations RP-89, RP-113 and RP-122 p1. from the Group of Experts established under Art.31 of the Euratom Treaty. - Pathway analysis and impact studies considering the existing conventional waste management framework implemented in Spain for some specific waste streams like used oils, spent resins, active charcoal and others. - The use of a conservative approach in order to obtain derived clearance levels for a wide range of disposal options, considering the most restrictive situation. - Sometimes a realistic approach could be considered in order to obtain specific derived levels to be applied in specific disposal facilities. - Time-frame considerations usually based on prescriptions related to institutional control periods in landfill disposal or hazardous disposal facilities. - Dose Criteria. - 10 microSv/year to the most exposed individual of the critical group in case of scenarios of normal occurrence. - Below 1 mSv/year to the most exposed individual of the critical group in case of accidental (low probability scenarios). Intruder construction, intruder well and intruder agricultural are considered as future use of landfill disposal sites after institutional control period is finished.		
Q.No 23	Country Netherlands	Article General	Ref. in National Report Question 53 about the 2nd NR
Question/ Comment	What are the regulations or standards for the management of waste from decommissioning? The answer to this question has not been taken up into the 3rd NR		
Answer	Each NPP has temporary storage facilities for conditioned operational wastes and spent fuel. The same applies to waste of radioactive installations. There is no specific regulation for waste arising as a result of dismantling activities. The radioactive waste generated during this phase are generally required to undergo similar management to those generated during the operating phase of		

	the facilities. Article 30 of the Regulations on nuclear and radioactive facilities requires the submission of a Radioactive Waste Management Plan for the dismantling stage, which is studied case by case before granting a decommissioning license for each nuclear or radioactive installation.		
Q.No 24	Country Netherlands	Article General	Ref. in National Report Question 65 about the 2nd NR
Question/ Comment	"Spain's response to a question about the 2003 National Report stated a study by ENRESA would evaluate disposal criteria for sealed sources "between Co-60 and Cs-137". Please describe progress on this study since it is not mentioned in the Second National Report." This question has not been addressed in the 3rd NR		
Answer	ENRESA is working on the subject and has to present a document not yet finished to CSN		
Q.No 25	Country Netherlands	Article General	Ref. in National Report Question 66 about the 2nd NR
Question/ Comment	Section C mentions that "certain quantities of spent fuel have been sent abroad in the past for reprocessing, as a result of which the different products that are to be returned to the country shall be considered to be included in the scope of application." The answer to the question to provide more information has not been addressed in the 3rd NR		
Answer	This was the response to question 66 about the 2nd report: "a) LWR spent fuel: 154 tU with no waste return; UNGG spent fuel: 1910 tU; as indicated in page 14 of the report, 13 m3 of HLW and 670m3 of ILW are to returned; ARBI and ARGOS Reactors: 0.031 tU, 1,71m3 of L&ILW are to be returned. b) The return of wastes should start by 2010 and last for 5 years. c) For the time being, the intention is to store them in the centralised storage facility expected to be commissioned by that time". There is no change regarding quantities to be returned but some delay in the starting of b) is expected due to delays in the designation of the site for the the centralised storage facility.		
Q.No 26	Country Romania	Article General	Ref. in National Report Section A, page 10
Question/ Comment	According with the 6th General Radioactive Waste Plan (GRWP), approved during the meeting of the Cabinet on June 23rd 2006, is there in this moment any candidate site for Centralised Temporary Storage (CTS) facility?		
Answer	The next phase of the decision making process for the site selection for the Centralized Interim Storage Facility (CISF) will be a		

	public invitation for municipalities. Once this call for bidders be published in the Official State Gazette, municipalities will be able to stand for selection as candidates.		
Q.No 27	Country Romania	Article General	Ref. in National Report Section L, Annex B, page 214
Question/ Comment	In compliance with the Regulation on Nuclear and Radioactive Facilities (RNFR), approved by Royal Decree 1836/1999, of December 3rd, any nuclear facility requires the operating permit. To obtain this permit the licensee shall present the final disposal arrangements foreseen for the wastes generated and a study of the cost and economic and financial forecasts to guarantee decommissioning. Before the Royal Decree 1836/1999 what was required regarding to dismantling and decommissioning of a nuclear facility in order to obtain the permit for operating of the facility?		
Answer	Before the RNFR 1836/1999, other Royal Decree issued in 1972 was in force, which did not establish in detail the process regarding to decommissioning of nuclear power plant, taking into account that the first Spanish nuclear power plant started its operation nearby the mentioned date.		
Q.No 28	Country Netherlands	Article Article 3	Ref. in National Report C, p.25
Question/ Comment	The 2nd NR had the phrase: “Spain is party to the Nuclear Weapons Non-Proliferation Treaty and does not have any radioactive wastes or spent fuel from military or defence programmes.” This phrase has been skipped. Is there a reason for that?		
Answer	Spain is party to the Nuclear Weapons Non-Proliferation Treaty and does not have any radioactive wastes or spent fuel from military or defence. This phrase was considered needless because Radioactive Waste and Spent Fuel from military or defence is, in principle, out of the scope of this Convention.		
Q.No 29	Country Germany	Article Article 4	Ref. in National Report p. 117; Sec. 4.1.1
Question/ Comment	At PWR plants, the capacities of the storage pools have been enlarged by application of neutron poisons (dissolved in the water or integrated in the structures of the storage racks). The storage pools are divided into two regions: Region I for fresh and low irradiated fuel (burnup below a specified margin) and Region II for spent fuel (burnup exceeding this margin). Maintaining criticality safety of this complex type of storage pool requires permanent control of geometric configurations, fuel assignment to the storage positions and concentration of neutron poison in cooling water and rack structures. What kind of administrative and controlling measures have been taken to guarantee the compliance with these safety regulations?		

Answer	The conditions for preventing criticality are regulated by the "Operating Technical Specifications" (OTC), prescriptive document required by the operation permit. The OTC include "Operating Limiting Conditions" (OLC) for each storage safety condition (boron concentration, initial fuel enrichment and degree of allowed fuel burn up, etc) as well as the "ACTION" to be taken for controlling the compliance within each OTC. "Surveillance requirements" are associated to each OLC in the ETF. The utility is in charge of keeping track of the history of each of the fuel elements loaded in the core. The history includes among others: original enrichment, burnable poisons, positions occupied within the core and achieved burnup. This information is used to verify that the fuel element can be loaded in the spent fuel pool region II racks. Before being discharged, each fuel element is allocated a position in a rack. In order to guarantee the appropriateness of the racks design, it has to go through an extensive and detailed licensing process. Finally, all operations and manoeuvres involving the handling of fuel elements must be supervised by a licensed operator.		
Q.No 30	Country Ukraine	Article Article 4	Ref. in National Report Section G.4.1.2, page 118
Question/ Comment	Is the zoned loading of spent fuel applied to provide for heat removal during the load of spent fuel in ÌÐÑ storage casks (spent fuel dry-type storage facility of Jose Cabrera NPP)? How many years spent fuel in cooling pond of the unit is stored before loading into ÌÐÑ?		
Answer	Heat is removed by natural convection. Fuel is now being removed from the pond to the storage containers, so last fuels stored at the pond have a cooling period of less than 3 years (shut down in April 2006).		
Q.No 31	Country Hungary	Article Article 5	Ref. in National Report G, H p.122, p.152
Question/ Comment	Is there any special guidance for the Periodic Safety Review of spent fuel management or spent fuel storage facilities?		
Answer	CSN´s Safety Guide GSG-1.10. "Periodic safety reviews at nuclear powers plants applies to the irradiated spent fuel stored in the pools associated to the reactors design. On the other hand, Spanish currently existing spent fuel storage facilities are located on Nuclear Power Plan (NPPs) sites (Trillo and Jose Cabrera NPPs). Therefore, the Periodic Safety Reviews (PSR) is part of the PSR of each of NPP, being carried out according to the CSN´s Safety Guide GSG-1.10. above mentioned and included in the National Report" (referred in Annex A, chapter 4, page 207 of the NR). In relation to the Centralized Temporary Storage facility (CTS), the CSN is drafting a basic technical standard on the requirements for the spent fuel and high level waste storage facilities which considers the Periodic Safety Review requirement, according to the WENRA reference levels and the IAEA applicable safety standards. The corresponding detailed guidance for its implementation will be further developed.		

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Q.No 32	Country Canada	Article Article 6	Ref. in National Report Section G 6.1, p.124/125
Question/ Comment	Please outline the reasons for segregating the responsibilities of the Interministerial Commission to establish the criteria for a Centralized Temporary Storage Facility for nuclear fuel and high level wastes and those of ENRESA which is authorized to provide spent fuel and radioactive waste storage and disposal.		
Answer	The selection site procedure for the Centralized Interim Storage Facility encompasses not only technical matters, but also environmental and socio-economic considerations that go beyond the functions of ENRESA.		
Q.No 33	Country Canada	Article Article 6	Ref. in National Report Section G 6.4., p.131
Question/ Comment	The selection of a candidate municipality host is followed by 1) a CSN report and 2) an Environmental Impact Assessment and public information. a) Does the order of this process restrict the regulator's functions? b) If new, and potentially conflicting, information comes to light at the EIA stage; can or will the CSN change its views?		
Answer	The Law creating the Nuclear Safety Council sets up, as one of the functions of the CSN, to assess the environmental radiological impact of nuclear and radioactive installations and of those activities that imply the use of ionising radiation, according to the stipulations of the applicable laws. Royal Decree 1131/1988 sets up that the EIA will be made in a coordinated way by means of the Ministry of Environment and the Nuclear Safety Council, within the scope of their respective competences. CSN´s opinion about environmental radiological impact is binding, as the SOLE entity having competence in relation with nuclear safety and radiological protection.		
Q.No 34	Country Canada	Article Article 6	Ref. in National Report Section G 6.5, p.131-133
Question/ Comment	It is noted that Spain has fully embraced open and transparent public consultation at many levels of the nuclear decision making process. How has this transparent public consultation process affected the tone of the nuclear dialogue and the nuclear decision making process in Spain?		
Answer	Although Spain has embraced significant efforts aiming the highest levels of transparency and public participation, nuclear decision making processes are always controversial. It can be pointed out that the results of the eurobarometer illustrate that support to nuclear energy and the self-perceived levels of information about radioactive waste increased lightly since 2005, but support to nuclear energy in Spain keeps very low.		

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Q.No 35	Country Czech Republic	Article Article 6	Ref. in National Report
Question/ Comment	Please provide additional information regarding the Local Information Committee (how does it participate in the preparation of emergency plans or if it has authority to inspect independently the nuclear facilities etc.)		
Answer	The Regulation on nuclear and radioactive installations establishes, under article 13, that local committees shall be on place during the phases of construction, operation and dismantling of nuclear power plants. The functions of this committee shall be to inform the different represented entities of the progress of the activities regulated in the corresponding permits and to jointly deal with those other questions that are of interest to said entities. These committees aim exclusively to provide information, so neither inspections nor preparation of emergency plans are included within their scope.		
Q.No 36	Country Germany	Article Article 6	Ref. in National Report p. 125; Chap. 6.1
Question/ Comment	Could you give some additional information on the site selection criteria for the Central Temporary Storage (CTS) for spent fuel which are described in Chapter 6.1: Will the “technical, environmental and socio-economic conditions to be fulfilled by the potential candidate sites” be of equal importance in the selection process or will they have different weighting? The site selection process for the CTS - which is described i. a. in Chapters 6.1 and 6.4 - is based on voluntary participation of potential host communities. Did you already develop a “fall back” solution for the case no volunteer communities can be found?		
Answer	The potential candidates must comply with the technical, environmental and socio-economic required conditions. The process only contemplates the case of a voluntary offer from the municipalities for the site selection.		
Q.No 37	Country United States of America	Article Article 6	Ref. in National Report Section 6.3, Page 129
Question/ Comment	Spain plans for the availability of a Centralized Temporary Storage facility (CTS) by 2012. Discussion on page 125 indicates a public call for the municipal areas interested in hosting the facility, and its associated technology centre has yet to be made. Please describe the progress made in meeting the ambitious 2012 schedule in your national presentation in May 2009.		
Answer	The next phase of the decision making process for the site selection for the Centralized Interim Storage Facility (CISF) will be a public invitation for municipalities. Once this call for bidders be published in the Official State Gazette, municipalities will be able to stand for selection as candidates. However, bearing in mind the intrinsic difficulties of this type of projects, it seems difficult now to meet the schudule for 2012.		
Q.No	Country	Article	Ref. in National Report

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38	United States of America	Article 6	Section 6.5, Page 132
Question/ Comment	Law 33/2007 creates a CSN Advisory committee on public information and participation. It also provides for setting up Local Information Committees. These committees are similar to the practice in the U.S. of setting up Site-Specific Advisory Boards. Please elaborate on the effectiveness of this process during your national report presentation in May 2009.		
Answer	Regarding information committees, the Regulation on nuclear and radioactive installations (RNRI) establishes, under article 13, that information committees shall be on place during the phases of construction, operation and dismantling of nuclear power plants. The functions of this committee shall be to inform the different represented entities (representatives of the licensee of the facility, the CSN and central and Autonomous Community Government departments responsible for industry, civil defence, public security and emergencies, as well as a representant of the municipality in which the plant is located and the representants of all municipalities included within a radius of 10 Km around the plant, as contemplated in the emergency plans) of the progress of the activities regulated in the corresponding permits and to jointly deal with those other questions that are of interest to said entities. After the last ammendment of the RNRI, the composition of these committees was extended in order to allow the participation of the different resident´s associations. Additionally, it is foreseen to celebrate, after the committee meetings, divulgative sessions for the general public to spread information about a specific topic. These committees are in place since year 1972 and use to be held once a year or more frequently if specific issues need to be spread. Regarding the Advisory Committee, article 15 of the Law Creating the Nuclear Safety Council sets up that an Advisory Committee for public information and involvement regarding nuclear safety and radiological protection shall be created, presided over by the Chairman of the Nuclear Safety Council, whose mission will be to issue recommendations for the Nuclear Safety Council in order to increase transparency, public information access and involvement in matters of its competence. The recommendations of the Advisory Committee shall not be binding for the Nuclear Safety Council. This Advisory Committee shall be comprised by members of the relevant ministries, Autonomous Communities hosting nuclear facilities, municipalities affected by nuclear power plants, the industry, ENRESA, ENUSA, unions, ngo´s and independent experts which shall be appointed by the Chairman of the Nuclear Safety Council. Ministries representatives shall at least have the category of General Deputy Director, or equivalent. The Advisory Committee shall collect all information deemed as necessary for the development of its function from the Nuclear Safety Council. The Advisory Committee shall be operative as far as it be regulated by the new Nuclear Safety Council charter.		
Q.No 39	Country France	Article Article 7	Ref. in National Report G.7.2 - p. 135
Question/ Comment	In Spain, currently, some light water reactors use fuel assemblies with "zirlo" cladding. Could Spain envisage to dispose of the ion exchange resins of these reactors in the "El Cabril" facility ?		

Answer	Concerning the conditioning of ion exchange resins from the light water reactors to be disposed of at El Cabril LILW disposal facility, ENRESA has not detected any influence neither in the conditioning behaviour nor in activity of these resins due to the zirlo cladding.		
Q.No 40	Country France	Article Article 7	Ref. in National Report G.7.2 - p. 136
Question/ Comment	In the CTS facility, the spent fuel assemblies and the vitrified waste (HLW) would be stored in cells equipped with pits. Concerning the ILW that would be also stored in the CST facility, could Spain specify the kind of cells to be used?		
Answer	ILW are to be stored in concrete bunkers that are part of the CTS facility.		
Q.No 41	Country Hungary	Article Article 9	Ref. in National Report G p.141
Question/ Comment	The report states that the defective rods are removed from the fuel assemblies. How do you inspect the irradiated fuel? How do you manage the damaged spent fuel?		
Answer	• Each Spanish NPP uses different techniques for inspecting the irradiated fuel. Overall, the inspection techniques used in Spain are:  in-mast sipping,  ultrasonic testing (UT),  can-sipping,  visual,  Eddy Current testing (EC) for external cladding corrosion,  EC for fuel rod failures,  dimensional analysis for fuel assembly (FA) growth and deformation,  crud chemical analysis. In some cases, the inspections can be supplemented by hot cell examinations. The inspections are aimed at the characterization of the FA's for their further use at the reactor or for their wet and dry storage. • Once one damaged fuel rod has been identified (mainly by sipping and/or UT) if the FA is deemed for reinsertion, the leaking fuel rod is removed from the assembly and a SS rod is inserted in the vacancy. The failed rod is stored in the spent fuel pool in a special storage basket. If the FA is intended for dry storage, the further treatment depends on the license conditions of the dry storage spent fuel system, as some canisters are able to accept leaking FA without additional conditioning. All the FA's are clearly identified in the spent fuel data base, including removed fuel rods. This data base includes all their		

	significant characteristics.		
Q.No 42	Country Canada	Article Article 10	Ref. in National Report Section G 10, p.142
Question/ Comment	Please explain why the decision making process and site characterization for a spent fuel disposal facility will not start until 2025?		
Answer	The basic Spanish strategy in this field focuses on the temporary storage of spent fuel and HLW on the basis of a dry storage system guaranteeing the safety and protection of people and the environment over the time periods required for their definitive or very long term management. Specifically, the solution proposed, in view of the analyses performed from the technical, strategic and economical points of view,is based on the availability of a vault type Centralised Temporary Storage(CTS) facility by around 2012, the operating period of which would be some 60 years. From the point of view of economic calculationand planning, it has been assumed that a definitive disposal facility could be put into operation around the year 2050, which would house this spent fuel, the HLW and those other intermediateactivity wastes that cannot be sent to the El Cabril facility. On the one hand, the suitability of a strategy based on a CTS facility, allows management to be addressed under optimal conditions and in a unified manner for all SF, HLW and ILW, while allowing temporary management to be carried out independent of definitive management. On the other hand, it should be pointed out that although there is wide agreement internationally in relation to the deep geological disposal option, there is at present no facility of this type in the world for SF/HLW. Within the general situation of international delay, the most favourable forecasts as regards the initiation of operation of the two first HLW and SF disposals in the world are envisaged around the year 2020. . As regards other definitive management options, such as the separation and transmutation of long-lived radionuclides in order to reduce the volume and radiotoxicity of the wastes, their degree of development is still in too early stage. Foreseen timeframe for the decision making process and site characterization for the SF and HLW disposal facility will allow taking advantage of international development in this field, as well as consolidation and updating of the knowledge acquired.		
Q.No 43	Country Belgium	Article Article 11	Ref. in National Report Page 149
Question/ Comment	Could Spain elaborate more on the 2° and 3° category radioactive facilities		
Answer	According to the Law 15/1980 for CSN creation radioactive there are three categories of radioactive facilities: Category 1st radioactive facilities includes: • Facilities to produce Uranium, Thorium and their by-products.		

	• Facilities to manufacture nuclear fuel elements made of natural uranium. • Irradiation facilities using high activity sealed sources. • Complex facilities managing big inventories of radioactive materials or where radiations beams with very high fluence of energy are produced. Category 2nd radioactive facilities includes: • Facilities where radioactive materials are handled or stored with total activity over thousand times the exemption levels. • Facilities where X ray equipment with operating voltage over 200 kV are operated. • Particles accelerators and facilities for neutron sources storage. Category 3rd radioactive facilities includes: • Facilities where radioactive materials are handled or stored with total activity below thousand times the exemption levels but above these levels. • Facilities where X ray equipment with operating voltage below 200 kV are operated. As regards 2nd and 3rd category radioactive facilities for medical, industrial or re search purposes, Ministerial Order ECO/1449/2003 specifies the different aspects to be taken into account in managing the radioactive wastes from such installations. This regulation includes definition for radioactive waste from 2nd and 3rd category radioactive facilities as those materials for which no further use is anticipated and containing or contaminated with radionucleides with activity per unit mass above values specified in the annex of the regulation. Materials with activity concentration below these values can be managed as conventional non radioactive wastes. This regulation also includes requirements related to basic principles for waste classification and management, reporting to regulatory authorities, quality control system for waste management and traceability of the management process. To help licensees to comply with Ministerial Order ECO/1449/2003 CSN released the Guide 9.2 management of solid waste containing radioactivity produced at radioactive facilities. It includes guidance on basic principles to be followed; methods for the different management steps: characterisation, separations, storage and release; how to determine total activity in waste materials; quality control and records, files and reports.

Q.No	Country	Article	Ref. in National Report

44	Canada	Article 11	Section H 11.6, p.151
Question/ Comment	Has a process been initiated to develop legislation to include specific provisions relating to long term control of radiological risk, and the legal areas relating to the safety principles and criteria to be met by waste management facilities over timescales other than normal operating periods?		
Answer	As it is mentioned in the 3rd NR, a work programme is on going in order to complete and improve the legal and regulatory framework related to safety in the management of spent fuel and radioactive waste management. As regards the long term control of radiological risk, during the information period of the 3rd. National Report a modification of Nuclear Energy Act (Law 25/1964) expressly place on record the obligation of the licensees to protect suitably, at present and in the future, the people and the environment in all phases of spent fuel and radioactive waste management. The specific regulatory framework is been developed taking into consideration the legal obligation mentioned previously.		
Q.No 45	Country Czech Republic	Article Article 11	Ref. in National Report
Question/ Comment	Hazardous and toxic constituents – are they just declared or are they considered in operational safety reassessment of radioactive waste repository? How is the assessment of their presence in the EIA quantified with respect to impact, intake or concentration in environmental components? Who is responsible for assessing the compliance with regulations?		
Answer	Hazardous and toxic wastes are considered in the waste acceptance criteria. There are limits on leching rates for the VLLW. For the LILW facility, the conditioning of the wastes is sufficient for hazardous and toxic wastes to comply with the limits of the acceptance criteria.. ENRESA, as operator of the facility, is risponsible for assessing the compliance with the operation limits of El Cabril.		
Q.No 46	Country Bulgaria	Article Article 12	Ref. in National Report
Question/ Comment	The El Cabril facility for the definitive disposal of low and intermediate level wastes is the only one existing in Spain for this purpose. What part of the disposal capacity of the El Cabril facility has been filled up? Is there a forecast with regard to the period in which the facility will be filled up?		
Answer	At the end of 2007, 56% of the LILW facility was filled. If the expected life time of the existing NPPs is maintained, 40 years, with the actual generation of wastes there should no be necessary to encrease the capacity.		
Q.No 47	Country United States of America	Article Article 12	Ref. in National Report Section H, Page 155

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Question/ Comment	Section 12.2.2 of the report addresses the declassification of some nuclear power plant waste streams (presumably to relieve the pressure on disposal capacity at El Cabril). Please address similar efforts, if any, to "declassify" or otherwise manage some medical, industrial, and research radioactive waste in order to eliminate it from the need for disposal as RW. (e.g. decay in storage, sewer disposal etc.)		
Answer	As regards radioactive facilities for medical, industrial or research purposes, Ministerial Order ECO/1449/2003 specifies the different aspects to be taken into account in managing the radioactive wastes from such installations. This regulation includes definition for radioactive waste from radioactive facilities as those materials for which no further use is anticipated and containing or contaminated with radionucleides with activity per unit mass above values specified in the annex of the regulation. Materials with activity concentration below these values can be managed as conventional non radioactive wastes. This regulation also includes requirements related to basic principles for waste classification and management, reporting to regulatory authorities, quality control system for waste management and traceability of the management process. To help licensees to comply with Ministerial Order ECO/1449/2003 CSN released the Guide 9.2 management of solid waste containing radioactivity produced at radioactive facilities. It includes guidance on basic principles to be followed; methods for the different management steps: characterisation, separations, storage and release; how to determine total activity in waste materials; quality control and records, files and reports. As a general scheme for waste management this guide proposes the following sequence: 1. If activity concentration of materials produced at the facility is below values proposed in Order ECO/1449/2003 to define radioactive waste, conventional non radioactive waste management should be carried out. 2. If activity concentration of materials produced at the facility is above values proposed in Order ECO/1449/2003 to define radioactive waste, storage for decay is the recommended way for management, with a maximum recommended decay time of five years. 3. If activity concentration of materials after decay time is below values proposed in Order ECO/1449/2003 to define radioactive waste, conventional non radioactive waste management should be carried out. 4. If activity concentration of materials after decay time is above values proposed in Order ECO/1449/2003 to define radioactive waste, radioactive waste management must be carried out.		
Q.No 48	Country Belgium	Article Article 13	Ref. in National Report Section H, §13.1.2, p 158
Question/ Comment	To what extent have the consequences of a postponed decision regarding the definitive disposal facility for spent fuel and high level waste been taken into account in the 6th GRWP in force in Spain?		
Answer	As regards long-term management, it should be pointed out that although there is wide agreement internationally in relation to the		

	deep geological disposal option, there is at present no facility of this type in the world for SF/HLW. As it is reflected in the 6th GRWP, the basic Spanish strategy in this field focuses on the temporary storage of spent fuel and HLW on the basis of a dry storage system guaranteeing the safety and protection of people and the environment over the time periods required for their definitive or very long term management. The suitability of a strategy based on a CTS facility, allows management to be addressed under optimal conditions and in a unified manner for all SF, HLW and ILW, while allowing temporary management to be carried out independent of definitive management, taking advantage of international developments in the field.		
Q.No 49	Country Belgium	Article Article 13	Ref. in National Report Page 158
Question/ Comment	What kind of technical scenarios for the final management of radioactive sources are put in place? What kind of radioactive sources can be disposed of in the El Cabril site?		
Answer	Scenarios considered were those of the whole facility, no specific scenario was put in place. Sources thata are disposed of are those with half life below or equal to Co60. Furthermore, ENRESA is working on sealed sources with half life between Co60 and Cs137, a report of which will be submitted to CSN.		
Q.No 50	Country Canada	Article Article 13	Ref. in National Report Section H 13, p.157
Question/ Comment	Can Spain confirm that the word “disposal” in the sentence “the construction of a centralized disposal facility is currently foreseen by the year 2012” should this be replaced by “storage”?		
Answer	The sentence should be read as follows: "...the construction of a centralised storage facility is currently foreseen by the year 2012."		
Q.No 51	Country China	Article Article 13	Ref. in National Report Section H, 158
Question/ Comment	What is the new progress and consideration on the disposal facility for Spent fuel and HLW, after the decision had been postponed?		
Answer	In the case of HLW and Spent Fuel, in the longer term, and only for the purposes of economic calculation and planning, a schedule will be mapped out for the startup of a definitive disposal facility in the year 2050 along with preliminary periods for decision-making, the characterisation of the site(s) and the construction of installations from 2025 to 2040 and from 2041 to 2050, respectively. In this respect, the activities for the forthcoming years will be, among others, as follows: The knowledge acquired of techniques and methods for the characterisation from the surface of granitic and clay geological formations capable of housing a definitive disposal facility will be compiled. Generic designs for each host rock will be consolidated and alternatives will be		

	contemplated as a result of improved knowledge of the components and processes and considering the criterion of recovery of the wastes deposited for a defined period. The corresponding safety assessment exercises will be revised in order to update them in accordance with the progress made in the R&D programmes and in keeping with the revised designs. In parallel with the above, analysis and knowledge of the different alternatives to definitive disposal will be furthered, in close collaboration with the international progress and projects achieved and undertaken in this field, with a dimension and scope in keeping with the research capabilities existing in the country.		
Q.No 52	Country Canada	Article Article 15	Ref. in National Report Section H 15.3, p.170
Question/ Comment	Is there a cut off value for the probability of occurrence in the accident scenarios that should be considered in the Safety Assessment?		
Answer	The current version of the Safety Assessment of El Cabril disposal facility does not treat in a purely probabilistic manner the uncertainties in the system performance. For specific parameters a maximum and a minimum values are assigned and a further results comparison is performed. A probabilistic analysis of the adopted values for those parameters that quantify the accident scenarios and their probability of occurrence is not carried out.		
Q.No 53	Country Czech Republic	Article Article 15	Ref. in National Report
Question/ Comment	The limit 0,1 mSv/yr and the risk limit – are they applied also for less probable scenarios as intrusion?		
Answer	For inadvertent intrusion scenarios and taking into account ICRP recommendations, compliment with the radiological criteria implies the application of qualitative criteria to demonstrate in a reasonable way the understanding of system behaviour. The design of the system shall take into account the adequate measures to reduce the probability and consequences of intrusion. For inadvertent intrusion scenarios, after the institutional control period, a reference radiological criterion of 1 mSv/year of effective dose to the individual is considered.		
Q.No 54	Country Czech Republic	Article Article 15	Ref. in National Report
Question/ Comment	For which stages of facility existence is the EIA process applied; for siting process before construction and for closure?		

Answer	The assessment of environmental impact of projects is regulated by the Royal legislative decree 1/2008, approving the modified text of the Law on the assessment of environmental impact of projects (LAEIP) The mentioned law includes in its scope the facilities devoted to the disposal of radioactive wastes, but it doesn't deal with the specific process of environmental impact assessment to be applied in each of the sequential steps of required authorisations. So far, the EIA process has been performed together with each of the authorisations required by the regulation on Nuclear and Radioactive installations (site and decommissioning), and the EIA has also been conducted in important modifications of the facilities requiring the subsequent authorisation according the aforementioned regulation.		
Q.No 55	Country Czech Republic	Article Article 15	Ref. in National Report
Question/ Comment	In some countries, there is needed for a special license for personnel developing the EIA documents and for risk analysis calculations and no special license is necessary for safety assessment. What is the situation in Spain?		
Answer	There is no need for a special license: - For personnel developing the EIA document and for risk analysis calculations. - For personnel developing the safety assessment.		
Q.No 56	Country Germany	Article Article 15	Ref. in National Report p. 169; Sec. H.15.2
Question/ Comment	For preventing any dissemination of radioactive substances in the operating and surveillance phases of the El Cabril disposal facility, run-off water, seepage, drainage waters and groundwaters are supervised. Does there also exist a monitoring system for airborne radioactivity?		
Answer	Airborne is controlled with the following systems: air monitoring is done at the incineration stack when a campaign is taken place; the ventilation system is continously measured; there is an ambient moitoring system within the site outside of the buildings; a Programme for Radiological and Ambient Vigilance is put in place in the outdoors of the site.		
Q.No 57	Country Slovakia	Article Article 15	Ref. in National Report page 159
Question/ Comment	What kinds of scenarios do you consider for activity heterogeneity in repository?		
Answer	Demonstration of safety implies, among others, the assessment of the Waste acceptance criteria (WAC). WAC involve specifications for the producers in order to obtain a waste form according to the criteria, and also specifications which		

	assure that the activity inventory is distributed to comply with specified radiological conditions. In order to avoid the concentration of activity in specifics parts of the waste form a criterion is considered in WAC, taking into account a factor of heterogeneity in the distribution of the activity. Other criteria restrict the waste types to be accepted in the disposal facility, and so, sealed sources with long lived radionuclides are not accepted in the facility. The scenarios considered in all phases of the facility life are selected to estimate doses according to the WAC.		
Q.No 58	Country Belgium	Article Article 16	Ref. in National Report Page 179
Question/ Comment	What are the characteristics of the so called “historic waste” that will be disposed of in El Cabril? How the level of radioactivity has been determined?		
Answer	The so-called Historic Wastes are wastes conditioned at NPPs before El Cabril was commissioned and acceptance methodology was settled. The NPPs had at that time all data on how the wastes were conditioned, including radiological data, so a verification process was put in place in order to qualify the conditioned wastes in the new acceptance methodology		
Q.No 59	Country Belgium	Article Article 16	Ref. in National Report Page 180
Question/ Comment	What are the means present at El Cabril to perform tests such as verification of the activity, chemical characteristics?		
Answer	Test are performed at the Verification Laboratory. Distructive and non distructive testing can be performed at equiped hot cell, hot laboratory and leaching tests facilities.		
Q.No 60	Country China	Article Article 16	Ref. in National Report Section H, P.179
Question/ Comment	Please give the radioactivity limit value for VLLW. What is the acceptance criteria for VLLW received by El Cabril?		
Answer	There is a long list of concentration limits for VLLW that consider different radionuclides, ranging from H3 to different á emitters. Waste acceptance criteria is a set of criteria that have to meet all wastes. They include the type of waste (inert, assimilable to non hazardous wastes, and stabilised wastes), restricctions to wastes (non explosive, corrosive, flamable, pyrophoric, infectious, etc) and radiological criteria, including the list indicated above.		
Q.No	Country	Article	Ref. in National Report

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61	France	Article 16	H.1.6.2.4 - p. 179 & 180
Question/ Comment	At the laboratory of the "El Cabril" facility, ENRESA has the possibility to perform some destructive and non-destructive technical verification tests. On average for the last years, could Spain specify how many tests are performed? Approximately, what is the proportion of the LILW disposed of in the "El Cabril" facility subjected to these destructive and non-destructive technical verification tests?		
Answer	During the last 3 years, the LVCR has performed some 13 control tests. Most of the drums checked contained ion exchange resins (11). So, in average, the number of destructive and non destructive test per year is 4. However, it is expected to increase the number of controls in the next years because the capacities of the El Cabril laboratory have nowadays increased, with a new laboratory and a new spectrometry desk. The number and type of packages selected to be controlled and tested depends on the annual estimation of packages production by the different producers.		
Q.No 62	Country France	Article Article 16	Ref. in National Report D.3 - p. 34 & H.1.6.2.1 - p. 176
Question/ Comment	Currently, there are 28 LILW disposal cells at the ""El Cabril"" facility. The current operating permit will end once the available disposal volume of the existing cells saturated. Could Spain indicate if the construction of new LILW disposal cells is scheduled ?		
Answer	At the end of 2007, 56% of the LILW facility was filled. If the expected life time of the existing NPPs is maintained, 40 years, with the actual generation of wastes there should no be necessary to encrease the capacity. Regarding VLLW facility it is in operation since the fourth quarter of 2008.		
Q.No 63	Country Canada	Article Article 17	Ref. in National Report Section H 17.3, p.182
Question/ Comment	Please outline some of the considerations that led to the view that “legally” the state will take over the ownership of radioactive waste once it has been disposed of and also will take over the required surveillance.		
Answer	The titular of the Radioactive waste before their definitive disposal is the producer. After their disposal, the State is titular of the radioactive waste, assuming the total responsibility over them, bearing in mind that the life of the waste widely exceeds the time frame of the producers.		
Q.No 64	Country France	Article Article 17	Ref. in National Report D.5 - p. 38 & H.1.7.2 & H.1.7.3 - p. 181

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Question/ Comment	A few years ago, a plan has been issued for the restoration of some sites where uranium mining activities had been carried out. The table 8 indicated that this sites are restored. Could Spain indicate if any uranium tailings are stored or disposed of in these sites ? If yes, are there any surveillance and control plans required by the relevant authorities for these sites?
Answer	In Spain, a number of 23 mine facilities were restored before 1999. There are no surveillance and monitoring plans for these restored sites, as there was no specific regulation on radiological safety before 1999. Since 1999, the current Regulation on Nuclear and Radioactive Installation establishes that mine facilities restoration must be subjected to regulatory control, in order to ensure that the process is suitable under radiological considerations. Two old uranium mines, not restored before 1999, are actually being restored. The Valdemascaño old uranium mine has recently completed the restoration process, and is now subjected to a three year period of compliance to control the behaviour and suitability of tailing stabilization. In the case of Casillas de Flores old uranium mine, the restoration process is still in progress, and the corresponding compliance period will begin as soon as the restoration is completed. There are also three uranium recovery plants for obtaining “yellow cake”, where mine tailings were stabilized and conditioned. These facilities have been subjected to regulatory control from the beginning and, therefore, the end of the decommissioning process will require a decommission statement, where the required institutional controls will be established. Two of the above mentioned installations, the FUA and Elefante plants, are now in the compliance period, waiting for the final verification on the suitability of the performed tailings stabilization. The Lobo-G uranium recovery plant is the only one of this type completely dismantled and decommissioned. In this case, uranium mine tailings were stabilized on-site. The decommission statement for this facility establishes a restricted use for pasture and forest of the released part of the site. This use restriction has been included in the appropriate legal property record of the site. The decommission statement also imposes a control and surveillance period for the unreleased part of the site where the conditioned waste was placed. This compliance period is of indefinite length, being the conditioned waste under old plant operator responsibility.

Q.No	Country	Article	Ref. in National Report
65	Netherlands	Article 17	17.3

Question/ Comment	In the NR it is not straightforward to find which periods of Institutional Control are applicable for the different facilities. Section 13.2 (p.160) mentions 300 years for EL Cabril, but this seems to be mentioned in an illogical place in the text (Section 13.2. Criteria

	for the assessment of safety significant factors relating to the site"		
Answer	In principle, it is not established any standard duration for the institutional control period to be imposed on decommissioned facilities. Both, the duration of this period and the responsible organizations for its implementation and monitoring, should be specified in the respective decommission statement and depends on the radiological conditions of the site of such facilities when the decommission statement be granted. The period of 300 years referred to in the question is just a design parameter of the repository facility "El Cabril". It is used to calculate the radiological capacity of the installation, assuming that 300 years after the last deposition of waste the repository can be decommissioned and the site can be released from regulatory control.		
Q.No 66	Country Hungary	Article Article 18	Ref. in National Report E p.59
Question/ Comment	Does the collaboration between the CSN and the Ministry of Public Health and Consumption include aspects such as dose limitation, dosimetry service, treatment of radiation injures?		
Answer	Yes. Co-operation between CSN and Ministry of Public Health and Consumption includes many aspects related to radiation protection such as: • Regulations development including definition and implementation of radiation protection principles for justification, dose limitation and optimisation for workers, members of the public and patients. • In relation with TLD Dosimetry, in Spain it is performed by external organisations authorised by CSN, no actions are required from health authorities. Co-operation between CSN and Health authorities exists for development, implementation and maintenance of capabilities to perform Biologic Dosimetry. • Sanitary assistance to irradiated/contaminated people is performed in Spain by specific sanitary centres authorized by health authorities. Co-operation between CSN and health authorities exists to define, implement and maintain adequate capabilities in this matter. • Principles and procedures to be followed for sanitary surveillance of exposed workers have been established in Spain jointly by CSN and health authorities also in co-operation with labour authorities and trade unions.		
Q.No 67	Country Belgium	Article Article 19	Ref. in National Report Page 47 (last but one bullet)
Question/ Comment	A paragraph is added to art. 38: "... expressly place on record the obligation…. to minimise the production of SF and radioactive waste: best scientific practices available at each moment": How is this evaluated/controlled in practice?		

Answer	The Regulation on Nuclear and Radioactive Facilities (RNRF) establishes that applications for nuclear facility operating permits must include a plan for the management of radioactive waste and spent fuel (PLAGERR), incorporating where appropriate the contracts entered into with management companies and including, among other items, a system for possible waste declassification. These PLAGERR must be approved by the Ministry of Industry, Tourism and Trade (MITYC) with the prior favourable report of the Nuclear Safety Council, who is reponsible for carrying out the inspections to verify its fulfillment.		
Q.No 68	Country Belgium	Article Article 19	Ref. in National Report Page 48: NSC law 33/2007
Question/ Comment	"...strengthening of its functions...promoting public participation in the areas for which it is responsible: How is this put into practice?		
Answer	The CSN Instructions and Guides are to be subjected to a process of public comments during their period of development. The Law creating the Nuclear Safety Council lays down, under article 14, that the Nuclear Safety Council (CSN) shall provide information access and facilitate involvement in its operational issues to citizens and the civil society. For said purpose CSN shall subject instructions and technical guides to public discussion, while they are being prepared, using the corporate Nuclear Safety Council Website in an extensive manner, in order to facilitate citizen access. Additionally, an Advisory Committee has been set up, the mission of which is to issue recommendations to the CSN in order to improve its transparency, access to information and public participation in matters within its realm of competence.		
Q.No 69	Country Belgium	Article Article 19	Ref. in National Report Page 50: law 33/2007
Question/ Comment	"…assignments set aside for municipal areas affected by NPP, SF or RA-waste storage facilities…" How are determined the levies/taxes and what are the amounts for the communities?		
Answer	Nowadays, the allocation of funds envisaged for municipalities surrounding this kind of facilities are set up by means of Ministerial Order from July, 13rd 1998 (Official State Gazette 17-7-98). According to this, it is established a fund for each installation corresponding to one of the following categories: 1) Nuclear Power Plants storing Spent Fuel 2) Centralized Interim Storages Facilities for Spent Fuel and HLW or Long Lived Waste, 3) Nuclear Power Plants in decommissioning phase without Spent Fuel and 4) Centralized Disposal Facilities for LILW. The quantity of the fund for each installation depends on the category it belongs to and it consists of an annual allocation made up of a fixed and a variable term, the latter varies with the increase of the Spent Fuel weight and the Radioactive Waste volume each year. The fund for each installation is distribuited between towns surrounding it, according to population and distance to the installation criteria. In the attached table of the support document, details are given about the allocations for each category of installation.		

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Support Documents	» Spanish Answer support document		
Q.No 70	Country Belgium	Article Article 19	Ref. in National Report Page 51: law 12/2006
Question/ Comment	"…complementary taxes Andalusia..." How are determined the levies and what are the amounts?		
Answer	This Law, endorsed by the Parliament of the Autonomous Community of Andalusia, is complementary to the Budget Law of the said Community and introduces a new tax on radioactive waste disposal operations within its territory. The tax base is constituted by the volume of the radioactive waste disposed of in the repository. The net tax base is obtained after reducing the tax base with a coefficient depending on the compactness of the waste. The final quota to be paid is the result of the product between the net tax base and the tax rate. This tax rate raises 7000 Euros/m3 of LILW or 2000 Euros/m3 VLLW deposited.		
Q.No 71	Country Belgium	Article Article 19	Ref. in National Report Page 54: law 33/2007
Question/ Comment	"…sanctions nuclear facility…" Has this already been applied and if yes, please give some examples.		
Answer	The new enforcement regime has only been applied once to a nuclear installation, by means of a Resolution of the Directorate General for Energy Policy and Mines about the break of the Regulation 158/1995 about the physical protection of nuclear materials, resulting into 2 slight category sanctions.		
Q.No 72	Country Belgium	Article Article 19	Ref. in National Report Page 75 "middle bullet"
Question/ Comment	"… content of documentation procedure for the authorization of D&D" What are the changes that have been introduced on the basis of the gained experience?		
Answer	There are basically two different types of changes: • The incorporation of new regulatory documents and modification of the content of some other that. Some documents maintain similar heading to the official documents of facilities in operation, but have a scope, a structure and content more in line with what is needed to regulate and ensure safety in the processes of decommissioning. Thus, the recent amendment of the Regulation on nuclear and radioactive installations has affected the content of the Safety Study and the Plan for the Restoration of the Site and has included some new documents such as the Plan for the Control of Cleared Materials.		

	• Some other amendments have been included in documents such as Technical Specifications that are affected by the continuous changes of the physical configuration of the systems, components and structures of the installation. In this case, a specific editorial structure has been established to allow these documents not to be subject to permanent revision, and to reflect the decommissioning process dynamism.		
Q.No 73	Country Belgium	Article Article 19	Ref. in National Report Page 75 (last paragraph)
Question/ Comment	"… nuclear power plant information committees…" What has to be understood by "zone I of the nuclear emergency plans"?		
Answer	According to the Basic Nuclear Emergency Plan approved by Royal Decree 1546/2004 of June 25th, there is a planning zone classification: Operator control zone or Zone 0 is the area in which the plant is located and includes the surrounding land freely available to the owner, either for reasons of ownership or in view of agreements with the owners The protective measures and other emergency response actions to be adopted in this zone are specified in the on site emergency plant. Zone I or urgent protective measures zone: is the area included within a 10 kilometre radius of the nuclear power plant and includes zone 0. This zone corresponds to the geographical area in which the main pathways of exposure are associated with the passing of the radioactive cloud, which implies direct exposure to the radiation from contamination of the atmosphere and the soil, and internal contamination due to inhalation of the radioactive material released during the accident. Zone I is divided into three sub-zones, IA, IB and IC, depending on the level of risk expected in each. 1. Sub-zone IA is the area included within a three-kilometre radius of the nuclear power plant. 2. Sub-zone IB is the area included between the three and five-kilometre radii of the nuclear power plant. 3. Sub-zone IC is the area included between the five and ten-kilometre radii of the nuclear power plant. Zone II or long-term protective measures zone: is the ring-shaped area located between the radii at 10 and 30 kilometres from the nuclear power plant, in which the radiation exposure pathways are associated fundamentally with the radioactive material deposited on the ground following the accident. In this zone protective measures should be planned to reduce the long-term doses from the radioactive substances deposited and from the ingestion of contaminated foodstuffs and water.		

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Q.No 74	Country Belgium	Article Article 19	Ref. in National Report Page 76 (middle paragraph)
Question/ Comment	"…in drawing up such standards participation stakeholders and public must be promoted…" How is this put into practice?		
Answer	The Law creating the Nuclear Safety Council lays down, under article 14, that the Nuclear Safety Council (CSN) shall provide information access and facilitate involvement in its operational issues to citizens and the civil society. For said purpose CSN shall subject instructions and technical guides to public discussion, while they are being prepared, using the corporate Nuclear Safety Council Website in an extensive manner, in order to facilitate citizen access.		
Q.No 75	Country Canada	Article Article 19	Ref. in National Report
Question/ Comment	Canada has noted the continuous updating and modernization of the legal framework for Spent Fuel and Radioactive Waste Management in Spain. Generally, the introduction, modification, and updating of nuclear related legislation is a contentious and protracted process and is not undertaken lightly. Yet Spain, quite remarkably, successfully undertakes legislative initiatives on a regular and frequent basis. To what do you attribute your success?		
Answer	Although basic legal framework on nuclear energy in Spain is consolidated in Spain since long time before, some aspects of said framework have been modified as a result of the time lapsed since it was enacted, calling for an update with the purpose of taking into account the experience built during this period of time.		
Q.No 76	Country Hungary	Article Article 19	Ref. in National Report E p.53
Question/ Comment	Could Spain provide statistics on performed inspections? (Especially, on inspections on spent fuel management in the nuclear power plants.)		
Answer	.- Inspections of spent fuel and high level waste storages are part of the Basic Inspection Plan associated with the SISC and are carried out according to a specific technical procedure "PT.IV.227. -Inspection of spent fuel and high level waste management activities" Inspections are performed in a biannual frequency, 1 each 2 years to each NPP, which normally are carried out after the refuelling.		
Q.No 77	Country Netherlands	Article Article 19	Ref. in National Report 19.1, p.46
Question/	In comparison with the 2nd NR, Section 19 contains important novelties in the main legal provisions regulating spent fuel and		

Comment	radioactive waste management, thereby addressing the concern made in the 2nd NR that “the legal development process foreseen has not been completed”.		
Answer	Effectively, the legal framework has been developed.		
Q.No 78	Country Netherlands	Article Article 19	Ref. in National Report 19.4, p.54
Question/ Comment	The section “System of sanctions relating to nuclear facilities” is much more elaborate than that of most of the other National Reports. Perhaps Table 9 (p.55) could be left out.		
Answer	The system of sanctions regarding nuclear matters, established under Chapter XIV of Law 25/1964, has been fully revised through the Law 33/2007. As a consequence, it has been considered as convenient to elaborate on it under article 19 of the third National Report. Moreover, the table 9 summarizes the main changes on the quantities for the sanctions to be administered.		
Q.No 79	Country Ukraine	Article Article 19	Ref. in National Report Section Å 19.1, page 45
Question/ Comment	What specific regulatory procedures and actions were taken as regards modification for Jose Cabrera NPP related to shipment of spent fuel from cooling pond to spent fuel storage facility?		
Answer	The licensing of the Jose Cabrera modification related to the spent fuel storage in the dry storage casks has been carried out according to the provisions of the RNRF (Regulations on Nuclear and radioactive facilities) consisting of: 1st) The cask approval, according to the requirement set up in Article 80 of the RNRF.  2nd) The plant modification authorization which, according to article 25 of the RNRF, include a previous authorisation for the execution and assembly of the modification. 3rd) Regulatory requirements and conditions for the design, construction and operation are included, as Annexes, in the authorizations. According to the same regulation, a program of pre-nuclear tests has been performed before load of the spent from the pond to the casks (including the simulation of the complete process from the load to the transference of the loaded cask to the storage facility). The pre- nuclear tests have been inspected by CSN´s experts. A load programme has been also reviewed previously to the initiation of the spent fuel load. The load spent fuel from the pond to the cask and the internal transport till the storage facility are carried out according to specific procedures and has been also inspected by the regulatory body.		

	Additional information on this aspect is provided in Chapter G session 8.		
Q.No 80	Country United States of America	Article Article 19	Ref. in National Report Section 19.1, Page 52
Question/ Comment	EU Council Directive 2006/117/EURATOM is referenced in the report. The report indicates that Member States are expected to transpose this to their respective internal legislation by December 25, 2008. What changes have been made to Spain's regulations since publication of the National Report? Are the provisions of this EU directive consistent with provisions for transboundary movements in the Joint Convention?		
Answer	In relation to the transpose the EU Council Directive 2006/117/EURATOM , by means of Royal Decree 243/2009 at the begining of this year it was transposed to the Spanish legislations. Provissions of EU Directive are coherent with Joint Convention transboundary movement provissions.		
Q.No 81	Country United States of America	Article Article 19	Ref. in National Report Section 19.1, Page 51
Question/ Comment	Law 27/2006 created regulating rights to access information, public participation, and justice in environmental matters. How has this improved public participation in the licensing process? Please provide feedback on how sucessful this process has been and lessons learned during your national presentation in May 2009.		
Answer	Licensing process is laid down in the Regulation on Nuclear and Radioactive Installations, which calls for a "preliminary or site authorisation" for nuclear installations (an official recognition of the proposed objective and the suitability of the chosen site), the obtaining of which entitles the holder to request the facility construction permit and start the preliminary infrastructure work that is authorised. Once the preliminary authorisation application is received, the Ministry of Industry, Tourism and Trade shall send a copy thereof to the respective Government Regional Office so that it opens a period of public information, which shall start with the publication in the Official State Gazette and in the Gazette of the corresponding Autonomous Community of a summary advert in which the purpose and main characteristics of the facility shall be highlighted. The advert shall state that the people and entities that consider themselves affected by the project may submit within thirty days the written pleadings they deem fair before the corresponding Government Regional Office. The public information procedure shall be jointly carried out with the one envisaged for the environmental impact study in its specific regulation. Once the thirty-day period for public information has expired, the Government Regional Office shall make the appropriate verifications with regard to both the submitted documentation and the written pleadings and shall issue its report with regard to the former and the latter, sending the file to the Ministry of Industry, Tourism and Trade and a copy thereof to the Nuclear Safety Council.		

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Q.No 82	Country Canada	Article Article 20	Ref. in National Report Section E 20.1.2, p.62
Question/ Comment	The separation of roles and responsibilities between the Government (MITYC) and the regulator (CSN) is not clear. Can you explain the checks and balances that are in place to ensure that regulatory requirements are not impacted by policy or political considerations?		
Answer	In Spain, the regulatory function in the area of nuclear energy corresponds to several authorities with diferentiated and separated competences depending on the subject, according to the provissions of legislation in force. The most relevant authorities in the areas within the scope of the Joint Convention are, from the political and the administrative side, the Government and MITYC, and from the nuclear safety side, the Nuclear Safety Council (CSN). Independence, both organizational and economic, between nuclear safety related issues and political issues is guaranteed by legislation in force. Regarding organizational independence, Law creating the Nuclear Safety Council establishes the Nuclear Safety Council as the sole entity having competence in relation with nuclear safety and radiological protection, an entity existing under Public Law and independent from the Government, with its own legal standing and equity. The CSN is only under the Spanish Parliament control. Regarding economic side, CSN is not economic dependent on the Government, since the budgets for CSN incomes are regulated by Law 14/1999, of May 4th, on Tariffs and Public Prices for services rendered by the Nuclear Safety Council.		
Q.No 83	Country Netherlands	Article Article 20	Ref. in National Report 20, pp.57-77
Question/ Comment	The description of the regulatory institutions is very elaborate with a lot of details. This section might be condensed in order to improve the readability.		
Answer	Article 20 was written aiming a general self-explaining overview of the Spanish regulatory system.		
Q.No 84	Country Slovakia	Article Article 20	Ref. in National Report + Article 16
Question/ Comment	Does your regulatory body accept results of probabilistic safety assessment in establishing activity concentration limits for disposal facility?		
Answer	The current version of El Cabril Safety Assessment does not treat in a probabilistic approach the long term performance assessment of the facility. The role as well as the utilization of probabilistic assessment could be considered by the regulatory body, but in near surface disposal facilities the time frame of interest is not longer than those for which the conditions of the engineered and geological barriers can be modelled, or reasonably assumed, to gain the necessary confidence, without the implementation of a pure probabilistic safety		

	assessment.		
Q.No 85	Country Belgium	Article Article 21	Ref. in National Report Page 82 (first paragraph)
Question/ Comment	"… That the State shall take over the ownership of RA-waste once they have definitively disposed of…" From which moment RA-waste is considered as "definitively disposed"? What about the aspect of retrievabillity?		
Answer	Radioactive waste are considered definitively disposed of once it have been placed and kept in a disposal facility, regardless of wether or not they be retriebable in the future. In this respect, the General Waste Radioactive Plan sets up the activities regarding definitive solutions for HLW and SF to be set about for the forthcoming years, among others, the following: "Generic designs for each host rock will be consolidated and alternatives will be contemplated as a result of improved knowledge of the components and processes and considering the criterion of recovery of the wastes deposited for a defined period".		
Q.No 86	Country Belgium	Article Article 21	Ref. in National Report Page 83 law 17/2007
Question/ Comment	"... possibility liability being reduced for those facilities … may be considered as low risk…: Which type of installations is considered as "low risk"?		
Answer	The Ministry of Industry, Tourism and Trade has imposed a reduced liability on those facilities that, in the opinion of the Nuclear Safety Council are considered as low risk: El Cabril LILW Disposal Facility and Juzbado Fuel Assembly Manufacturing Facility.		
Q.No 87	Country Canada	Article Article 21	Ref. in National Report Section F 21.2.2, p.83
Question/ Comment	Liability for Nuclear Damage has been extended to include damage caused to the environment. a) What is encompassed by "damage to the environment"? b) How does Spain plan to calculate a monetary value for the "direct economic losses derived from the use and enjoyment of the environment"?		
Answer	Damage to the environment encompass the categories included in 2004 Protocol to Amend the Paris Convention on Third Party Liability in the Field of Nuclear Energy, ratified by Spain in 2005. Compensations are supposed to be requested by the victims to the court of Justice, who will decide, according to the legislation in force, about the claims demanded.		
Q.No 88	Country Belgium	Article Article 22	Ref. in National Report Page 88 RD 1349/2003 funding
Question/	What kind of uncertainties is considered in the calculation of the funding?		

Comment			
Answer	Uncertainties are considered in three main elements: reference scenario, future costs and discount rate. To deal with the first a basic scenario is set up taking into account the current nuclear fleet, an operational life-time of 40 years, decommissioning to green-field starting three years after shut-down and no reprocessing of spent fuel. According to this reference scenario, radioactive waste management strategies, programs and activities are defined for the short, medium and long-term. Next step is to estimate future costs. This is done for each of the different lines of actions (LILW, HLW and SF, decommissioning, etc.). Major uncertainties at this phase are mainly in final disposal of HLW and SF as in the other lines of action the Spanish experience as well as the international one provide a very accurate knowledge of the level of costs involved. That is to say, basic uncertainties are those concerning main parameters of the underground disposal system (host rock, site, disposal concept, etc.) and associated technological costs. To tackle with this a percentage on the total estimated cost is applied. Finally the discount rate used to make the financial estimations is a very sensitive variable to determine required periodic incomes to the Fund. Sensitivity analyses are carried out and, in any case, funding estimations are revised every year.		
Q.No 89	Country Canada	Article Article 22	Ref. in National Report Section F 22.1, p.86
Question/ Comment	It is noted that Spain inspects personnel training programs on a two year basis. a) What criteria are used to assess the suitability of these programs? b) Would Spain consider lengthening/shortening the time period?		
Answer	A) The CSN's Instruction IS-12 defines the qualification and training requirements of non-licensed staff and non-licensed off-site personnel of nuclear power plants, and requires that licensee's training programs accomplish the following requirements: • The licensee of a NPP shall be obliged to implement a training program for the plant personnel that: o shall keep duly updated prior to assigning the functions pertaining to their job functions; o shall fulfil the objective of ensuring that the personnel acquires and maintains the competence required for the efficient and safe performance of their job positions; o shall emphasise the extreme importance of safety in all aspects relating to plant operation, over and above all other considerations, and o shall be documented and available to be inspected by the CSN • The licensee of an NPP shall ensure that all the personnel required to perform safety related functions have the sufficient knowledge and skills to do it. This shall be achieved by:		

	o checking that the personnel have successfully performed all the phases of the training plan and that they have adequately passed all the evaluation tests. • The licensee's training program shall consist of initial and on-going training programs and shall be based in the application of a systematic approach to training methodology, which shall include the following considerations: o Determination of the learning objectives, in accordance with the results obtained from the job position analysis. o Design and implementation of the training program based on the learning objectives. o The tools and human resources required for its satisfactory achievement. o Assessment of the degree of personal compliance with the learning objectives mapped out. o Evaluation and revision of the training program based on the performance of the personnel in their respective job positions. • The licensee's training program shall include operating experience on incidents occurring at the plant, and those occurring at other plants which were relevant and applicable to it. • All the plant personnel with upper or line management responsibilities, having responsibilities in severe accidents management, shall receive training on it. • The training program shall be continuously improved, as contemplated in the systematic approach training design, and shall include any modifications to it (changes in the regulations or standards, NPP modifications, lessons learned from the experience of the industry, etc.). • Compliance with the program requires the implementation of justified control systems (attendances, absences, recoveries, justification, tests, marks, etc.) • The licensee of an NPP shall possess a training organisation provided with the necessary resources and facilities. All the previous requirements exposed by non-licensed staff are applicable to non-licensed permanent off-site personnel of nuclear power plants and can be used as reference for non-licensed temporary off-site personnel. B) Would Spain consider lengthening/shortening the time period?

	B) No. We are non considering lengthening/shortening the time period for training inspections. At the moment we haven't noticed such necessity and it seems adequate biennial inspections for reviewing practices that are modified at higher intervals. If important incidents with training aspects implications were detected, they would be covered by reactive inspections in response to them, which are outside the basic inspection plan.		
Q.No 90	Country Canada	Article Article 22	Ref. in National Report Section F 22.2, p.88
Question/ Comment	Could Spain please outline the processes and mechanisms used by the Tracking and Control Committee in their supervision and control of the Fund for the Financing of Activities included in the General Radioactive Waste Plan?		
Answer	According to the Royal Decree 1349/2003, the functions of the tracking and control Committee are as follows: a) Development of the criteria regarding the composition of the assets included in the Fund. b) Tracking of the financial investments, verifying application of the principles of security, profitability and liquidity as stated in the mentioned Royal Decree c) Drawing up of six-monthly reports describing the situation of the Fund and the investments corresponding to its financial management, along with the qualification issued by the committee. This report shall be submitted to the Minister of Economy and the Chancellor of the Exchequer. Every six month the Committee issues a report whose main objective is to qualify in the terms of security, profitability and liquidity the financial management of the Fund as carried out by ENRESA. The Committee also provides guidance on investment criteria to precise and limit the possibilities given in the Royal Decree 1349/2003 among different financial assets. This latter function comes out when several understandings of investment options are available. Usually, the Committee discharges this duty onto a reduced working group that analyses the implications of the alternatives involved and reports back to the Committee		
Q.No 91	Country France	Article Article 22	Ref. in National Report F.22.2 - p. 87
Question/ Comment	The process to calculate taxes to be paid by licensees is detailed. These taxes cover waste storage cost. Could Spain indicate if this tax amount include post-closure monitoring/surveillance costs of waste disposal facility ?		
Answer	The estimations of costs to set up the taxes are carried out according to the different lines of activity of radioactive waste		

	management (VLLW, LILW, HLW and SF). In all of these cases, the costs of post-closure monitoring or institutional surveillance of disposal facilities are included in costs estimations.		
Q.No 92	Country Romania	Article Article 22	Ref. in National Report Section F, page 87
Question/ Comment	Please, provide the criteria used to determine the value for the financing of the cost of radioactive waste and spent fuel management, and of the dismantling and decommissioning of NPP.		
Answer	The principle is to collect the financial resources in advance during the operational life-time of the facilities. ENRESA's activities are funded via a Fund for the financing of the activities of the General Radioactive Waste Plan. The Fund is intended to cover all activities concerning waste management from its collection from producers to its final disposal. Decommissioning of nuclear facilities and remediation of some nuclear sites are also included. To estimate the required level of the Fund the main criteria are: • Waste originated by the existing fleet of NPPs during a lifetime of 40 years • Decommissioning of NPPs to green-field. Immediate decommissioning is the preferred option. • Waste produced in institutional producers (laboratories, industry, research centres, etc.) • Disposal of VLLW and LILW in the near-surface facilities of El Cabril • Temporary storage for HLW and SF in a centralised facility prior to final disposal. • Disposal of HLW and SF in an underground repository. Start of operation in the year 2050. Planned closure in the year 2070. • Application of percentages to electricity sales to cover future costs of decommissioning, managing radioactive waste and spent fuel generated by NPPs prior to 1st April 2005. • Payment of monthly contributions to the Fund by the NPPs according to a quota annually estimated by ENRESA and approved by MITYC for the same concepts in the point above but generated as from 31st March 2005 • Payment by the owner of the fuel manufacturing plant of annual contributions to the Fund • Payment of a lump sum by institutional producers when their wastes are collected • Discount rate 1.5% More detailed information is given in Annex D of the General Radioactive Waste Management Plan. Available at www.enresa.es		
Q.No 93	Country Belgium	Article Article 24	Ref. in National Report Page 97
Question/	"…El Cabril…zero release for radioactive effluents…" Does this mean that all the effluents of the waste conditioning installations,		

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Comment	the laboratories present on site are being used as conditioning matrix?		
Answer	Yes. All liquids that might have been in contact with radioactive material are recovered and used for conditioning mortar in the process of conditioning the cubic disposal units.		
Q.No 94	Country Bulgaria	Article Article 24	Ref. in National Report
Question/ Comment	Are any other dose limits pertaining to persons in training between 16 and 18 years of age included in the regulation?		
Answer	Yes. There are the same limits proposed for these people by EU Directive EURATOM96/29: The limit for effective dose for apprentices aged between 16 and 18 years and for students aged between 16 and 18 years who, in the course of their studies, are obliged to use sources shall be 6 mSv per year. Without prejudice to this dose limit: (a) the limit on equivalent dose for the lens of the eye shall be 50 mSv in a year; (b) the limit on equivalent dose for the skin shall be 150 mSv in a year. This limit shall apply to the dose averaged over any area of 1 cm^2, regardless of the area exposed; (c) the limit on equivalent dose for the hands, forearms, feet and ankles shall be 150 mSv in a year.		
Q.No 95	Country Bulgaria	Article Article 24	Ref. in National Report
Question/ Comment	What is the criterion for sufficiently low radiological risk?		
Answer	We take on that the question is related to paragraph included on page 93 of the report saying: In most cases, the control of the radiation doses received by professionally-ex posed workers is accomplished through individual surveillance by passive physical dosimeters. There are cases, however, in which, if the radiological risk is sufficiently low, the radiological surveillance of the environment in which the workers perform their work activities may suffice. According to article 29 on the regulation 783/2001 on sanitary protection against ionizing radiation, only individual doses received by exposed workers classified in category B can be estimated form results of surveillance of the environment in which the workers perform their work activities. Category B exposed workers are defined on the aforementioned regulation as those worker who, due to their working conditions, is very unlikely that they receive doses above 6 milisievert/year or 3/10 of the year dose limits for eye lenses, skin or extremities. In addition this regulation (article 18) requires using individual dosimeters when external exposure risk is present in Controlled		

	Areas. Then, according to Spanish regulation only doses received by exposed workers classified in category B , working in Supervised Areas can be estimated form results of surveillance of the environment in which the workers perform their work activities.		
Q.No 96	Country Hungary	Article Article 24	Ref. in National Report F p.92, p.96
Question/ Comment	Who prepared the regulation on dose limits for the professionally exposed workers and for the public? Was it the CSN or the Ministry of Public Health and Consumption or they prepared it together?		
Answer	The Spanish regulation 738/2001 on sanitary protection against ionising radiation was drafted by CSN following EU Directive EURATOM/96/29 laying down basic safety standards for the protection of the health of workers and the general public against the dangers arising from ionizing radiation. Once drafted a technical committee to discuss the proposed regulation was launched; Ministries for Economy, Health and Consumption, Labor and Social Affaires and Internal Affaires took part on that committee as well as CSN. Finally a joint Government Regulation from all those mentioned Ministries together was released.		
Q.No 97	Country Netherlands	Article Article 24	Ref. in National Report 24.1, pp91 etc
Question/ Comment	The section treating the “Protection of Workers” has been updated and measures have been described that account for the further implementation of the ALARA principle. This is valuable information.		
Answer	Thanks for your comment.		
Q.No 98	Country Netherlands	Article Article 24	Ref. in National Report 24.1.2, p.94,95, table 10
Question/ Comment	Please add caption text to Table 10. Is there a reason that explains the significant difference between contracted persons and plant staff concerning the average individual dose rates?		
Answer	It is due to the next 3 facts: 1. Main charge of work at NPP is carried out during refueling period. 2. Main works at refueling period are carried out by contracted persons. 3. Plant staff supervises this work.		

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Q.No 99	Country Netherlands	Article Article 24	Ref. in National Report 24.1.2, p.94,95
Question/ Comment	In the answer to question/comment 19 of the 2nd NR, a table was presented with the effective dose rates for the different plants for 2003 and 2004. Perhaps this information could be extended into a graph for additional years, including the applicable limit values?		
Answer	Please see attached graph in the support document.		
Support Documents	» Spanish Answer support document		
Q.No 100	Country Belgium	Article Article 25	Ref. in National Report Page 104 RD
Question/ Comment	"…Enresa…assigns the mission of acting in support of the civil defence services…" For what kind of activities ENRESA has to act in support?		
Answer	ENRESA is part of the National System for Emergency Response in case of nuclear or radiological emergency that is coordinated by the National Organisation for Civil Defense as part of the "radiological group" directed by the nuclear regulator (Nuclear Safety Council).		
Q.No 101	Country Canada	Article Article 25	Ref. in National Report Section F 25.3, p.105
Question/ Comment	What, if any, are the linkages between the Emergency Preparedness measures, the Emergency Response in the event of a nuclear incident, and the application of the Liability for Nuclear Damage?		
Answer	The Protocol to amend the Paris Convention on third party liability in the field of nuclear energy of 29 July 1960, as amended by the additional Protocol of 28 January 1964 and by the Protocol of 16 November 1982, defines "nuclear damage" as, among other meanings, as "the costs of preventive measures, and further loss or damage caused by such measures". Since Spain is ratifier of this Convention, the costs of preventive measures and the emergency response in the event of a nuclear incident are within the scope of the liability of the licence holder.		
Q.No 102	Country France	Article Article 25	Ref. in National Report F - p. 103
Question/ Comment	Could Spain detail how transboundary harmonization between the different provincial government is achieved ?		

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Answer	The Spanish territory is divided by autonomous communities. The CSN is the only competent authority in Spain regarding to nuclear safety and radiation protection. Therefore it provides with its recommendations to the regional governments. The Basic Nuclear Emergency Plan approved by Royal Decree 1546/2004, of June 25th establishes that the Director of the Nuclear Emergency Plan is the Delegate of the Government in the autonomous community in which the nuclear power plant is located. The CSN makes recommendations in relation with nuclear safety and radiological protection in radiological or nuclear emergency cases to this role and therefore should be followed in every part of the Spanish territory. There has not been any problem of harmonization in Spain.		
Q.No 103	Country France	Article Article 25	Ref. in National Report F - p. 107
Question/ Comment	Could Spain give examples of feedback on the supply of information to the media and the population ?		
Answer	The "Plan Básico de Emergencia Nuclear" (PLABEN) [Basic Plan of Nuclear Emergency] establishes a guideline on early information supply to the population living within the planning zones I and II defined in each Emergency Plan. CSN is among the organizations, public and private, responsible to undertake the necessary informative actions. Concerning emergency drills and exercises, CSN carries out the supply of information to the population and the media throughout its Communication and Information Group (GIC), which elaborates and disseminates press releases to the media and the institutions concerned (city councils, autonomous government and national organizations, depending on the scenario). This group is also in charge of the management of any information request coming from the public or the journalists. To meet a requirement of the European Union, CSN participates in the addressing of informative sessions to residents nearby NPPs on matters of interest concerning the plant´s operation and emergency arrangements. Also, and as a complementary way of information to nearby population, a regular exchange of information is held within the Information Committees foreseen in the Regulation on Nuclear and Radioactive Facilities, which have also been recently enlarged. It also maintains a close collaboration on these issues with the AMAC association [of municipalities nearby NPPs]. The CSN stresses public information and participation issues, and has set as one of its main goals to improve transparency. To meet this objective, the new website acts as a powerful tool to post and regularly update any relevant document, internal procedure and news focusing on emergency preparedness and participation in exercises and drills. Finally, a comprehensive response is promptly given to any individual request addressed to NRO (by phone or through CSN´s electronic letterbox), i.e. regarding the performance of the different Emergency Plans, etc.		

	Technical experts from CSN also participate periodically as observers in International transboundary exercises carried out in other countries with NPPs on the border. These help to show up the difficulties and problems which may appear when informing from one country to another (language, different technical criteria on countermeasures and to see how the residents surrounding NPPs are informed by their own competent authorities, etc).		
Q.No 104	Country Slovenia	Article Article 25	Ref. in National Report page 106
Question/ Comment	Can you please provide information and frequency of emergency drills on national or province levels?		
Answer	The Spanish Royal Decree 1836/1999 modified by Royal Decree 35/2008 establishes that every nuclear facility must carry out a yearly on-site drill aimed to test the operative of the on-site emergency plan. The minimum scope for these drills is established by the CSN. This scope is submitted to licensees, which then develop the detailed scenarios. Those scenarios have to be approved by CSN previously to performance. Throughout the years, when choosing the scope it is tried that every nuclear installation carry out one of possible accidents considered into the accident analysis. The General Direction for Civil Protection and Emergencies belonging to the Ministry of Interior is responsible for planning and carrying out the off-site emergency drills. Off-site emergency drills involved some times a province and some time several regions depending on nuclear plant site. The Royal Decree 1546/2004 (Basic Plan) develops the guidelines for off-site emergency drills and usually every year an off-site emergency drill is carried out, although the number of operative groups and emergency workers involved depend on the drill's scope. The regulation contemplates that a general drill must be carried out every three year in any of the five off-site emergency plans.		
Q.No 105	Country France	Article Article 26	Ref. in National Report F.26.1 - p. 109
Question/ Comment	The responsibility for decommissioning and associated fund are transferred to ENRESA. Could Spain explain the decommissioning cost evaluation before this transfer ? What are the provisions if the actual cost is higher that expected ? During operation of a nuclear facility, how is supervised the decommissioning funding accumulation ?		
Answer	Decommissioning of NPPs has always been a responsibility of ENRESA since the establishment of this Agency. The funds for decommissioning are part of the Fund for financing the activities included in the General Radioactive Waste Plan and this Fund is managed by ENRESA. Every year ENRESA estimates future decommissioning costs in order to propose to the MITYC the adequate		

	quota, if necessary. According to Royal Decree-Law 5/2005, of 11th March, NPPs, jointly with the amounts collected via electricity tariffs, must contribute to funding during their period of operation. Consequently NPPs contributions to the Fund are in the form of a quota on their electricity output (euros/Mwh). Legal obligation of funding ends when the plant is shut-down. As mentioned before, to avoid any deficit in the fund, economic and financial estimations are reviewed every year by ENRESA and the level of funding adjusted accordingly. If any deficit appears during decommissioning, and the operational life-time has coincided with the 40 year period established, future deficits, in such a case, will be charged to electricity tariffs. More detailed information can be found in General Radioactive Waste Plan at www.enresa.es		
Q.No 106	Country Hungary	Article Article 26	Ref. in National Report F. p.108
Question/ Comment	The report states that the dismantling process of the facility culminates with a declaration on decommissioning. What is the preferred strategy for decommissioning/dismantling? Are there any time limit for the deferred dismantling (or SAFSTOR) option in the Spanish regulation?		
Answer	The preferred strategy is to decommission the NPPs (LWR) immediately after shut down. The agreement between ENRESA and utilities consider ENRESA to become operator some 3 years after shut down, once the decommissioning license is given.		
Q.No 107	Country Korea, Republic of	Article Article 26	Ref. in National Report p.109 (F.26.1)
Question/ Comment	It may be beneficial for safe and effective decommissioning of nuclear facilities to consult with operating staff and to use operational data. In this regard, how are the operational data and the expertise of the operational staff transferred to, exchanged with or relocated to ENRESA, after the decommissioning contract is made between ENRESA and the owners of the nuclear power plants?		
Answer	Decommissioning is part of the general contract between ENRESA and the NPPs owners. In the case of a shut down, it is expected that in about 3 years after its happening, ENRESA will become operator and licensee for decommisioning. In the meanwhile, ENRESA prepares the decommissioning plan to be submitted to the licensing authorities and gets all the necessary inputs from the NPP to prepare the plan. If necessary, ENRESA may also contract with the utilities some specific services in order to have a smooth transition.		
Q.No	Country	Article	Ref. in National Report

108	Netherlands	Article 26	26.1, p.109
Question/ Comment	Section 26.1 (page 109) describes the organization and responsibilities for dismantling. In order for the authorization to be granted for the dismantling, the licensee must first have conditioned the radioactive waste in accordance with the acceptance criteria. What are these acceptance criteria?		
Answer	All the waste generated in the Spanish nuclear facilities has to be conditioned in order to meet the waste acceptance criteria established by El Cabril for each different kind of waste. Waste acceptance criteria for El Cabril facility are established depending of the conditioning mode (compactable or conditioned in solid matrix) and their level (Level 1 or 2). They include limits in free liquid, mechanical strength, maximum dose in contact, surface contamination, etc, and activity limits (list of different radionuclides). Besides, there are also objectives of quality on mechanical strength, confinement and resistance to thermal cycles.		
Q.No 109	Country Netherlands	Article Article 26	Ref. in National Report 26.1, p. 109
Question/ Comment	In section 26.1 (page 109) the organisation and responsibilities for dismantling are described. Are there are also (financial and/ or legal) provisions in force for the (unforeseen) case that a nuclear power plant has to be shut down and dismantled (much) earlier than the expected lifetime?		
Answer	Royal Decree Law 5/2005, of 11th March establishes the modalities for a fall-back situation. If nuclear power plant has to be shut down and dismantled earlier than the planned lifetime (40 years) and this situation is due to a decision of the owner, then this latter has to pay the estimated deficit. For so doing the Law opens a three year period after shut-down. If the shut-down follows a government decision the potential deficit will be charged to the electricity tariffs.		
Q.No 110	Country Netherlands	Article Article 26	Ref. in National Report 26.2, p.109, 110
Question/ Comment	Section 26.2 explains that dismantling is financed with funds that are transferred form licensee to ENRESA during operating lifetime. During decommissioning, a licensee may not be able to provide additional funding, since after shut-down of its plant, no more commercial activities are left. What provisions have been made to ensure that the funds will be sufficient, in any stage of decommissioning?		
Answer	According to Decree Law 5/2005, of 11th March, NPPs, jointly with the amounts collected via electricity tariffs, must contribute to funding during their period of operation. Consequently their contributions to the Fund for Radioactive Waste Management are in the form of a quota on their electricity output (euros/Mwh). Legal obligation of funding ends when the plant is shut-down. To avoid any deficit in the fund, economic and financial estimations are review every year by ENRESA and the level of funding accordingly		

	adjusted. If any deficit appears during decommissioning and the operational life-time have coincided with the 40 year period established, future deficits, in such a case, will be charged to electricity tariffs. More detailed information can be found in General Radioactive Waste Plan at www.enresa.es		
Q.No 111	Country Korea, Republic of	Article Article 27	Ref. in National Report p.186 (I)
Question/ Comment	Section I.27.2 introduces a transboundary movement case of transporting 2 irradiated fuel rods to Belgium in 2007. 1. What kinds of transport means (e.g. ship, train, trailer, etc.) were used for the above transboundary movement case? 2. What kinds of specific obligations were carried out to "the States of transit" in the above transboundary movement case?		
Answer	With regard to the obligations with the States of Transit we can list the following requirements related to this transport: 1- Notifications between Spanish authorities and French or Belgian Authorities. As the Directive 92/3/Euratom does not apply to spent fuel, there was no need of sending the corresponding section of the standard document for the supervision and control of shipments of radioactive waste referred to in this Council Directive, so, in conclusion, the Spanish authority responsible for the authorisation of this transport was under no obligation to contact the other countries. 2- Safeguards. Almaraz NPP notified to EURATOM about the activities inside the plant to prepare the transport and also another notification about the date of the shipment was sent. 3- Physical Protection Prior to the realisation of the shipment, TRANSNUBEL had to apply for an authorisation in terms of physical protection in each of the three countries. According to the Spanish authorisation, TRANSNUBEL should notify the details of the transport 10 days prior to its realisation. Similar measures were adopted by the French and the Belgian authorities that granted the authorisation. 4- Third Party Liability in the Field of Nuclear Energy TRANSNUBEL was operator liable for the shipment so the insurer of Certificate of Financial Security for the Carriage of Nuclear Substances was the “Syndicat Belge D’Assurances Nuvcleaires” and it was signed by the Competent Belgian Authority.		
Q.No 112	Country Belgium	Article Article 28	Ref. in National Report Page 193
Question/ Comment	How is it proved that an orphan source is of “national origin”?		

Answer	From information included in marks and labels on the sources itself or on the equipment where they are included as well as gathering information on the pathways followed by the sources to end up at the scrap recovery factory, an investigation is carried out. In many cases a conclusion can be drawn on whether the source comes from national practices or it comes from abroad.		
Q.No 113	Country Belgium	Article Article 28	Ref. in National Report Page 193
Question/ Comment	Radioactive sources can also be found in other non-nuclear activities such waste collection. What is the current practice for these so called “orphan sensitive” non-nuclear activities?		
Answer	The main orphan sensitive non-nuclear activities identified in Spain was metal scrap recovery industries. In 1999 a protocol was signed up for authorities, metal scrap recovery companies and the national agency for radioactive waste management (Enresa) to co-operate on surveillance of radioactive materials in metal scrap as well as on management of materials found. This protocol is implemented by industries in a voluntary basis. As a result gate radiation detectors were place at the entrance of almost every facilities working with scrap. Enresa is in charge of safe management of radioactive sources/material found. The approach followed for metal scrap surveillance has been incorporated to regulation 229/226 where it is stated that in those facilities with specific characteristics related to potential for orphan sources to be found, surveillance, control and procedures to be followed in case of detection can be carried out in the frame of agreements to be established by Ministries in charge and Nuclear Safety Council. Gate radiation detectors have also been placed, in a voluntary basis, at the entrance of many facilities to manage with urban or industrial wastes. In case of detection at those gate radiation detectors the first step is to segregate the radioactive material followed by characterisation by a radiation protection expert company. Once identified the radioactive material decision is made about the way to manage it, on the place isolation to decay is chosen when short half-live radionuceides are found, otherwise the material is transferred to Enresa for its management as radioactive waste.		
Q.No 114	Country Belgium	Article Article 28	Ref. in National Report Page 194
Question/ Comment	Could Spain elaborate more about the national campaign ?		

Answer	The Ministry of Industry, Tourism and Trade has promoted a campaign at national level for the search, recovery and management of orphan sources. The campaign started on February 2007, and is conducted by ENRESA under the auspices of MITYC and CSN. The activities undertaken for the campaign include: • Large diffusion through personal contacts towards companies or groups identified as having major interest and professional fora, including notices in specialised publications • Participation in meetings related to the use of radioisotopes in medicine • Letters to official technical and scientific associations The response from owners (universities and secondary schools, research laboratories, industry, hospitals, national and autonomic administration, private owners, etc.) has been large and positive in such a way that in the period 2007-08 a total of 122 sources, with a global activity of 94.3 GBq, have been recovered under the umbrella of the authorisation, as indicated in the report, given to ENRESA. The campaign will be maintained in 2009		
Q.No 115	Country Belgium	Article Article 28	Ref. in National Report Page 194
Question/ Comment	What is the approach/practice on the application of the article on “financial guarantee of HASS”?		
Answer	After regulation 229/2006 was released in march 2006 a generic letter was sent to all licensed holders of high activity sealed sources to add a specific additional condition to their authorisations requiring them to get a financial security for the safe management of sources when they become disused sources, including the case where the holder becomes insolvent or goes out of business. Authorisations for new high activity sealed source holders also include such condition on financial guarantee. Compliance with this requirement has been verified by regulatory yearly control inspections. The costs deriving from the management of stray sources, and from interventions for the recovery of such sources or to address radiological emergencies caused by them, shall be covered by the last owner of the sources, as long as this owner may be identified (Article 12 of RD 229/2006). If this were not possible, these costs shall be covered by the licensee of the facility at which the source is detected, except in specific cases.		
Q.No 116	Country China	Article Article 28	Ref. in National Report Section J, P. 192
Question/ Comment	El Cabril repository receive spent radiation source?		

Answer	Sources that cannot be disposed of are stored at a specific room of the waste treatment facility.		
Q.No 117	Country France	Article Article 28	Ref. in National Report J - p. 193
Question/ Comment	In accordance with the RNRF, the removal by ENRESA of a disused source has to be authorized by the Ministry of Industry. Could Spain specify the characteristics of these authorizations ?		
Answer	In the development of the campaign for the search, recovery and management of orphan radioactive sources, it was considered convenient that ENRESA had a generic authorisation so as to take care of the sources that could be found. On October 18 2007, the Ministry of Industry, Tourism and Trade (MITYC) gave to ENRESA such an authorisation. It authorises the tranfer, as waste, of the sources that are found. ENRESA must maintain a register of the sources where data such as their characteristics, date of recovery and final destination are to be included. Besides, ENRESA will have to send an extensive report to MITYC and Nuclear Safety Council at the end of the campaign. Article 12 of RD 229/2006 states that the costs deriving from the management of stray sources, and from interventions for the recovery of such sources or to address radiological emergencies caused by them, shall be covered by the last owner of the sources, as long as this owner may be identified. If this were not possible, these costs shall be covered by the licensee of the facility at which the source is detected, except in specific cases.		
Q.No 118	Country Hungary	Article Article 28	Ref. in National Report J p.191-195
Question/ Comment	No information (neither quantities nor nuclides) can be found on the inventory of DSRS stored or disposed of.		
Answer	In El Cabril 1945 sources (44 radioisotopes) have been disposed of, and 2183 sources (88 radioisotopes) are stored in different storage buildings		
Q.No 119	Country Romania	Article Article 28	Ref. in National Report Section J, page 193
Question/ Comment	Who is responsible in Spain with the financial sources for management of disused radioactive sources (old or orphan sources) and in what facility are these sources finally disposed?		
Answer	The policy concerning sealed sources is that the user has to arrange a specific clause with the supplier prior to be authorised to import them so the source will be returned to the country of origin when no longer in use. If this is not possible when the device becomes useless, the owner must pay the costs of its management by ENRESA. On the other hand, Article 12 of Royal Decree 229/2006 states that the costs deriving from the management of stray sources, and from interventions for the recovery of such		

	sources or to address radiological emergencies caused by them, shall be covered by the last owner of the sources, as long as this owner may be identified. If this were not possible, these costs shall be covered by the licensee of the facility at which the source is detected, except in specific cases.		
Q.No 120	Country Slovenia	Article Article 28	Ref. in National Report page 194
Question/ Comment	Through recent campaigns, a number of sources were recovered (received) mainly from hospitals, research centres, faculties, university colleges, other educational centres and individuals. It is definitely a good practice. Can you provide more information on authorisation of ENRESA for performing this task and on financial charges to a source holder (if any)?		
Answer	In the development of the campaign for the search, recovery and management of orphan radioactive sources, it was considered convenient that ENRESA had a generic authorisation so as to take care of the sources that could be found. On October 18 2007, the Ministry of Industry, Tourism and Trade (MITYC) gave to ENRESA such an authorisation. It authorises the tranfer, as waste, of the sources that are found. ENRESA must maintain a register of the sources where data such as their characteristics, date of recovery and final destination are to be included. Besides, ENRESA will have to send an extensive report to MITYC and Nuclear Safety Council at the end of the campaign. Article 12 of RD 229/2006 states that the costs deriving from the management of stray sources, and from interventions for the recovery of such sources or to address radiological emergencies caused by them, shall be covered by the last owner of the sources, as long as this owner may be identified. If this were not possible, these costs shall be covered by the licensee of the facility at which the source is detected, except in specific cases.		
Q.No 121	Country Belgium	Article Article 32	Ref. in National Report Page 17
Question/ Comment	Could Spain give more details for each of the NPP on the quantities and characteristics of the wastes and inform on the installed nuclear capacity (MWe). Furthermore, the distinction between VLLW and LILW related should be explained (e.g. difference in activity, presence of radio nuclides.		
Answer	There are concentration limits for different â-ã emitters radionuclides at El Cabril facility; upper limits are different for LILW and VLLW. With regard to á emitters even though there are different limits foe LILW and VLLW, there is a global inventory limit for the facility (2,7 E+1 TBq) and all wastes together 370Bq/g. Please see attached table in the support document regarding data of operational wastes from NPPs. Definition for VLLW: The management of this category and its limits changes country to country while in this case it has been taken as primary reference the French concept that it is assumed to be the most proper for the Spanish case. In a brief definition, it could be		

	said that are considered as VLLW those wastes with specific activities bellow and/or in the order of 100 Bq/g being the case that each radionuclide is having an individual limit arisen from the SA.		
Support Documents	» Spanish Answer support document		
Q.No 122	Country Canada	Article Article 32	Ref. in National Report Section D.5, p.37
Question/ Comment	Please provide information on the process to resolve conflicting needs of the Government (MITYC), the regulator (CSN) and, the Research organization (CIEMAT) in the development of the Integrated Plan for the Improvement of the CIEMAT Installations (PIMIC).		
Answer	The procedures of the administrative function are clearly established and assigned between the MITYC, the CSN and the CIEMAT: the ministerial department in charge of arrangements for the PIMIC (MITYC) endorses the PIMIC. MITYC must request the CSN a mandatory report, which will be bindind in the case of rejesting the request. Additionally, the CSN may establish binding limits and conditions if the report is favourable. CIEMAT is a public research centre subject to the plan for the improvements of its installations (PIMIC).		
Q.No 123	Country Croatia	Article Article 32	Ref. in National Report page 15
Question/ Comment	In the classification of radioactive waste it is mentioned that estimated amount of HLW is 12,800 m3 for which a construction of surface centralized temporary storage facility is foreseen. Since storage may temporary solution for HLW for several decades, is there a plan to build a final repository for HLW in Spain? If so can you describe plans for it?		
Answer	The 6th GRWM Plan considers, as regards to economic calculations and planning, that a disposal site would enter into operation by 2050 (prefered option), but no option for final management is yet taken.		
Q.No 124	Country Croatia	Article Article 32	Ref. in National Report page 17
Question/ Comment	One assumption in the GRWP reference scenario is that open fuel cycle is considered and the option of reprocessing spent fuel is not being contemplated. Spain has already had practice to reprocess spent fuel in France and Great Britain. Why was this concept left in the reference scenario?		
Answer	Since 1983 National Energy Plan spent fuel is considerd as a waste and, as a consequence, the option for reproccessing is not contemplated, with the only exception of the Spent Fuel from Vandellos I NPP for technical reasons.		

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Q.No 125	Country Czech Republic	Article Article 32	Ref. in National Report
Question/ Comment	How is the VLLW defined (by total activity, volume activity, doses)? Volume activities disposed in El Cabril seem to be comparable with LLW and ILW levels used in some countries. Are the criteria derived from safety assessment as it has been indicated in 14.1., or are some radionuclides restricted administratively only?		
Answer	Activity limits are derived from the Safety assessment report. From there, the acceptance criteria and conditioning capacities of bulk waste generatied at the waste generator facilities give the final waste volumes to be managed by the waste management organisation (ENRESA). VLLW concentration limits are based on one side on the long term safety and on the other side on operational safety.		
Q.No 126	Country Czech Republic	Article Article 32	Ref. in National Report
Question/ Comment	Is the radioactive waste definition related to the activity content? Do you apply levels as clearance and exemptions to waste produced by nuclear installations? What is the way of management of such waste – municipal disposal, incineration, and reuse or recycling?		
Answer	The definition of radioactive waste is included in the Law of Nuclear Energy. According this definition, radioactive waste is any residual material for which no use is foreseen containing activity above certain levels defined by the Ministry of Industry Tourism and Trade with a previous report issued by the CSN. The clearance system for residual materials generated by nuclear facilities is based on: - The need of an authorisation granted by The Ministry of Industry Tourism and Trade. - Radiological criteria prescribed by the 96/29 EURATOM Directive for the clearance of materials. - Recommendations RP-89, RP-113 and RP-122 p1. of the Group of Experts established under Art.31 of the Euratom Treaty. - Pathway analysis and impact studies considering the existing conventional waste management framework implemented in Spain for some specific waste streams like used oils, spent resins, active charcoal and others. - The use of a conservative approach in order to obtain derived clearance levels for a wide range of disposal options, considering the most restrictive situation. - Sometimes a realistic approach could be considered in order to obtain specific derived levels to be applied in specific disposal facilities. - Time-frame considerations usually based on prescriptions related to institutional control periods in landfill disposal or hazardous disposal facilities. - Dose Criteria.		

	- 10 microSv/year to the most exposed individual of the critical group in case of scenarios of normal occurrence. - Below 1 mSv/year to the most exposed individual of the critical group in case of accidental (low probability scenarios). Intruder construction, intruder well and intruder agricultural are considered as future use of landfill disposal sites after institutional control period is finished.		
Q.No 127	Country Czech Republic	Article Article 32	Ref. in National Report
Question/ Comment	Do short and medium lived LLW and ILW contain Cs-137?		
Answer	Low and intermediate level wastes may contain Cs 137. It is one of the major components of NPPs wastes with a half life close to 30 years that has to be clearly taken into account and identified.		
Q.No 128	Country France	Article Article 32	Ref. in National Report D.3 - p. 32
Question/ Comment	Vandellos I nuclear power plant (dismantling phase) has an installation in the lower part of the reactor building for the storage of the graphite waste from fuel assembly sleeves. Could Spain clarify what is the likely identified path to dispose of the graphite waste (sleeves and reactor's core)? When the selected path for graphite waste disposal will be commissioned ?		
Answer	Spain has not yet identified the selected final disposition form of the graphite in the reactor core and the graphite stored at the basement of the reactor building.		
Q.No 129	Country France	Article Article 32	Ref. in National Report D.5 - p. 37
Question/ Comment	At the CIEMAT centre, a spent fuel reprocessing pilot plant is completely dismantled and currently in the decontamination phase. Could Spain explain if specific waste from the reprocessed spent fuel is currently stored or disposed of ? Could Spain specify processes used to package these specific waste from the reprocessed spent fuel before their storage or disposal ?		
Answer	Liquid wastes from reprocessing were shipped to Belgium for treatment by Begoprocess. Wastes are already returned to Spain.		
Q.No 130	Country Germany	Article Article 32	Ref. in National Report p. 36; Sec. D.4
Question/	According to the first line in Section D.4, Table 5 shows the inventory of radioactive wastes in Spain. However, all wastes in the		

Comment	table are declared as VLLW (Very Low Level Waste). On the other hand it is mentioned on page 17 that there is an amount of 171,500 m³ of Low and Intermediate Level Waste (including some 90,000 m³ of VLLW) to be managed in Spain. These figures are not consistent with the figures of Table 5. Could you please provide some clarification on these inconsistencies?		
Answer	Effectively, there is a mistake in the English translation referring to the column “Type of waste”. It should be LILW instead of VLLW.		
Q.No 131	Country Hungary	Article Article 32	Ref. in National Report B.1.2 p.14
Question/ Comment	What is the mechanism of the participation of the general public in the review of the General Radioactive Waste Plan?		
Answer	As it is said in the National Report, after this Plan is drawn up by ENRESA and submitted to the Ministry of Industry, Tourism and Trade (MITYC), then the CSN, the Autonomous Communities, industry and social stakeholders are requested comments. The society is able to participate in the process through its legal representatives (industry, social stakeholders, NGOs) but, additionally, the general public is requested to send comments via its publication on the MITYC website.		
Q.No 132	Country Hungary	Article Article 32	Ref. in National Report B.1.2 p.14
Question/ Comment	Is there any forecast related to the timing of the Spanish program concerning high level waste and spent fuel disposal?		
Answer	The 6th General Waste Management Plan approved by the Cabinet of Ministers on June 23rd, 2006 says "From the point of view of economic calculation and planning, it has been assumed that a definitive disposal facility could be put into operation around the year 2050, which would house this spent fuel, the HLW and those other intermediate activity wastes that cannot be sent to the El Cabril facility.", but no option for final management has yet been decided.		
Q.No 133	Country Hungary	Article Article 32	Ref. in National Report B.2 p.15
Question/ Comment	What is the limit between the VLLW and the L/ILW in terms of activity concentration?		
Answer	There is a long list of upper concentration limits for VLLW that consider different radionuclides, ranging from H3 to different á emitters.		
Q.No	Country	Article	Ref. in National Report

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134	Hungary	Article 32	B.2 p.15
Question/ Comment	What is the limit of acceptable concentrations of long-lived alpha emitters with half lives of more than 30 years in HLW?		
Answer	There is not yet any determined limit for long lived alpha emitters for HLW.		
Q.No 135	Country Hungary	Article Article 32	Ref. in National Report B.2 p.15
Question/ Comment	Is the foreseen centralized temporary storage facility for long-lived L/ILW and the HLW planned to be at the same site?		
Answer	There will only be one single facility for both LILW-LL and HLW.		
Q.No 136	Country Hungary	Article Article 32	Ref. in National Report B.4.2 p.20
Question/ Comment	Do you intend to take into account the concept of reversibility and retrievability in deep geological disposal?		
Answer	The GRWN plan considers, that within the generic design for each host rock, retrievability criterion should be taken into account for a defined period of time.		
Q.No 137	Country Hungary	Article Article 32	Ref. in National Report B.5 p.20
Question/ Comment	Are there any limitations as far as VLLW disposal is concerned based on the half time of the nuclides in the waste?		
Answer	There is a long list of concentration limits for VLLW that consider different radionuclides, ranging from H3 to different á emitters. Half life is not the basis of the limit of each radionuclide.		
Q.No 138	Country Hungary	Article Article 32	Ref. in National Report B.5 p.20
Question/ Comment	What is the concentration limit of alpha emitters (long-lived) in LILW?		
Answer	With regard to á emitters there is a global inventory limit for the facility (2,7 E+1 TBq) and all wastes together 370Bq/g. Besides there are global limits for waste packages.		

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Q.No 139	Country Hungary	Article Article 32	Ref. in National Report D.3 p.31
Question/ Comment	What is the planned disposal route for graphite and the FA sleeves?		
Answer	There is not yet a defined disposal route for graphite arising from Vandellós I dismantling. Presently, graphite removed as part of the fuel assemblies has been conditioned and is stored in Vandellós site. There is still large quantities of graphite waste inside the reactor building that were used as moderator. It will be removed in the future, planned 25 years ahead, when the NPP would be decommissioned to Level 3 of IAEA. Disposal of graphite is a challenging issue in many countries which are striving to implement a definitive solution for this particular type of waste. In the meantime the General Radioactive Waste Plan (GRWP) commits ENRESA to follow the international evolution of ways to manage this material.		
Q.No 140	Country Korea, Republic of	Article Article 32	Ref. in National Report p.14 (B.1.2)
Question/ Comment	Section B.1.2 addresses that the General Radioactive Waste Plan (GRWP) is commented from the regulatory body, CSN. Section G.4.6 states that the generic conceptual design of the centralized temporary storage facility (without a specific site) in the GRWP has been favorably appreciated by the CSN. 1. Does the regulatory body usually review and appreciate the plan and generic conceptual design of nuclear facilities prior to official license application? If so, how will the preliminary review results be taken into consideration in the main regulatory review on the license application?		
Answer	Regarding the General Radioactive Waste Plan (GRWP), the Government is the responsible for establishing the policy on radioactive waste management and the dismantling and decommissioning of nuclear and radioactive facilities in Spain, through approval of the GRWP, this being submitted to it by the MITYC and subsequently reported on to Parliament. The GRWP itself is the basic reference document that clearly and concisely deals with all the strategies and actions to be undertaken in Spain in the different fields of radioactive waste management and the dismantling of facilities, along with the corresponding economic-financial study. The Nuclear Safety Council (CSN), as the sole body responsible for nuclear safety and radiological protection in Spain is requested comments to be taken into account to guarantee safety from the very beginning of the strategies and courses of actions to be accomplished in the future. Regarding generic conceptual design review, article 82 of the Regulation on Nuclear and Radioactive Facilities lays down "Any person or entity may request the Nuclear Safety Council to issue a declaration of favourable appraisal on new designs, methodologies, simulation models or verification protocols related to the nuclear safety or radiation protection of the		

	facilities or activities to which this Regulation refers to, for which he/she/it shall submit an application to said body accompanied by the documents necessary to make said declaration". As a consequence, the initiative to decide wether or not to request declaration of favourable appraissal on new designs belongs to the interested persons or entities. As regards with how these preliminary review results will be taken into consideration in the licence application, the article is completed as follows: "The declaration from the CSN may be included as a reference in any subsequent processes for applying for any of the permits envisaged in this Regulation, provided the limits and conditions imposed in the declaration are met."		
Q.No 141	Country Korea, Republic of	Article Article 32	Ref. in National Report p.36 (D.4)
Question/ Comment	Table 5 of the report shows the inventory of radioactive waste in Spain. 1. The Table 5 presents all types of wastes as "VLLW". Is the inventory of LILW at each site excluded in Table 5? 2. The Table 5 presents Co-60 and Cs-137 as main radionuclides. How the activity of non-gamma emitting radionuclides in the waste streams is quantified?		
Answer	There is a mistake in the English translation refering to the column "Type of waste". It should be LILW instead of VLLW. Regarding other radionuclides, Difficult To Measure radionuclides are derived and alpha activity is usualy measured.		
Q.No 142	Country Romania	Article Article 32	Ref. in National Report Section B, page 19
Question/ Comment	The Centralised Temporary Storage (CTS) facility, foreseen to entry into service for around the year 2012, will house the spent fuel and HLW for all of the Spanish nuclear power plants (i.e. both PWR and BWR fuel type)?		
Answer	Yes, the CTS facility will house all spent fuel already stored ot to be discharged in the future at all LWRs, as well as LILW-LL and HLW to be returned from reprocessing abroad.		
Q.No 143	Country Romania	Article Article 32	Ref. in National Report Section D, page 32
Question/ Comment	Could Spain provide more information on the management of the graphite pile wastes derived from dismantling phase of Vandellos I nuclear power plant?		
Answer	There is not yet a defined disposal route for graphite arising from Vandellós I dismantling. Presently, graphite removed as part of the fuel assemblies has been conditioned and is stored in Vandellós site. There is still large quantities of graphite waste inside the reactor		

	building that were used as moderator. It will be removed in the future, planned 25 years ahead, when the NPP would be decommissioned to Level 3 of IAEA. Disposal of graphite is a challenging issue in many countries which are striving to implement a definitive solution for this particular type of waste. In the meantime the General Radioactive Waste Plan (GRWP) commits ENRESA to follow the international evolution of ways to manage this material.		
Q.No 144	Country Romania	Article Article 32	Ref. in National Report Section B, page 14
Question/ Comment	Which are the waste acceptance criteria applied by ENRESA for the EL CABRIL disposal facility?		
Answer	Acceptance criteria is a set criteria depending of conditioning mode (compactible or conditioned in solid matrix) and their level (Level 1 or 2) . They include limits in free liquid, mechanical strength, maximum dose in contact, surface contamination, etc, and activity limits (list of different radionuclides). Besides, there are also objectives of quality on mechanical strength, confinement and resistance to thermal cycles.		
Q.No 145	Country Romania	Article Article 32	Ref. in National Report Section B, page 14
Question/ Comment	Could you provide more details about “waste treatment capability for conditioning” used at NPPs, for each type of radioactive waste?		
Answer	• Homogeneous wastes Resins, Concentrates and Sludge Homogeneous waste is usually conditioned by solidification, mixing the waste with cement in 220 litres steel drums. For specific wastes a pre-treatment may be needed before conditioning (e.g. chemical adjustment). Basically the solidification plant facility has the following elements: cement dosage system, drums transport and positioning system, resins draining and dosage system, and capping system. The mixture is poured into 220 litres drum by means of a planetary mixer (in some NNP´s the mixer is left in the drum). The final product is a solid matrix, homogeneous and exempt of free water. • Heterogeneous waste Scrap, Wood, Active Carbon The waste is packed into steel containers (220 or 1300 litres). Before capping, empty spaces of the container are filled with light concrete. • Dry active wastes Rags, Paper, Clothes, Plastic, Waste is introduced in plastic bags or directly into 220 litres drums and it’s compacted by a hydraulic press at NPPs getting a significant waste volume reduction.		

	• Dewatering Waste Concentrates and Sludge The process consists of evaporation to remove water from sludge and concentrates in a vacuum drying plant. The drying plant have mainly the following sections: concentrate tank, drying chamber, vacuum and condenser and cooling equipment. When the drying is finished and a 135 litres drum is taken out from the drying cabin, the drum is automatically capped and introduced into 220 litres shielded drum. • Liquid systems filters The filters are immobilized in concrete into 220 litres steel drum with an inner concrete wall of 5 cm of thickness.		
Q.No 146	Country Romania	Article Article 32	Ref. in National Report Section B, page 14
Question/ Comment	Which are the measures / treatment techniques applied for reduction of volume of LILW?		
Answer	At NPPs, utilities are responsible for volume reduction and ENRESA is collaborating with them in order to have a longer lifetime of the disposal facility. ENRESA does not implement any technique at the NPPs. At El Cabril facility, there is a high pressure compactor (1200t) and an incinerator.		
Q.No 147	Country Romania	Article Article 32	Ref. in National Report Section B, page 20
Question/ Comment	Which are the important parameters of radioactive waste that are used as criteria for classification (e.g.: radiological physical, chemical, biological).		
Answer	The main parameter is radiological but for VLLW other parameters are considered. LILW considers mainly â-ã emitters radionuclides with half life under 30 years. Once conditioned, under acceptance criteria limits, they can be disposed at the LILW or VLLW disposal facilities of El Cabril.		
Q.No 148	Country Romania	Article Article 32	Ref. in National Report Section B, page 20
Question/ Comment	If the specific activity is used as criteria for classification of the radioactive waste, can the values of gamma/ beta/ alpha emitting radio nuclides activities be specified?		
Answer	Yes there are concentration limits for different â-ã emitters radionuclides at El Cabril facility; limits are different for LILW and VLLW (thre is a long list of radionuclides with concentration limits of VLLW). With regard to á emitters there is a global inventory limit for the facility (2,7 E+1 TBq) and all wastes together 370Bq/g.		

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Q.No 149	Country Romania	Article Article 32	Ref. in National Report Section B
Question/ Comment	Is there any strategy for deep geological disposal in Spain?		
Answer	In the case of HLW and Spent Fuel, in the longer term, and only for the purposes of economic calculation and planning, a schedule will be mapped out for the startup of a definitive disposal facility in the year 2050 along with preliminary periods for decision-making, the characterisation of the site(s) and the construction of installations from 2025 to 2040 and from 2041 to 2050, respectively. In this respect, the activities for the forthcoming years will be, among others, as follows: The knowledge acquired of techniques and methods for the characterisation from the surface of granitic and clay geological formations capable of housing a definitive disposal facility will be compiled. Generic designs for each host rock will be consolidated and alternatives will be contemplated as a result of improved knowledge of the components and processes and considering the criterion of recovery of the wastes deposited for a defined period. The corresponding safety assessment exercises will be revised in order to update them in accordance with the progress made in the R&D programmes and in keeping with the revised designs. In parallel with the above, analysis and knowledge of the different alternatives to definitive disposal will be furthered, in close collaboration with the international progress and projects achieved and undertaken in this field, with a dimension and scope in keeping with the research capabilities existing in the country.		
Q.No 150	Country Slovakia	Article Article 32	Ref. in National Report page 21
Question/ Comment	Does the very low level waste repository project take into account possible gas generation due to long term microbiological degradation of organic material or corrosion of metallic material?		
Answer	Wastes have limitations in biodegradable and fermentable components.		
Q.No 151	Country Slovakia	Article Article 32	Ref. in National Report page 15
Question/ Comment	How safety assessment for very low level repository takes into account possible migration of long lived radionuclides form nearby located LILW reposiories?		
Answer	The Safety Report makes an analysis and a presentation of the potential consequences of the facility, including the radiological impacts from the VLLW and the LILW disposal areas. A specific section of the Safety Report is specially devoted to analyse the joint effect of both disposal areas, taking into account all the scenarios and radionuclides transfer pathways, and demonstrating compliance with radiological criteria.		

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PREGUNTAS AL INFORME NACIONAL

Q.No 152	Country Ukraine	Article Article 32	Ref. in National Report Section B.1.3, page 14
Question/ Comment	Who is responsible for the safety of management of radwaste and spent fuel at the site of NPP – operator of nuclear facility (producer of radioactive waste and spent fuel) or ENRESSA – company authorized to perform works with radwaste and spent fuel (responsible for storage, transport and management with radwaste and spent fuel)?		
Answer	The responsibility belongs to the operator of the nuclear facility.		
Q.No 153	Country Ukraine	Article Article 32	Ref. in National Report Section Â.4.2, page 20
Question/ Comment	When it is planned to complete works on each of four main stages directed at provision of final disposal of spent fuel and radwaste?		
Answer	As indicated in the report, there is not yet a decision on final management option. Nevertheless, the 6th GRWM plan requires ENRESA to submit in the coming years to the Ministry of Industry, Tourism and Trade, a report on management options, a report on feasability of new technologies and Basic Generic Projects summarising the knowledge acquired in relation to definitive disposal.		
Q.No 154	Country Ukraine	Article Article 32	Ref. in National Report Section D.1, page 31
Question/ Comment	Were any steps taken to modify or adapt the original system HI-STORM 100 to the conditions of NPP Jose Cabrera or to the requirements oft regulatory authorities of Spain?		
Answer	Yes, the original design of the HI-STORM 100 system was adapted to the dimensions of the Jose Cabrera fuel assemblies , affecting to the axial dimensions of the components, whereas the radial dimensions remain the same. Some other provisions were implemented taken into account the characteristic of the NPP. Thus, an auxiliary cooling system has been adopted incase of longer duration than expected fot the movement of the transfer cask in a horizontal position inside the plant (contingency measure).		
Q.No 155	Country Ukraine	Article Article 32	Ref. in National Report Section D.1, page 31
Question/ Comment	Do any transport containers exist for transportation of spent fuel from spent fuel dry storage facility at Jose Cabrera NPP to centralized storage of spent fuel?		
Answer	The HI-STAR transport cask (counterpart of the HI-STORM 100 storage system) will be used for canister transportation to the CTS.		

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Q.No 156	Country Ukraine	Article Article 32	Ref. in National Report Section À.2
Question/ Comment	General Radioactive Waste Plan (GRWP) is drafted by ENRESA and MITYG review this plan and submit it to the Government. Is CSN approval of the plan required?		
Answer	As described under Section B.1.2, the Government is responsible for the establishment of the national radioactive waste and spent fuel management policy through the GRWP. This plan is a document drawn up by ENRESA and submitted to the Ministry of Industry, Tourism and Trade (MITYC) pursuant to the legislation in force. It is to be submitted by the MITYC to the Government, which first requests comments (not approval) from the CSN, the Autonomous Communities, industry and social stakeholders, as well as from the general public via its publication on the MITYC website. Following approval by the Government, the plan is communicated to Parliament.		
Q.No 157	Country Ukraine	Article Article 32	Ref. in National Report Section A4, page 9
Question/ Comment	It is stated that radioactive waste management plans include implementation of “second line of radiological control of all materials existing the facilities”. What are the concrete measures of the “second line control”?		
Answer	The Nuclear Safety Control Guide GSN 9.3 establishes the need of establishing a methodology that allows the licensee to achieve a high level of confidence to distinguish between radioactive waste open to be desqualied and those which are conventional waste. This methodology should be based on the use, by the licensee, of two independent lines of defence: The first one consists of the establishment of a classification of the installation into different waste zones. The second one is oriented to controls to be passed by conventional waste before leaving the installation. According to this, it is required a confirmation of the conventional nature of the waste so classified using radiologic control procedures and equipments proposed by the own licensee.		
Q.No 158	Country Ukraine	Article Article 32	Ref. in National Report Section A4, page 9
Question/ Comment	What are the stimuli that force municipalities to submit their candidates for hosting CTS (Centralized Temporary Storage) site? Are there any submissions already done?		
Answer	Nowadays, the allocation of funds envisaged for municipalities surrounding this kind of facilities are set up by means of Ministerial Order from July, 13rd 1998 (Official State Gazette 17-7-98). According to this, towns surrounding a Centralized Interim Storage Facility (CISF) will get, within the terms and conditions of the order, an annual allocation made up of a fixed and a variable term. Additionally, it creates highly qualified employment and stimulates the local economical development. The next phase of the decision making process for the site selection for the CISF will be a public invitation for municipalities. Once this call for bidders be		

	published in the Official State Gazette, municipalities will be able to stand for selection as candidates.		
Q.No 159	Country Ukraine	Article Article 32	Ref. in National Report Section Â
Question/ Comment	What are advantages and disadvantages of the ENRESA as monopolist for radwaste management? Is it obligatory to have contract with ENRESA for any waste producer? If so, where is it defined and how supervised?		
Answer	Radioactive waste management is not a monopoly “de iure” in Spain. According to Royal Decree 1349/2003, of 31st October, the operators of nuclear and radioactive facilities that work with radioactive substances shall be obliged to have special installations for the storage, transport and handling of radioactive waste or alternatively to contract the use of the services of companies that have available installations. Said companies must be authorised by royal decree. This latter is the case of ENRESA, although it is possible for other companies to also undertake these tasks. That is not the case and Spain follows the European trend where radioactive waste management oriented to final disposal in the majority of the members of European Union is carried out by a solely management Agency or Body.		
Q.No 160	Country Ukraine	Article Article 32	Ref. in National Report Section B1, page 15
Question/ Comment	By whom and how the prices and tariffs for ENRESA services are calculated so that there is enough finances for GRWP realization? How often prices and tariffs are revised?		
Answer	Prices and tariffs for ENRESA’s services are estimated by ENRESA according to the methodology set up in the General Radioactive Waste Plans. The method calculates the total costs of managing the waste and SF originated by the existing fleet of NPPs (decommissioning included), the waste produced by institutional producers and others users of nuclear materials and facilities (fuel manufacturing plant and other facilities of the nuclear fuel cycle). To cover all the costs, a Fund has been established that is feed up on a monthly basis by large producers. Institutional producers pay a tariff when their waste is collected. The values to be paid are annually calculated by ENRESA and approved by the MITYC. These values are revised each year on the basis of an updated economic-financial report on the cost of the corresponding activities. More detailed information can be found in General Radioactive Waste Plan at www.enresa.es		
Q.No 161	Country United States of America	Article Article 32	Ref. in National Report Section D.3, Page 33
Question/ Comment	The El Cabril treatment and disposal facility operates an incinerator for decomposable solids, biohazards, liquids, oil, and solvents. In the U.S. there has been public objection to such incinerators. Briefly describe any public objections and their resolution with respect to siting and operating such incinerators.		

Answer	The project of the incinerator was included as part of the overall project of El Cabril and, consequently, subjected with the rest of facilities to an Environmental Impact Assessment (EIA). This process started in 1988 and concluded in 1989 with the corresponding Environmental Impact Statement issued by the Ministry of Environment after a Public hearing process. All through the EIA there were a number of objections to El Cabril disposal facilities and to waste transportation plans. Nevertheless the incinerator did not raised significant opposition or relevant questions during the different hearings held. Out of the EIA procedures, the several demonstrations against the facility construction in Córdoba did not address the issue of the incinerator, neither did they particularly mentioned it.		
Q.No 162	Country United States of America	Article Article 32	Ref. in National Report Section B.1.2, Page 14
Question/ Comment	Spain's radioactive waste management policy is defined in the General Radioactive Waste Plan (GRWP). The latest plan was approved in 2006. Please summarize the GRWP elements during the national presentation in May 2009. If this plan is available in English please provide a reference.		
Answer	The General Radioactive Waste Plan itself is the basic reference document that clearly and concisely deals with all the strategies and actions to be undertaken in Spain in the different fields along with the corresponding economic-financial study. The Plan describes the courses of action in the four major blocks or areas into which management has been divided: Low and Intermediate Level Waste (LILW), Spent Fuel and High Level Waste (SF/HLW), the Decommissioning of Facilities and Other Actions, and is completed with a specific section on Research and Development (R&D). The Plan also includes the economic-financial aspects of waste management, with a section on cost estimates and another on the system for the financing of these costs, with special emphasis on those relating to the nuclear power plants, along with a calculation of all the revenues required and to be collected in each case. An English version of the Plan can be found at www.enresa.es (document store --> institutional reports (ENGLISH VERSION))		
Q.No 163	Country China	Article Article 33	Ref. in National Report Section D, P.32
Question/ Comment	What is the requirement for the waste in temporary storage installations at each plant? How long the waste can be stored in the facility?		
Answer	Art.33 of the Joint Convention refers to the attendance to the review meeting and is not included within the scope of the National Report.		