ITALY

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

Questions/Answers

April 2018

Q.No *	Country Canada	Article Planned Activities	Ref. in National Report Section A.1.2, A.2, B.5
Question/ Comment	The overview matrix shows the long-term management policy for nuclear fuel cycle wastes including an “interim ILW/HLW storage facility”. Has the strategy for disposal of ILW/HLW been developed? For what period is storage of ILW/HLW envisaged before disposal would be developed? As storage is not a permanent solution, how does this policy address the principle of minimizing the burden to future generations?		
Answer	The overall policy and strategy for radioactive waste management will be defined in the National Programme that is to be issued according to the procedure established in the Legislative Decree n. 45/2014 . During the period July-November 2017 the draft of the National Programme went under public consultation within the procedure of Strategic Environmental Assessment (SEA). For ILW/HLW a long term storage period (50-100 y) is envisaged. For their geological disposal the programme envisage participation to international research activities in connection with multinational solutions, also in relation to the limited amount of waste.		

Q.No *	Country Canada	Article Planned Activities	Ref. in National Report Section B.5
Question/ Comment	“The Ministerial Decree December 2nd, 2004 requested SOGIN to proceed to the treatment and conditioning into certified form, in a 10 year time frame, of all liquid and solid wastes, ready to be delivered to the National Repository.” How mature is the repository concept specifically relating to Waste Acceptance Criteria and certified waste form? What is the level of confidence that wastes that have been conditioned will not require further rework to be compliant for disposal once the repository has been realized?		
Answer	The requirements adopted for conditioning of Low and Medium radioactive waste are sufficiently conservative for disposal in a near surface facility. Furthermore, ISPRA has recently introduced an additional requirements to the operators for RW conditioning that refers to a kind of certification, named Letter of Compliance, from SOGIN, the supposed operator of the future National Repository, that the conditioned waste will be accepted at the surface disposal. Different situation for the ILW, where the strategy is storage at the long term storage facility that will be realized at the site of the National Repository. Conditioning requirements mainly address long term storage and assurance that conditioned waste will be accepted to the future geological disposal is subject to more uncertainty.		

Q.No *	Country Canada	Article Planned Activities	Ref. in National Report Section B.6
Question/ Comment	What is the anticipated duration of the storage of the “pre-disposal period” for the HLW strategy?		
Answer	The present strategy foresees that HLW, as well as ILW and spent fuel that will not be reprocessed, will be stored at the long term storage facility that will be realized in the National Repository. At the moment there is not strategy for disposal, then the foreseen period of storage for ILW/HLW and SF is more than 50 years.		

Q.No *	Country Ireland	Article General	Ref. in National Report n/a
Question/ Comment	Ireland would like to thank Italy for its detailed national report.		
Answer	Italy would like to thank Ireland for this statement.		

Q.No *	Country Ireland	Article General	Ref. in National Report n/a
Question/ Comment	Areas of Good Performance/ Good Practice: Progress has been made with the National Repository. The Italian government has taken the decision to authorise the publication of the National Chart after conclusion of the SEA process.		
Answer	Italy would like to thank Ireland for this statement. The conclusion of the SEA process it is expected very soon.		

Q.No *	Country Ireland	Article General	Ref. in National Report n/a
Question/ Comment	Challenges: • An on-going challenge for the Italian government to continue efforts to develop a national policy and strategy for safety and national policies and strategies for decommissioning and management of radioactive waste including disposal. This challenge was also raised as a recommendation raised during the November 2016 Integrated Regulatory Review Service mission. • Implementation of the recommendation and suggestions raised during the IRRS mission to Italy in November 2016.		
Answer	With the aim to cope the challenge from the previous RM and to implement the recommendation from the IRRS mission with regard to the a national policy and strategy for safety and national policies and strategies for decommissioning and management of radioactive waste including disposal, in the National Programme for the management of radioactive waste and spent fuel drafted pursuant to Legislative Decree 45/2014 implementing Directive 2011/70/EURATOM, it has been established that “The fundamental principle underlying the national policy on radioactive waste and spent fuel management is to protect the population, the workers and the environment from the risk of exposure to ionizing radiation and, in particular, to avoid undue transfer to future generations of the onerous duty of managing radioactive waste present today, ensuring adoption of the necessary solutions, without delay National policy is also based on the general principles indicated in article 4 of directive 2011/70/Euratom, which are provided below: a) the generation of radioactive waste shall be kept to the minimum which is reasonably practicable, both in terms of activity and volume, by means of appropriate design measures and of operating and decommissioning practices, including the recycling and reuse of materials; b) the interdependencies between all steps in spent fuel and radioactive waste generation and management shall be taken into account; c) spent fuel and radioactive waste shall be safely managed, including in the long term with passive safety features; d) implementation of measures shall follow a graded approach; e) the costs for the management of spent fuel and radioactive waste shall be borne by those who generated those materials; f) an evidence-based and documented decision-making process shall be applied with regard to all stages of the management of spent fuel and radioactive waste.		

Q.No *	Country Belgium	Article Article 6.1.3	Ref. in National Report Section B.6 Pg 18 Section G.6.1 Pg 84
Question/	The siting process of the nationnal repository envisages a phase of public participation.		

Comment	Could you please ellaborate about the modalities of public input in the siting and which part of the safety concept of the facility will be selected through public participation?
Answer	The siting procedure foresee the publication of the list of potential areas where the National Repository could be sited. At that moment the public, that includes all level of stakeholders (municipalities, regional authorities, associations etc. . as well as individual persons) can send its comments relevant to the identified areas, but not only. Together with the publication of the list of areas, SOGIN has to publish also the preliminary design of the facilities that will be realized in the site, it means a near surface disposal facility for LLW and a long term storage facility for ILW/HLW/SF. This means that public debate will include also discussion about the design and the characteristics of the facilities. This phase of public consultation has the main objective to reach an agreement with one or more interested regions that will allow to perform the onsite investigations necessary for confirmation of the suitability of the area. Only when the procedure will arrive at selecting one site, SOGIN will present the detailed design of the facilities so initiating the licensing process for construction and authorization. A specific information and participation campaign is envisaged for the communities of the selected site.

Q.No	Country	Article	Ref. in National Report
*	United Kingdom	Article 9	p.89 Section 9.1

Question/ Comment	This seems like a pretty blunt case of not formally meeting the Article 9 commitment to “ensure” that programmes [for OPEX feedback] are in place. The question is trying to ascertain whether or not, regardless of whether there are legal/regulatory requirements, if OPEX programmes have been established or are lacking. In Section 9.2 (assessment of compliance), the National Report asserts compliance with Article 9 but caveats this with “… considering the limited residual life of the spent fuel management facilities….”. This doesn’t seem very well justified because, firstly, Article 9 doesn’t contain this caveat but, secondly, regardless of spent fuel ponds and interim storage there are plans for long term LLW/ILW/HLW storage in Italy, which would surely benefit from good OPEX programmes, as well as a significant amount of reactor decommissioning remaining. Article 9 paragraph (vi) expects contracting parties to ensure that programmes to collect and analyse relevant operating experience are established and that the results are acted upon where appropriate. The National Report states that collection of operating experience is not a legal requirement, although it notes that some of the regulator’s technical guides ask for taking such data into account. Please provide further information as to how the obligation of Paragraph (vi) of Article 9 of the Convention is achieved. Please also confirm whether operating experience collection and analysis programmes in place at each of Italy’s nuclear sites and, if not, how does the regulator intend to resolve this?
Answer	From the legislative and regulatory point of view it has first of all to be mentioned that in October 2017 the Legislative Decree n.137/2017, with which the Directive 2014/87/Euratom has been transposed into the national legislation, entered into force. This new Decree establishes amendments to the legislative decree n. 230/1995 so that art. 37- ter now states that the licence holder has to register, document and assess internal and external operating experience relevant to nuclear safety. This provision

	fully applies to spent fuel management facilities, waste management facilities inside nuclear installations and to decommissioning activities of nuclear installations themselves. Furthermore art. 37-quarter on periodic safety review require operating experience to be considered in this context. What reported in the National report concerning legislative provisions on operating experience refer to the situation before the issue of legislative decree n.137/2017. From the implementation side it is to be mentioned that operating experience has always been recorded and assessed by the llicensees. In addition, in the licensing process of new facilities connected to waste treatment and conditioning references to iinternational experience have to be provided.		
Q.No *	Country Austria	Article Article 13	Ref. in National Report 97
Question/ Comment	Could you provide further information whether the final repository for spent fuel and high level waste should be located in Italy or an international cooperation should be sought?		
Answer	In principle, a geological repository for the disposal of high activity radioactive waste (including spent fuel) should be constructed in Italy, even though, in the case of Italy, the quantity of spent fuel and high level waste to be disposed of is very modest and the solution of creating a geological depot within the country appears to be very expensive. During the period when the high activity radioactive waste will be stored in the long term storage facility of the National Repository, the most appropriate disposal solution for this waste will be identified, also taking into account the opportunities provided within the context of possible international agreements that could be concluded within the same period.		
Q.No *	Country United States of America	Article Article 13	Ref. in National Report Section H.13.1 pg. 97
Question/ Comment	The report notes "...information to the public on new facilities to be constructed in the nuclear sites is provided in the context of information meetings periodically arranged with local authorities." Please elaborate on these meetings, including how many have been held, and what has been the reaction from the local authorities to the information presented at these meetings.		
Answer	About twice a year the so called “Table of transparency” are arranged by the Region hosting the nuclear installations. The meetings are attended by the national competent authority, operators, representatives from the Region and are opened to stakeholders, local communities and the public. Anyone of the participants can ask information about topics related to the decommissioning of the installations, management of waste and spent fuel and all other aspects linked to the safety management of the nuclear activities in the region. These meetings represent, in particular for the public, a moment of information and clarification on topics and issues in the nuclear safety field and they are always welcome.		
Q.No *	Country Switzerland	Article Article 16	Ref. in National Report 16.1, 103
Question/ Comment	According to Article 16vii, each contracting party shall take the appropriate steps to ensure that programmes to collect and analyse relevant operating experience are established and that the results are acted upon, where appropriate. According to the Italian report, programmes to collect and analyse relevant operating experience are established and the results are acted upon, where appropriate. Could you explore more on how these programmes are established, what experience shall be collected and analysed?		

Answer	From the legislative and regulatory point of view it has first of all to be mentioned that in October 2017 the Legislative Decree n.137/2017, with which the Directive 2014/87/Euratom has been transposed into the national legislation, entered into force. This new Decree establishes amendments to the legislative decree n. 230/1995 so that art. 37- ter now states that the licence holder has to register, document and assess internal and external operating experience relevant to nuclear safety. This provision fully applies to spent fuel management facilities, waste management facilities inside nuclear installations and to decommissioning activities of nuclear installations themselves. Furthermore art. 37-quarter on periodic safety review require operating experience to be considered in this context. What reported in the National report concerning legislative provisions on operating experience refer to the situation before the issue of legislative decree n.137/2017. From the implementation side it is to be mentioned that operating experience has always been recorded and assessed by the licensees. In addition, in the licensing process of new facilities connected to waste treatment and conditioning references to international experience have to be provided to the competent regulatory authority.

Q.No	Country	Article	Ref. in National Report
*	Denmark	Article 20.2	Section E, page 55
Question/ Comment	It is stated that the main national operator involved in the decommissioning and in the spent fuel and radioactive waste management has only the Ministry of Economy and Finance as shareholder, while the strategic and operational aims of the operator are given by the Ministry of Economic Development. Kindly elaborate on the relative positions potential interdependencies of the Ministry of Economy and Finance and Ministry of Economic Development within the regulatory framework as illustrated in Figure 10.		
Answer	There are not interdependencies between the Ministry of Economy and Finance and the Ministry of Economic Development. The Ministry of Economy and Finance, as showed in Fig. 10 has no rule in the Regulatory system, just assigns every year the amount of founding on the basis of the preliminary budget presented by the operator and endorsed by the National Authority for the Electricity and Gas (AEEG) as specified in para. 22.2. The Ministry of Economic Development gives the strategic and operational targets to the operator on which basis the National Authority for the Electricity and Gas (AEEG) endorses the operator’s budget.		

Q.No	Country	Article	Ref. in National Report
*	Denmark	Article 20.2	Section E, page 55
Question/ Comment	Kindly elaborate on the legislative basis of the independent, binding technical advice of ISPRA to the Ministry of Economic Development as licensing body in relation to granting and revoking of authorizations.		
Answer	As stated in art. 56 of Legislative Decree N. 230/1995 “The Ministry of Economic Development, shall issue the authorization for the decommissioning of nuclear facilities, conditioning it to the specifications established by ISPRA”.		

Q.No	Country	Article	Ref. in National Report
*	France	Article 22	Section 22.2 - page 77/193
Question/ Comment	It is indicated in the section 22.2 that "the current Italian decommissioning strategy foresees a deferred decommissioning until the unconditional release of the sites" and in the section 26.1 that "the current strategy for all national nuclear installations to be decommissioned is to reach unconditional release of the site". It is understood that immediate dismantling is implemented until a brown field (i.e. storage facilities) waiting for the removal of waste to their final destination (especially for NPPs under		

	decommissioning). This point could be better clarified in the report for all facilities under decommissioning.
Answer	The achievement of the green field condition (no radiological constraints) is the aims for all the national nuclear installations under decommissioning. This is the national current strategy that comes from the main Act of the Italian legislation, the Legislative Decree 230/1995 that, in Art. 7 “Definitions” establishes that “decommissioning means a set of planned technical and management actions, to be carried out on a nuclear installation as a result of its definitive shutdown or final cessation of the operational period, in accordance with the requirements of safety and protection of workers, members of public and the environment until the final dismantling or in any case the release of the site without any radiological constraint.”

Q.No	Country	Article	Ref. in National Report
*	Belgium	Article 22.3	Section K.1 pg 119-120
Question/ Comment	To which extent the IRRS recomendation that the government should provide the regulatory body with sufficient competent staff take into account the provision given in the further published legislative decree n13/2017 ?		
Answer	Legislative Decree n. 137/2017 gives assigns a larger amount of economic resources to the new competent regulatory authority ISIN, also to recruit new competent technical personnel. The current technical staff amounts to about 35 units while ISIN can recruit until 60 staff units. The total number of staff is 90, 60 of which of technical personnel.		

Q.No	Country	Article	Ref. in National Report
*	Ireland	Article 23	Pg 63
Question/ Comment	It is documented in the 2017 fifth Italian National report that the technical guides were issued in the 70’s and 80’s. It was identified in the 2015 Joint Convention review meeting that Italy plans to take measures in relation to new technical guides. Can Italy outline what progress has been made since the 2015 review meeting in relation to the development of new technical guides?		
Answer	The drafts of the following technical guides have been finalized: • Decommissioning of nuclear installations, • Storage of radioactive waste, • Clearance of materials, They are ready for a consultation process among the stakeholders for comments.		

Q.No	Country	Article	Ref. in National Report
*	Slovenia	Article 23	F, p. 63
Question/ Comment	Although the legislative system does not contain specific provisions regarding quality assurance in nuclear installations, QA requirements are detailed in specific Technical Guides issued by the Regulatory Authority in the middle of 70’s and at the beginning of 80’s, in the frame of a more general programme of development of technical guides to support the regulation of installations of the national nuclear programme. Does Italy intend to define requirements related to the management system in its legislative system?		
Answer	Technical Guides issued by the Regulatory Authority represent the second level of the National Regulatory System as reported at page 43, para 19.1. Legislative decree n. 137/2017 establish the requirement for licensees to develop and implement a proper management system assigning to nuclear safety the proper priority. Requirements related the management system (e.g. organizational predispositions, activity planning, staff training, design verification, quality controls, etc.) are reported in TG n. 8 “Quality assurance criteria for NPPs” which is however under review on the basis of most recent		

IAEA standards on leadership and management.

Q.No	Country	Article	Ref. in National Report
*	Slovenia	Article 24	F, p. 65
Question/ Comment	Are the measurements of radiation at the scrap metal facilities provided and by whom are they controlled or authorized?		
Answer	Article 157 of legislative decree n. 230/1995, as modified by legislative decree n. 100/2011, establishes that any persons who carry out, for industrial or commercial purposes, activities of import, collection, storage, or melting of scraps or other resulting metal materials as well as those who carry out, for industrial or commercial purposes, activities of import of semi-finished metal products, are required to perform a radiometric surveillance on the above mentioned materials, in order to detect the presence of abnormal levels of radioactivity or of any disused sources, in order to ensure the health protection of workers and the public from events that may involve exposure to ionizing radiation and to avoid contamination of the environment. The same article establishes that the certificate of the radiometric surveillance carried out is issued by qualified experts; it should be pointed out that such professional figures are recognized according to the provisions established in the legislative decree n. 230/1995. As far as the compliance with for all above mentioned provisions, ISPRA has general inspection powers as other local authorities (Labour Inspectorate and local Health bodies).		

Q.No	Country	Article	Ref. in National Report
*	Austria	Article 25	66
Question/ Comment	To be able to assess whether neighbouring countries are potentially affected by severe accidents als regarding the radioactive waste management and disposal it is important to take into account potential Beyond Design Basis Accidents. Italy submitted documents within the frame of an transboundary process, nevertheless at this point it is not possible to exclude accidents with impacts on territory outside Italy during different stages of disposal (interim storage, transport and final repository). However, Beyond Design Basis Accidents are not taken into consideration. Further information would be appreciated.		
Answer	All radioactive waste management and storage facilities are subject to off-site emergency preparedness arrangements based on specific hazard assessment. No probabilistic assessment is used but a deterministic approach is considered, even if the postulated event can be considered a very low probability accident events. For the new facilities this approach (e.g. postulating aircraft impact) is performed for licencing (design) purposes as well, applying the criterion to avoid the need for disruptive protective actions (evacuation). In Italy, most of the nuclear and radiological facilities are within the Emergency Preparedness Category III (EPC III). In any case, a very limited off-site emergency zones are requested for those facilities which, following the specific hazard assessment, result included in the EPC II. Therefore, for the nuclear and radiological Italian facilities currently in operation or under decommissioning, no transboundary consequences are expected even postulating BDBA. Of course, in general this is not true for activities and acts in EPC IV, such as transportation, if the event is postulated occurring very close to a national border. Arrangements are in place (in addition to the European and international early warning systems) with most neighbouring countries (but not with all) for rapid emergency information exchange in case of an emergency.		

Q.No	Country	Article	Ref. in National Report
*	Switzerland	Article 25	25.1, 67

Question/ Comment	It is mentioned that there are periodic emergency drills. What is the minimum amount of emergency exercises a licensee is obliged to conduct in one year and what kind of exercises have to be conducted?
Answer	The minimum amount of emergency exercises that a licensee is obliged to conduct is one per year. The overall on-site emergency plan is tested, including also the interface with the off-site emergency plan (e.g. off-site authorities notification procedures). In particular the exercise aims to verify the following emergency response tasks: - the organization of the staff in charge for the management, operation and maintenance of the plant under exceptional conditions is compliant with the operating rules approved by ISPRA; - the simulation of the reference accident as agreed with ISPRA; - the capability of intervention of the emergency teams (i.e. on site firefighters); - classification of the emergency and warning all workers and guest within the site; - application of the correct measures for radiation protection of workers involved in the emergency response; - appropriate conduct of the workers not involved in the emergency management and the guest present within the site (gathering at collection points, sheltering,..), verifying their safe location; - medical response set up by the operator (intervention of the first aid team, decontamination of contaminated workers); - activation of the on-site emergency centre; - notification of the accident and of the emergency classification to the off-site emergency management authorities, to the off-site urgent intervention and health care organizations, and to ISPRA, as by Legislative Decree no. 230 of 17th March 1995 (article 122), and according to the off-site emergency plan. - acquisition of the on-site meteorological data; - coordination of the monitoring activities of the mobile radiometric detection teams; - sampling and measurements activities(on-site and off-site) carried out by the mobile radiometric detection team; - delivering by the mobile radiometric detection team of the environmental samples (soil, grass, filter, ...) to the radiometric laboratory; - treatment of the environmental samples and execution of the analysis (i.e. high resolution spectrometry, alpha and beta counting...); - evaluation and elaboration of radiological data collected by the monitoring team.

Q.No	Country	Article	Ref. in National Report
*	United Kingdom	Article 25	p.67 Section 25.1

Question/ Comment	I think the design basis for spent fuel pools as well as long term waste storage is an interesting area for many contracting parties, including the UK. The approach to emergency planning in Italy sounds perfectly sensible (and actually quite similar to the UK) but it would be useful to hear a bit more about how they select the events that they actually plan for: a spent fuel pool liquid loss and minor aerial release is, for example and hugely different planning scenario as compared to extended fuel uncovery and a fuel fire. The National Report explains that the off-site emergency plan is based on “postulated reference events”. It seems from the Report that these events are put forward by a licensee and then revised by the regulatory authority. Please explain the criterion or criteria used to select the postulated reference events. In particular, please explain whether or not an initiating event frequency is applied.
Answer	The spent fuel currently present in spent fuel pools at the facilities now under

decommissioning (most of the Italian spent fuel was in the last decades sent abroad for reprocessing) was discharged more than 35 years ago. In such a conditions, the postulated accidental events refer to the spent fuel movement operations rather than to the pool liquid loss, entailing the breaking of the fuel rods plenums of one or more spent fuel element with an aerial release. Due to the very low decay power of the fuel, the strategy for the management of the residual spent fuel (e.g. for the ITREC spent fuel) is to store it in dry conditions. Concerning the waste storage facilities, the postulated accident scenario is usually represented by fire. The technical bases on which the off-site emergency plan is prepared are provided by the Operator and independently assessed by the Regulatory Authority. The selected accident scenarios are postulated not taking into account any initiating event frequency, but applying very conservative assumptions.

Q.No *	Country Austria	Article Article 27	Ref. in National Report 107
Question/ Comment	Italy has concluded an agreement on reprocessing with France and Great Britain. An explanation would be welcome to understand how Italy intends to assume its ultimate responsibility for the exported spent fuel assemblies, in particular concerning the contracts without take-back or the contracts with the UK including take-back, which could take place after the Brexit.		
Answer	Both the agreements with France and Great Britain foresee the take-back of the waste arising from reprocessing of spent fuel assemblies. Up to now it is not possible to evaluate what kind of impact, if any, will have the Brexit on the take-back of the waste form reprocessing of spent fuel from Great Britain.		

Q.No *	Country Slovakia	Article Article 27	Ref. in National Report Section I.27.2/ p. 108
Question/ Comment	It is stated that concerning transboundary movement of radioactive waste and spent fuel Italy follows administrative procedures established in the Directive 2006/117/Euratom. Could you specify/explain what emphasis do you place on compliance with time limits defined by Directive requirements for authorization of international shipments (standard documents)?		
Answer	Generally the time limits established by the Directive 2006/117/Euratom for authorization of international shipments are respected. Sometimes those time limits can be exceeded due to the internal process of authorization in which several authorities are involved. It has to be highlighted that, according to national legislation, re-export authorization of waste resulting from treatment and conditioning operations abroad cannot be refused.		

Q.No *	Country United Kingdom	Article Article 27	Ref. in National Report p.108 - 109
Question/ Comment	The Italian report states “For transboundary movement of radioactive waste and spent fuel Italy follows the administrative procedures established in the above mentioned European Union Directive 2006/117/Euratom implemented into the national regulatory framework by the Radiation Protection Act (Legislative Decree 17 March 1995, n°230 as modified).” No mention is made of Article 4(4) of Council Directive 2011/70/Euratom Reference is made to the European Council Directive on the supervision and control of shipments of radioactive waste and spent fuel (Council Directive 2006/117/Euratom). Are any shipments also subject to an intergovernmental agreement under Article 4(4) of the European Council Directive on the safe management of spent fuel and radioactive waste (Council Directive 2011/70/Euratom)? If so, please provide details.		

Answer	There are not any shipments subject to intergovernmental agreement under Article 4(4) of the Council Directive 2011/70/Euratom

Q.No	Country	Article	Ref. in National Report
*	Ireland	Article 28	Pg 113

Question/ Comment	Italy has regulations in place in relation to disused sources. What provisions does Italy have for the management of orphan sources including financial arrangements?
Answer	As regards the national strategies for gaining or regaining control over orphan sources, specific provisions are also established in the Legislative Decree No. 230/1995, in the Law No. 421 of 8th August 1996 and a ministerial decree, with a view to setting up detection apparatus measurement at the borders and at foundries or at facilities collecting metal scrap and metal by-products are already extant; in many instances apparatus and/or surveillance procedures are already in place. In relation to the problem concerning the orphan sources, additional specific provisions are laid down in the Legislative Decree No. 52/2007 to: - recover orphan sources also resulting from past activities; - deal with radiological emergencies due to orphan sources; - have drawn up appropriate intervention plans; - identify the competent authority responsible for intervention and to other organisms involved and relative duties. Other provisions are destined, by appropriate regulatory mechanisms: to regain the control of orphan sources, whose presence is ascertained, with a notification to the competent authority by anybody finds a source; to organize a campaign to recover orphan sources left behind from past activities also through surveys of historical records in possession of authorities and of holders. In particular, according to article 14 of Legislative Decree No. 52/2007, the Prefects of every province, in compliance with the national emergency plan referred to in Article 121 of the Legislative Decree No. 230 of 1995 issued by the Department of Civil Protection of the Presidency of the Council of Ministers, shall prepare schemes of response plans for the safety in the case of orphan sources discovered or suspected in the province, making use of the national fire department, of the regional agencies for environmental protection, of the national health service and, if appropriate, of the Labour Inspectorates.

Q.No	Country	Article	Ref. in National Report
*	Malta	Article 28	Page 113, Section 28.1, Sealed Sources R

Question/ Comment	In the sections 28.1 Sealed Sources Regulation in Italy, and 28.2 Spent Sources Management, it is mentioned that disused sealed sources are stored by the user or in medium or small size interim waste storage facilities. Does Italy have any plans for disposal of stored disused sealed sources?
Answer	The overall policy and strategy for disused sealed sources will be defined in the National Programme that is to be issued according to the procedure established in the Legislative Decree n. 45/2014 and subsequent amendments. The National Programme has been submitted in 2017 at a public consultation under the Strategic Evaluation Assessment procedure. Public consultation finished in November 2017 and final publication of the National Programme is foreseen by mid 2018. In the National Programme the realization of a national repository for low and medium radioactive waste, including disused sealed sources, and for the temporary storage of high activity radioactive waste is envisaged.

Q.No	Country	Article	Ref. in National Report
*	United Kingdom	Article 28	Section 28.2

Question/ Comment	This could be my own lack of knowledge on this one… but it strikes me that the Italian policy is just to store all the various unwanted sources in various places around the country but without any centralised storage and with no mention of a plan for how to dispose of this waste stream in the longer term, hence the question. The National Report notes that there is no central repository for disused sealed sources and explains that many sources continue to be stored in medium-term radioactive waste storage facilities. Please provide details of the strategy for the eventual processing and disposal of radioactive waste derived from disused sealed sources.
Answer	The overall policy and strategy for disused sealed sources will be defined in the National Programme that is to be issued according to the procedure established in the Legislative Decree n. 45/2014 and subsequent amendments. The National Programme has been submitted in 2017 at a public consultation under the Strategic Evaluation Assessment procedure. Public consultation finished in November 2017 and final publication of the National Programme is foreseen by mid 2018. In the National Programme the realization of a national repository for low and medium radioactive waste, including disused sealed sources, and for the temporary storage of high activity radioactive waste is envisaged. As mentioned in the National Report, in January 2015 SOGIN submitted a list of potential suitable area, called the National Chart, identified on the basis of the siting criteria provided by the TG n. 29 of ISPRA and by IAEA recommendations. The list of potential area have been selected after exclusion of territory on the basis of official Data Base e Cartography available. On July 2015 ISPRA completed its regulatory assessments and transmitted the reviewed National Chart of Potentially Eligible Sites (CNAPI) to the Ministry of Economic Development and the Ministry of Environment, Land and Sea Protection for the publication. Subsequently, the Ministries decided to suspend the publication of the National Chart, waiting for the finalization of the National Programme for Radioactive Waste and Spent Fuel Management. In the meantime, on January 2018, SOGIN submitted to ISPRA a new National Chart, modified according the recent update occurred in the official Data Base. ISPRA performed its verification and on March 29th transmitted the reviewed National Chart of Potentially Eligible Sites (CNAPI) to the Ministry of Economic Development and the Ministry of Environment, Land and Sea Protection for the publication.

Q.No *	Country	Article	Ref. in National Report
	Canada	Article 32	Section B.6

Question/ Comment	The section titled “Radioactive waste conditioning requirements” describes a process that “will produce waste form and waste package suitable for interim storage, transport and disposal.” What is the confidence that the current specification for conditioning will be adequate for disposal once final waste acceptance criteria for repository has been established?
Answer	The requirements adopted for conditioning of Low and Medium radioactive waste are sufficiently conservative for disposal in a near surface facility. Furthermore, ISPRA has recently introduced an additional requirements to the operators for RW conditioning that refers to a kind of certification, named Letter of Compliance, from SOGIN, the supposed operator of the future National Repository, that the conditioned waste will be accepted at the surface disposal. Different situation for the ILW, where the strategy is storage at the long term storage facility that will be realized at the site of the National

	Repository. Conditioning requirements mainly address long term storage and assurance that conditioned waste will be accepted to the future geological disposal is subject to more uncertainty.		
Q.No *	Country Canada	Article Article 32	Ref. in National Report Section D.3.2
Question/ Comment	Under the section titled EUREX – “qualification of the cementation matrix is at a well advanced stage” – what is the degree of confidence of the anticipated cement formulation requirements for disposal? How much can this possibly change when the repository design is finalized and final waste acceptance criteria for disposal confirmed?		
Answer	Liquid RW from EUREX facility will result, after cementation, classified as ILW. Conditioning requirements mainly address long term storage and assurance that conditioned waste will be accepted to the future geological disposal is subject to much more uncertainty. However, ISPRA has recently introduced an additional requirements to the operators for RW conditioning that refers to a kind of certification, named Letter of Compliance, from SOGIN, the supposed operator of the long term storage facility for HLW/ILW/SF that will be realized in the site of the National Repository, that the conditioned waste will be accepted at the long term storage facility.		
Q.No *	Country Czech Republic	Article Article 32	Ref. in National Report B.6, 19
Question/ Comment	Is possible to provide the general information of approved and used matrixes for fixing solid and liquid RAW, resp. semi-liquid RAW in Italian RAW processing facilities?		
Answer	Here some examples of approved cementation matrice for different waste streams: 1. Sludges from EUREX spent fuel storage pool Main sludge components: organic fraction, iron silicates and calcium silicates. Conditioning matrix composition: CEM IV/A-42,5 R pozzolanic cement, water/cement = 0.8, dry waste percentage = 32%. 2. 2AW/LLW Liquid radioactive waste from EUREX (Enriched URanium Extraction) pilot reprocessing plant Main waste components: nitric acid, sulfates, iron nitrates. Conditioning matrix composition: Sodium hydroxide for neutralization, CEM IV/A-42,5 R pozzolanic cement and silica fume, water/cement = 0.8, dry waste percentage = 27%. 3. Waste deriving from treatment by wet oxidation (WOT) of TRINO spent ion resins Main waste components: TOC (total organic carbon) = 5%, iron, sodium and ammonium sulfates, sodium borate, sodium carbonate. Conditioning matrix composition: High sulfate resistance 42,5 N CEM pozzolanic cement and CEM IV/A-P 42,5 R pozzolanic cement, water/cement = 0.38, dry waste percentage = 7.5%		
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Question/ Comment	Is possible to provide the general information of approved and used matrixes for fixing solid and liquid RAW, resp. semi-liquid RAW in Italian RAW processing facilities?		
Answer	Here some examples of approved cementation matrice for different waste streams: 1. Sludges from EUREX spent fuel storage pool Main sludge components: organic fraction, iron silicates and calcium silicates. Conditioning matrix composition: CEM IV/A-42,5 R pozzolanic cement, water/cement = 0.8, dry waste percentage = 32%. 2. 2AW/LLW Liquid radioactive waste from EUREX (Enriched URanium Extraction)		

pilot reprocessing plant
Main waste components: nitric acid, sulfates, iron nitrates.
Conditioning matrix composition: Sodium hydroxide for neutralization, CEM IV/A-42,5 R pozzolanic cement and silica fume, water/cement = 0.8, dry waste percentage = 27%.
3. Waste deriving from treatment by wet oxidation (WOT) of TRINO spent ion resins
Main waste components: TOC (total organic carbon) = 5%, iron, sodium and ammonium sulfates, sodium borate, sodium carbonate.
Conditioning matrix composition: High sulfate resistance 42,5 N CEM pozzolanic cement and CEM IV/A-P 42,5 R pozzolanic cement, water/cement = 0.38, dry waste percentage = 7.5%

Q.No *	Country France	Article Article 32	Ref. in National Report Section D.5 - page 51/193

Question/ Comment	It is indicated that "For [the pilot reprocessing facility] ITREC the decommissioning plan has been submitted for authorization in 2011" and that "Preliminary dismantling activities are however performed on the basis of “ad hoc” authorizations". Could Italy explain if the decommissioning application submitted in 2011 (6 years ago) is still applicable and consistent with the ongoing situation at the site?
Answer	Since 2011 some projects having priority for the safe management of spent fuel and existing waste have been started, based upon the approval of the competent regulatory authority, but not yet finalized (recovery of buried waste coming from 60’s, construction of facilities for liquid waste treatment, construction of a dry storage facility for spent fuel). Due to the above priorities the regulatory review of decommissioning application submitted has just started and if during the review some lack or inconsistencies will be found, an update of the documentation will be requested.

Q.No *	Country France	Article Article 32	Ref. in National Report Section D3.1 - page 42/193

Question/ Comment	Regarding the Caorso NPP radioactive waste treatment, it is indicated that "As result of an international tender, the thermal treatment and conditioning of operational radioactive waste has been assigned to a qualified Slovak operator. At the moment the qualification of the waste package that will result from the treatment and conditioning operations is ongoing. Also the licensing process in Italy and in Slovak Republic is in progress". Could Italy indicate the type of waste (classification) concerned by such thermal treatment? Is the packaging dedicated to storage or to disposal? Could Italy clarify the role of the Slovak authority in the waste package qualification and licensing?
Answer	After the thermal treatment, the resulting ashes in 220 l drums will be firstly compacted and then conditioned through grouting within 440 l qualified overpack. The resulting package will be classified LLW. The RW package will be qualified with respect to the following conditioning requirements: - Grouting (Compressive strength, Thermal cycling resistance, Radiation resistance, Leaching rate, Immersion resistance, Water permeability, Gas permeability) - Container (50y corrosion resistance, tightness) - Package (Free liquids, Fire resistance, stacking, penetration, mechanic resistance) These requirements have been developed for a conceptual design of near surface disposal. Furthermore, ISPRA has recently introduced an additional requirements to the

operators for RW conditioning that refers to a kind of certification, named Letter of Compliance, from SOGIN, the supposed operator of the future National Repository, that the conditioned waste will be accepted at the surface disposal.
UJD, the Slovak authority, will not enter in the licensing of the waste package qualification. The main role of UJD is related to the licensing process for import and transport, as well as for any modification to be implemented in the incineration facility.

Q.No	Country	Article	Ref. in National Report
*	France	Article 32	Section D3.3 - page 47/193

Question/ Comment	It is indicated that "A full description of the different facilities in the JRC [Joint Research Centre] ISPRA [Institute for the Environmental Protection and Research] is expected to be provided in the EURATOM report under the Joint Convention. The Joint Research Centre of Ispra is currently undertaking a global Decommissioning and Waste Management Programme aimed at dismantling the nuclear installations". Could Italy provide more information about the decommissioning program and strategy at JRC ISPRA and the related planning of projects and licensing steps under ISPRA supervision which are foreseen (including public consultation)?
Answer	It has first to be clarified that the Joint Research Centre is located in the town of Ispra, in the province of Varese. ISPRA, the Institute for Environmental Protection and Research) has the role of competent regulatory authority in the nuclear field which is exploited trough the National centre for Nuclear Safety and Radiation Protection. The decommissioning programme related to the nuclear facilities located in the JRC is regulated according to the Italian legislation. Main current activities are related to projects addressing the treatment, conditioning and interim storage of legacy waste, as well as interim storage of research spent fuel. A grouting station for the conditioning of existing LLW is under construction in the site. An interim Storage Facility has been constructed. It is expected to store all the waste of the research centre in the wait to be transferred to the Italian National Repository. According to a transaction agreement between the European Commission and the Italian republic the decommissioning of the Ispra -1 research reactor will be conducted by Italy. ISPRA provides information to the public on safety of decommissioning operations as established in the national legislation.

Q.No	Country	Article	Ref. in National Report
*	France	Article 32	Section D3.3 - page 48/193

Question/ Comment	Regarding the CEMERAD storage facility, it is indicated that "the Extraordinary Commissioner, in implementation of art. 126 bis of Legislative Decree 230/95, has undertaken the obligation to implement the prescribed provisions of law and has entrusted the SO.G.I.N. Spa for the transport, characterization and disposal of waste contained in the Cemerad storage facility, with final radiological remediation without radiological constraints". Could Italy explain what is the licensing status of the CEMERAD facility (i.e., under operation, under decommissioning...)? Has a safety case (or decommissioning plan) been developed, reviewed and approved to cover the existing situation? Could Italy detail the works under progress regarding this facility, including EIA and public hearing?
Answer	It should be pointed out that the Chapter X of Legislative Decree No. 230/1995 establishes the general principles for interventions that must be meet for the purposes of the decisions regarding the possible implementation and the extent of intervention in cases of radiological emergencies or in cases of prolonged exposure resulting from the effects of a radiological emergency or a practice that is no longer in place. In particular, the article 126-bis of Legislative Decree No. 230/1995, concerning the

prolonged exposure situations coming from nuclear or radiological emergency or contamination events or a past practice or a working activity with natural radiation sources, which is no longer in place, the authorities responsible under the Act No. 225/1992 (civil protection act), shall take appropriate action, taking into account the general principles set out in article 115-bis, in relation to the risk of exposure.
Regarding the CEMERAD storage facility, SO.GI.N (entrusted by the Extraordinary Commissioner, in implementation of art. 126 bis of Legislative Decree 230/95) submitted to the Extraordinary Commissioner an Intervention Operational Plan for the activities of removal, transport, characterization and disposal of the waste contained in the CEMERAD storage facility.
This plan is aimed at the final remediation of the site and of all the structures contained therein, without radiological constraints, by minimizing the time required for removal, by maximizing the safety of operators, population and environment and by reducing operations on the site as much as possible through the transport of waste to other operators authorized for the purpose of their treatment and conditioning.
The Intervention Operational Plan also includes the safety analysis in case of accidents during the activities.
The Intervention Operational Plan was approved by the Extraordinary Commissioner in November 2017 based on the advice issued by ISPRA.
The removal and transport activities started in November 2017 and are currently in progress. Following the characterization and removal of all waste from the site, the Extraordinary Commissioner will issue, on the basis of the advice by ISPRA, the approval of the activities for the final remediation of the site without radiological constraints.
All the activities in question are not subject to EIA.
In any case, the information relating to the activities to be carried out has been disseminated in the web site of the Prefecture and media.

Q.No *	Country	Article	Ref. in National Report
	Ireland	Article 32	pg 31

Question/ Comment	During the previous 2015 Joint Convention review meeting it was noted that there was ~30tHM of spent fuel remaining to be transferred abroad for reprocessing which was due to be completed by 2016. It is recorded in the 2017 National Report that there is ~15tHM of spent fuel left (noting that 1.7tHM will remain stored in ITREC). Can Italy outline the plan and timeframe for the transfer of remaining spent fuel?
Answer	Since the previous review meeting the spent fuel of the TRINO NPP (15 tHM) has been transferred to France for reprocessing. The remaining spent fuel currently in the Avogadro storage facility is the remaining fuel to be transferred in the context of the in place agreement with France. Transports are currently suspended pending consultations among the two governments. Spent fuel of ITREC plant will be stored in a dry interim storage facility on the site until the national repository will be available.

Q.No *	Country	Article	Ref. in National Report
	Ireland	Article 32	Pg 13

Question/ Comment	It is noted that there are interim storage measures in place for the spent fuel located at ITREC which cannot be transferred abroad for reprocessing which includes dry storage. Can Italy outline what the long-term management plan for the spent fuel which is currently located at ITREC?
Answer	The 64 U-Th spent fuel elements from Elk River Research Reactor will be stored in one dual purpose cask (storage and transportation). The cask will be stored in a storage building at the ITREC facility until the centralized long term storage facility for HLW/ILW/SF will be realized. This centralized storage facility will have at least 50 y

	of operational life. Final solution for disposal of HLW/ILW/SF in Italy has not yet been identified.

Q.No *	Country	Article	Ref. in National Report
	Switzerland	Article 32	B.3, 12
Question/ Comment	According to the reported decommissioning policy, the national decommissioning strategy is divided into two phases (due to the current unavailability of a national repository). These phases are called the “brown field” and the “green field” phases. The “brown field” is defined as a stage, in which all dismantling and waste treatment activities have been completed and all the radioactive waste is temporary stored in on-site interim storage facilities. The “green field” phase is reached, when all waste has been transferred to the national repository and the sites have been released without radiological constraints. Can you clarify, whether the Italian decommissioning policy includes the full removal of all buildings at these sites (following an international meaning of “green field”), to fully confirm that no contamination is left, and whether such treatment has to be applied to all sites of nuclear facilities in Italy?		
Answer	On all the sites all the buildings will be dismantled but one, the Garigliano NPP, where according to the Environmental Impact Assessment the reactor building and the turbine building will not be dismantled. Obviously it will have to be released without radiological constraints.		

Q.No *	Country	Article	Ref. in National Report
	Switzerland	Article 32	B.5, 14
Question/ Comment	At present, almost all the Italian waste generated by the operation of nuclear installations is stored at the sites of their origin. Together with radioactive waste derived from research, medical and industrial use, a national strategy for the long term management of radioactive waste envisages the construction of a national repository for the near surface disposal of low and intermediate level waste and for the long term storage of intermediate and high level waste. The terminology used in the Italian report (talking about “long-term storage only in the case of ILW and HLW) suggests that the near-surface facilities are not intended to be “long-term”. In addition, the separation between the different waste groups suggests that the long-term storage of ILW and HLW will not be “near surface”. Can you clarify, what the intentions of the national strategy are with respect to time and depth of disposal of radioactive waste? From your text, it is not clear, whether “a national repository” means only one facility for all kinds of waste, but perhaps with sub-facilities established at different depths and with different time horizons.		
Answer	At the site of the National Repository, two facilities will be realized: - one for the disposal of VLLW and LLW and will be a near surface disposal facility, - one for the long term storage of ILW/HLW/SF. This facility will be an engineered building on surface and will have 50 y of operational life. It is worthwhile to mention that at the site of the National Repository will not be realized any sub-surface facility neither any geological disposal.		

Q.No *	Country	Article	Ref. in National Report
	Switzerland	Article 32	B.5, 14
Question/ Comment	The national report refers to two acts issued in 2003 and 2004 giving provisions for the location of national sites to build repositories for the disposal of low, intermediate and high level waste. According to the report, the implementation met strong difficulties. Can you elucidate on the kind of difficulties (political, societal, technical) you were facing and how this has influenced the subsequent steps of disposal?		
Answer	At the end of 2003, before the Laws December 24, 2003, n° 368 and August 23, 2004,		

n° 239, the Government announced the results of the preliminary investigation for a localization of a site for the disposal of ILW and HLW, including spent fuel. This communication was done without the necessary steps to earn trust and consensus from the local population. The strong local opposition forced the Government to enact a law with provisions of proper selection of the site with the participation of the local stakeholders.
It must be said that substantial difficulties were encountered in the practical implementation of this law, in particular in relation to the site identification, due to the lack of acceptability by local population and authorities for such a type of facilities. These difficulties determined a postponement of the timing schedule foreseen in the law.
However the Legislative Decree 31/2010 has superseded the Laws December 24, 2003, n° 368, providing a new procedure for the site selection which includes also the involvement since the beginning of the authorization process of the local stakeholders. The present siting procedure foresees a national debate after 120 days from the publication of the list of potential areas where agreements with the regions involved will be sought.

Q.No *	Country Switzerland	Article Article 32	Ref. in National Report B.5, 15

Question/ Comment	During the envisaged site selection procedure, it is planned that the Italian implementer SOGIN will perform extensive investigations lasting 15 months. A period of 15 months seems to be rather short, if e.g. a 3D-seismic analysis or investigations in the underground by e.g. drilling activities are envisaged. May we ask what kind of investigations are planned to be done?
Answer	As indicated by the Legislative Decree n.31/2010, Sogin will carry out the site characterization, under the supervision of ISPRA, after the agreement of the Ministry of Economic Development with the local authorities to host the National LLW repository and long term temporary storage for ILW/HLW/SF. At this time, as indicated by law, the period of 15 months begins to carry out the technical characterization to reach the decision on the definitive site in accordance with IAEA, SSG-29 and ISPRA, SG n.29. According to art 27. Comma 10 of D.Lgs.31/2010, when the ministerial indication of the territory to be investigated will arrive, the Nuclear Regulatory Authority (ISPRA/ISIN) will define the methodology for the implementation of the technical investigations. However, a preliminary document "Criteria and contents for the definition of the survey program for the characterization of the site" will be published by SOGIN with the publication of the national map of suitable areas (CNAPI) and the preliminary design. The characterization surveys concern: Geology and Geotechnics, Hydrogeology, Geochemistry, Surface faulting, Seismic modeling, Geomorphology - topography, Hydrology, Weather-climatic modeling, Naturalistic aspects, Soil and water use, Human geography, Archeology and cultural heritage, Infrastructures. The level of investigation will be adequate to allow ISPRA to perform its regulatory assessment to verify that the disposal facility meets the safety requirements. However, the period of 15 months should be considered as "indicative in the context of a procedure" that is not rigid in every point because it is not possible to predict the time required for each technical, administrative or authoritative step. In any case it is worthwhile to mention that the IRRS mission in 2016 recommended that separate authorizations for different stages in the lifetime of the facility and adequate time periods for regulatory review and assessment should be envisaged. Then,

	it is not excluded that focused amendments to the Legislative Decree n. 31/2010 will be introduced in the near future to take into consideration the IRRS recommendations.

Q.No *	Country	Article	Ref. in National Report
	United States of America	Article 32	Section A.2 pg. 6
Question/ Comment	The National Center for Nuclear Safety and Radiation Protection of ISPRA issued Technical Guide 29 in June 2014, on siting criteria for the identification of potentially acceptable sites for a National Repository. Please clarify the ongoing activities leading to siting a National Repository. Please identify the sites on the National Chart.		
Answer	As mentioned in the National Report, in January 2015 SOGIN submitted a list of potential suitable area, called the National Chart, identified on the basis of the siting criteria provided by the TG29 of ISPRA and by IAEA recommendations. The list of potential area have been selected after exclusion of territory on the basis of official Data Base e Cartography available. On July 2015 ISPRA completed its regulatory assessments and transmitted the reviewed National Chart of Potentially Eligible Sites (CNAPI) to the Ministry of Economic Development and the Ministry of Environment, Land and Sea Protection for the publication. Subsequently, the Ministries decided to suspend the publication of the National Chart, waiting for the finalization of the National Programme for Radioactive Waste and Spent Fuel Management. The National Programme has been submitted in 2017 at a public consultation under the Strategic Evaluation Assessment procedure. Public consultation finished in November 2017 and final publication of the National Programme is foreseen by mid 2018. In the meantime, on January 2018, SOGIN submitted to ISPRA a new National Chart, modified according the recent update occurred in the official Data Base. ISPRA performed its verification and on March 29th transmitted the reviewed National Chart of Potentially Eligible Sites (CNAPI) to the Ministry of Economic Development and the Ministry of Environment, Land and Sea Protection for the publication. Concerning the last request, information on the sites of the National Chart are restricted until the implementer will be authorized by the Ministries for publication.		

Q.No *	Country	Article	Ref. in National Report
	United States of America	Article 32	Section B.6 pg. 16
Question/ Comment	A new waste classification system was established by a Decree from the Ministries of Economic Development and Environment in August 2015. It includes five waste categories. Please describe actions required to reclassify existing stored waste.		
Answer	The same Decree that provide the new classification system, give to the operators 6 months to update the accountancy registers and 5 years to update the mark and label on the existing waste packages. From the technical point of view, there have been not much difficulties. The Decree reported tables that have been used for conversion (see tables in the supporting document). Some difficulties resulted in the determination of the threshold of separation between VLLW and LLW, depending from the availability of radiological characterization.		
Support Documents	» Supporting document for RW classification		

Q.No *	Country	Article	Ref. in National Report
	Germany	Article 32.1.1	p. 17, Section B.6
Question/ Comment	In its National Report, Italy states that radioactive waste with high activity concentrations, such as to generate a significant amount of heat or with high		

concentrations of long-lived radionuclides, or both of these characteristics, which require a degree of isolation and containment for a time period of thousands of years and over requires disposal in geological formations. Has Italy finally decided to dispose of long lived ILW and HLW in deep geological formations?
Is there a rough estimate when such a disposal facility could be in operation?

Answer

In the draft National Programme for spent fuel and radioactive waste management, that has been submitted for public consultation under the Strategic Evaluation Assessment during 2017, it is affirmed that, in principle, a geological repository for the disposal of high activity radioactive waste (including spent fuel) should be constructed in Italy, even though, in the case of Italy, the quantity of such wastes to be disposed of is modest and the solution of creating a geological depot within the country appears to be excessive and not expedient financially.
During the period when the high activity radioactive waste will be stored in the long term storage facility of the National Repository, the most appropriate disposal solution for this waste will be identified, also taking into account the opportunities provided within the context of possible international agreements that could be concluded within the same period.

Q.No *	Country	Article	Ref. in National Report
	Germany	Article 32.2.1	p. 32, Section D.3.1

Question/ Comment

“As result of an international tender, the thermal treatment and conditioning of operational radioactive waste has been assigned to a qualified Slovak operator. At the moment the qualification of the waste package that will result from the treatment and conditioning operations is ongoing.
Also the licensing process in Italy and in Slovak Republic is in progress.”
Could Italy please elaborate on this international tender in more detail? Will in that case waste be transferred to the Slovak Republic and waste packages will be returned to Italy?

Answer

In June 2015, Sogin S.p.A. concluded a contract with the temporary consortium Javys - Ansaldo NewClear for the recovery, transport, incineration and conditioning for more than 5000 drum of spent ion resins and sludges. Most of these resins and sludges have already been treated in the past with urea-formaldehyde but, due to the presence of significant amount of free (corrosive) liquids, the treatment process was not satisfactory.
After the thermal treatment, the resulting ashes in 220 l drums will be firstly compacted and then conditioned through grouting within 440 l qualified overpack. The resulting package, that will be returned to Italy, will be classified LLW.
The RW package will be qualified and approved by ISPRA with respect to the following conditioning requirements:
- Grouting (Compressive strength, Thermal cycling resistance, Radiation resistance, Leaching rate, Immersion resistance, Water permeability, Gas permeability)
- Container (50y corrosion resistance, tightness)
- Package (Free liquids, Fire resistance, stacking, penetration, mechanic resistance)
These requirements have been developed for a conceptual design of near surface disposal. Furthermore, ISPRA has recently introduced an additional requirements to the operators for RW conditioning that refers to a kind of certification, named Letter of Compliance, from SOGIN, the supposed operator of the future National Repository, that the conditioned waste will be accepted at the surface disposal.

Q.No *	Country	Article	Ref. in National Report
	Belgium	Article 32.2.5	Section D.5 pg 41

Question/

Decomissioning plan of Latina NPP is under regulatory review.

Comment	Could you please provide more details in the current review and the expected timing for the final decomissioning licence?
Answer	The regulatory review is under finalization. The annual planning foresees that the authorization should be granted by the end of 2018.