

**Joint Convention
Responses to Questions Posted To Australia in 2009**

Q.No 1	Country Canada	Article Planned Activities	Ref. in National Report Page 68
Question/ Comment	Australia's National Report indicated that the Northern Territory will commence using the Radiation Protection Act 2004 and there is a plan in place to do this. Please provide a status update.		
Answer	The Radiation Protection Act (NT) is expected to start in 2009		
Q.No 2	Country Germany	Article General	Ref. in National Report p.5; Sec. A
Question/ Comment	It is stated that Australia does not have a nationally endorsed radioactive waste classification system, but is in the process of developing such a system. Furthermore, it is mentioned in Section A (p. 5) that "most Australian jurisdictions do not classify radioactive materials in long-term storage as waste as defined by the Convention." As what is it classified, if not as waste?		
Answer	Most Australian jurisdictions do not define radioactive waste in their legislation. However, each jurisdiction has a store for radioactive materials as well as radioactive waste. In the case of the State of Victoria, an interim store contains a variety of radioactive material surrendered to the regulator by the owner of the material; or material which has been seized by the regulator for safe keeping over the past 25 years (approximately). The materials can be considered to be waste in that it is unlikely that there will be any further uses for the materials.		
Q.No 3	Country United Kingdom	Article General	Ref. in National Report Section A, Page 5, Para. 1
Question/ Comment	The report states that "Most Australian jurisdictions do not classify radioactive materials in long-term storage as waste as defined by the Convention." (1) Can Australia give its reasoning behind such an approach? (2) How many facilities are there which do not classify some, or all, of their inventory as waste as defined by the Convention?		
Answer	<p>Most Australian jurisdictions do not define radioactive waste in their legislation. However, each jurisdiction has a store for radioactive materials as well as radioactive waste.</p> <p>The regulator for the State of New South Wales has advised that the storage facility reported in previous National Reports was decommissioned and that a new purpose built storage facility has been built. The contents of the old store were repackaged and relocated within the purpose built multi-function facility. The NSW regulator does not consider the new facility to be a radioactive waste management facility but a storage facility pending a longer term State or National solution to disposal of radioactive materials. In relation to Article 17 of the JC; records relating to the former facility have been preserved, no monitoring controls on the former site are required because all radioactive materials were removed and the site decommissioned, and no measures were required as no unplanned release occurred during decommissioning.</p> <p>The regulator for the State of Victoria advises that disused radioactive material that is in storage has not been regarded as necessarily being waste given that there is potential for some materials to be reused at a later time.</p>		

	Several organisations within medical, industrial, and university sectors in Victoria store disused radioactive material pending disposal or further use.		
Q.No 4	Country United Kingdom	Article Article 5	Ref. in National Report Section G - Page 41 last para.
Question/ Comment	Can you please outline the methodology that ARPANSA uses to determine if a potential improvement is reasonably practicable?		
Answer	The issue of reasonably practicable improvements in relation to the review of the safety of existing spent fuel management facilities is really an assessment of efficacy and cost. An improvement is reasonably practicable if it can be done appropriately and with reasonable cost. In other words, the optimisation of available resources is assessed.		
Q.No 5	Country Czech Republic	Article Article 9	Ref. in National Report
Question/ Comment	In the chapter "Preparation and update of decommissioning plans", there is no information about the periodicity of re-evaluation of the decommissioning plans. Please provide it.		
Answer	The Draft ARPANSA Decommissioning Guideline states that it is expected that the operating organisation will progressively update the decommissioning plan throughout the life of the facility and that each separate application for authorisation under the ARPANS Act (siting, construction, operation and eventually decommissioning itself) will include a decommissioning plan. Each updated plan must take into account recent experience derived from international developments in decommissioning practice.		
Q.No 6	Country Czech Republic	Article Article 10	Ref. in National Report
Question/ Comment	How long prior its shipment for reprocessing will be the SF stored in Australia and which country will provide the reprocessing services?		
Answer	<p>The spent fuel from the OPAL reactor will be stored in Australia until it is ready for shipment. After a suitable period in storage, the spent fuel will be transported overseas for disposal or reprocessing. The timing of spent fuel shipments will be determined by a number of factors, including:</p> <ul style="list-style-type: none"> • the time required to accumulate a practicable sized shipment; • the minimum cooling time required for the youngest elements in a shipment, to satisfy shipping cask regulatory criteria; and • the radiological safety benefit of minimising the number of shipment operations. <p>Whilst the US Foreign Research Reactor Spent Fuel Program is in operation, the spent fuel will be shipped to the US. Once that Program has ceased, the spent fuel will be shipped for reprocessing in France or another country, with the return of an intermediate level waste form to Australia.</p>		
Q.No 7	Country Czech Republic	Article Article 11	Ref. in National Report
Question/ Comment	What exactly mean the terms "concentrated liquids", and "low concentrated liquids"? Do these terms refer to "highly contaminated", and "low contaminated" liquids (meaning of the word "concentrated" is more connected with the density and viscosity of the liquid)? Furthermore, Australia does not sort the liquids as "organic", and "inorganic" what is important from the point of view of their processing by, for example, evaporation.		

Answer	<p>These two terms are used in the Safety Guide for the Predisposal Management of Radioactive Waste (ARPANSA, 2008) in the context of segregating different waste types for the purpose of waste minimisation during operation. These examples are not part of a comprehensive list of waste types, rather are there to indicate possible waste types during operation. In this case, the terms are referring to the concentration of the liquid (i.e. the concentration of solute in solvent). However, levels of contamination, or concentration of radionuclides in the liquid, are also valid categories for segregation for minimising waste volumes.</p> <p>Guidance on waste characterisation in Australia does not preclude the segregation of organic and inorganic waste for processing. This is an acceptable practice depending on the associated risk.</p>		
Q.No 8	Country Czech Republic	Article Article 11	Ref. in National Report
Question/ Comment	<p>In the chapter "Internationally consistent radiation protection legislation", there is mentioned that the incinerators are not usually used for processing of RAW, but later it is stated that only biological waste is incinerated. Does Australia have some special incinerator for radioactively contaminated biological waste, and if not, how is it assured that the clearance criteria are not exceeded before the residual ash (contaminated ash from the biological waste only) is mixed with non-radioactive ash?</p>		
Answer	<p>Australia does not use a specialised incineration facility for the incineration of radioactive waste. Waste, usually biological, is required to be incinerated in accordance with the Code of Practice for the Disposal of Radioactive Wastes by the User (1985). This Code requires the user, prior to incineration, to demonstrate to the regulator that the maximum activity of the gaseous products likely to be released to the atmosphere complies with specified emission standards. The ash is to be monitored and disposed of according to licence conditions, which will include clearance if the ash is shown to be below clearance criteria.</p>		
Q.No 9	Country Czech Republic	Article Article 11	Ref. in National Report
Question/ Comment	<p>In the description of the requirements of "Code of Practice for the Near-Surface Disposal of Radioactive Waste in Australia", no limit for the surface dose rate of the packaging that is accepted to the disposal is provided. Is there any limit established?</p>		
Answer	<p>For packaged wastes, currently there is only one operating near-surface disposal facility for radioactive waste in Australia. This facility is located at Mount Walton East, in Western Australia. There are no limits on the surface dose rate of packaging that is accepted for near surface disposal at this facility. However, the operator acknowledges the limits on the surface dose rate of packaging set by the provisions of the "Code of Practice for the Safe Transport of Radioactive Material (2008)". These limits apply to material that is transported to the facility. They also apply, by implication, to material that can be accepted by the facility. The "Code of Practice for the Near-Surface Disposal of Radioactive Waste in Australia (1992)" places no limits on surface dose rates, but provides limits on radionuclide concentrations for near surface disposal for the defined waste categories.</p>		
Q.No 10	Country United Kingdom	Article Article 11	Ref. in National Report Section H - Page 48 penultimate para.
Question/ Comment	<p>What are the plans for the revision of regulations to incorporate ICRP60 recommendations and the Lung Model described in ICRP66?</p>		

Answer	A draft of new disposal and discharge limits for very low level radioactive wastes was prepared in 2006. In order to revise existing regulations in line with these new limits, a new schedule for the National Directory for Radiation Protection to introduce updated disposal and discharge limits has been proposed. The proposed new schedule requires an assessment of the impact of the new regulatory requirements on stakeholders that examines the costs and benefits of the proposal and the impacts of other possible options (such as self-regulation) to achieve the same objective. The assessment and the proposed schedule is then subject to a public consultation process, where the outcomes of the consultation are used to review the proposal. Australian radiation regulators must then agree to the technical appropriateness of the revised proposal. The proposed schedule is then presented to all Australian Ministers for Health for approval of its incorporation in the National Directory. All Ministers must agree to the inclusion of the proposal. Once the schedule is part of the National Directory it must be adopted by all jurisdictions into their existing regulatory frameworks as soon as possible. It is expected that this process will be completed within the next 12 months.		
Q.No 11	Country United Kingdom	Article Article 11	Ref. in National Report Section H - Page 50 4th para.
Question/ Comment	The report identifies a weakness in the regulatory framework in that it fails to specifically address the need to reduce the undue burden on future generations by requiring the minimisation of waste produced. Can Australia please describe how it intends to remedy this weakness, and in what timescale?		
Answer	It is proposed to remedy this weakness in the review of Radiation Protection Series publication 1 (RPS1) Recommendations for Limiting Exposure to Ionizing Radiation 1995 (republished 2002) to bring it up to date so that it is consistent with ICRP 103. This review should be completed within the next 2 years.		
Q.No 12	Country Czech Republic	Article Article 12	Ref. in National Report
Question/ Comment	In the chapter "Review of safety" a disposal facility for the NORM is described. Is it possible to dispose also other RAW contaminated by naturally occurring radionuclides (Ra contaminated, etc.) there?		
Answer	Radioactive waste containing naturally occurring radionuclides (including radium) from mineral processing has been disposed in the low-level radioactive waste repository at Radium Hill in South Australia. No radium resulting from non-mining processes has been disposed at the site, and currently there is no intention to dispose of this or any other radioactive waste at the site.		
Q.No 13	Country Czech Republic	Article Article 12	Ref. in National Report
Question/ Comment	The monitoring of the air above the disposal facility is mentioned in chapter "Review of safety". How are the dose rates in the air measured and in what height? Is the dose rate measured around the disposal or only above it?		
Answer	The dose rates in air are determined 1 metre above ground level using a Mini-Instruments Environmental monitor Type 6-80 Geiger tube. Measurements are made above and around the perimeter of the disposal site and the aggregate counts over 1 minute are recorded. The aggregate counts are converted to absorbed dose rates in air using a conversion factor provided by the calibration organisation.		
Q.No	Country	Article	Ref. in National Report

14	United States of America	Article 13	Section H, Page 53
Question/ Comment	Australia states it has appropriate legislative measures in place to ensure engagement of the public in the decision making process for siting facilities. Please describe how such public interaction is organized and coordinated across jurisdictions. In particular, community consultations were undertaken during 2006-2008 at four locations in the Northern Territory. What degree of community support exists for such a facility? Please summarize during your national presentation in May 2009 the key community issues encountered.		
Answer	<p>Consultation with the public has been undertaken at a number of stages during proposals to establish waste facilities. For previous proposals, policy has required that community consultation has been undertaken by the proponent as part of the project; the proponent has also undertaken community consultation as part of the legislated process for obtaining environmental approval for the proposal; and the radiation regulator has undertaken public consultation again as part of the legislated process for the assessment of the licence application. There is the intention that for future proposals, the consultations that are part of the environmental approval and licensing application process will be integrated to some degree.</p> <p>During the most recent project to establish a waste facility in the Northern Territory, views expressed during community consultations ranged from strongly opposed through neutral to supportive. No detailed surveys were undertaken to precisely measure levels of support and opposition. One of the potential sites was volunteered by its traditional Aboriginal owners and enjoyed strong local community support. Those same traditional Aboriginal owners have continued to express their desire to have the facility located on their land.</p> <p>At the time of writing, the Australian Government has not made a decision whether to proceed with any of the sites identified by the previous government. It would be inappropriate to comment at this time on specific siting issues.</p>		
Q.No 15	Country United Kingdom	Article Article 14	Ref. in National Report Section H - Page 54 penultimate para.
Question/ Comment	Can you please give details of the likely timescales for harmonisation discharge limits for very low level wastes across the jurisdictions?		
Answer	Please refer to the response provided for question from the UK in relation to Article 11		
Q.No 16	Country Germany	Article Article 16	Ref. in National Report p. 57; Sec. H
Question/ Comment	An institutional control period of 100 to 200 years for near-surface disposal facilities is mentioned. How does Australia grant for the preservation of knowledge for appropriate operation and/or control of such facilities over time?		
Answer	The Code of Practice for the Near-Surface Disposal of Radioactive Waste in Australia (1992) provides requirements for and restrictions upon the management of the site during the institutional control period. At the end of the established institutional control period the status of the site is to be reviewed to determine whether any further management or control should be instituted. Records and inventory of the waste disposed at the site are required to be preserved in two locations, including the appropriate State or Federal government archives, at least until the end of the institutional control period. During the institutional control period the site is to be		

	maintained and secure. Post-institutional control requirements are for the removal of infrastructure, and for the assessment of the site for any proposed new use.		
Q.No 17	Country United States of America	Article Article 16	Ref. in National Report Section H, Page 59
Question/ Comment	The National Directory for Radiation Protection specifies the types of incidents that must be reported to ARPANSA for compilation of the Australian Radiation Incident Register. Among the types of incidents relative to waste management includes "...other incidents that the regulator considers warrant reporting". What guidance exists for license holders to understand what criteria apply for reporting these "other incidents"?		
Answer	The incident types listed are for all incidents not only for waste management facilities. At the present time there is no additional guidance on "other incidents". This provision was included to allow that regulators may identify additional types of incident that are not specified in Schedule 13 of the National Directory, but which are reported to the regulator and may warrant inclusion on the national register. Should additional types of incident be identified, this may lead to revision of Schedule 13 to ensure that all regulators report similar incidents to the national register. To date no incidents have been reported under the 'other incidents' category.		
Q.No 18	Country Canada	Article Article 18	Ref. in National Report
Question/ Comment	Considerable discussion occurred during the 2006 session regarding harmonization of laws/policy over all jurisdictions. Can Australia please provide an update on what has happened since 2006?		
Answer	<p>Since 2006, the committee of radiation regulators decided to progress national uniformity by individual amendments to the National Directory for Radiation Protection, in a similar way to which regulations are amended, rather than producing a consolidated edition 2. Three amendments are now at the final stage of obtaining approval by Australia Health Ministers for inclusion in the National Directory, one amendment has been approved by the committee of radiation regulators and will be submitted for Health Ministers' approval soon, and a number of other amendments are either in preparation, or at the stage of developing a regulatory impact statement. Once Ministers have approved the amendment, regulatory elements must be adopted by jurisdictions as soon as possible.</p> <p>In relation to radioactive waste management, the amendments include the Code of Practice for Radiation Protection in Mining and Mineral Processing (ARPANSA 2005) and clarification of the application of exemption and exclusion provisions of the National Directory to bulk materials.</p>		
Q.No 19	Country Canada	Article Article 18	Ref. in National Report
Question/ Comment	Edition 2 of the National Directory was expected to be adopted in late 2006 yet there is no mention of it in the report or on ARPANSA's website. What is the status of this and the initiatives it encompasses		
Answer	Please refer to the response provided to Canada in relation Article 18		
Q.No 20	Country United Kingdom	Article Article 18	Ref. in National Report Section E - Page 20 7th para.
Question/ Comment	(1) Can you please provide further details of the effectiveness review? (2) Can you please provide details of the findings, particularly for those where the		

	process of achieving national uniformity was found to be incomplete? (3) What plans are there to address these areas of incompleteness?		
Answer	<p>(1) The report on the effectiveness review and the advice to the ARPANSA CEO from the Radiation Health and Safety Advisory Council's can be found on the ARPANSA web site at http://www.arpansa.gov.au/Publications/RHSAC/rhsac_stat.cfm#ndrp</p> <p>(2) The main area of incompleteness relates to non-ionizing radiation, where some jurisdictions currently regulate prescribed equipment or practices and other jurisdictions do not regulate.</p> <p>(3) The committee of radiation regulators is continuing to develop the National Directory for Radiation Protection, with a range of amendments currently at different stages of progress. Three amendments are currently at the final stage of Ministerial approval, one has recently been approved by the Committee and will be submitted for Ministerial approval, and several others are at the stage of preparation of regulatory impact assessments prior to consultation. The Directory is intended to be a dynamic document that will evolve over time as more nationally agreed positions are reached by jurisdictions.</p>		
Q.No 21	Country Czech Republic	Article Article 19	Ref. in National Report
Question/ Comment	What indicators and criteria does the Regulatory Body use for making judgments about the licensee's safety culture?		
Answer	<p>ARPANSA regulatory staff use the International Atomic Energy Agency (IAEA) Safety Culture Assessment Review Team (SCART) methodology for making judgements about the licensees' safety culture. This methodology relies upon "safety characteristics" which are then broken down into "attributes". The Safety Characteristics are:</p> <p>A) Safety of a clearly recognised value B) Leadership for safety is clear C) Accountability for Safety is clear D) Safety is integrated into all activities E) Safety is learning driven</p>		
Q.No 22	Country United Kingdom	Article Article 19	Ref. in National Report Section E - Page 23 4th bullet
Question/ Comment	Can you please describe the criteria used by the regulator to identify natural sources that require control?		
Answer	<p>Currently, the main source of guidance for deciding whether natural sources should be controlled is contained in the recently published ARPANSA Safety Guide for the Management of naturally Occurring Radioactive Material (NORM) which is consistent with the IAEA Safety Report No. 49 - Assessing the Need for Radiation Protection Measures in Work Involving Minerals and Raw Materials. The ARPANSA safety guide discusses the issue of identifying NORM situations that may require control. This does not apply to undisturbed ore-bodies or areas of high natural background. The application of the exemption and exclusion limits in the National Directory for Radiation Protection also contributes to decisions on the control of natural sources.</p>		
Q.No 23	Country Korea, Republic of	Article Article 20	Ref. in National Report p.30 (E)
Question/ Comment	Section E states that totally nine radiation protection regulatory bodies exist within		

Comment	Australia. What are specific considerations for ensuring consistency of the regulatory practices and enforcements among the nine regulatory bodies?		
Answer	One of the primary roles given to the CEO of ARPANSA under the Australian Radiation Protection and Nuclear Safety Act is to promote uniformity of radiation protection and nuclear safety policy and practices across jurisdictions. One of the key means of achieving this is through the development and adoption of the National Directory for Radiation Protection (see http://www.arpansa.gov.au/publications/codes/rps6.cfm). Edition 1 of the Directory was published in 2004 and several jurisdictions have since made amendments to their Acts to become consistent with the Directory. A range of amendments to the Directory are currently at different stages of progress to further improve uniformity.		
Q.No 24	Country Canada	Article Article 21	Ref. in National Report
Question/ Comment	With respect to enforcement actions: a) In practice how are fines determined and administered? b) Has a licence holder's licence ever been revoked and who would assume responsibility for radioactive liabilities if a licence was revoked?		
Answer	a)In the case of Commonwealth regulated entities, penalties in the ARPANS Act are set based on the provisions of the Commonwealth Criminal Code. The imposition of penalties is the most severe enforcement action that could be taken against a licence holder and would only be resorted to if lower order enforcement action was either inappropriate given the seriousness of the circumstances of the breach or had not had a desired effect on the behaviour of a licence holder. Similarly, in the case of the Australian States and Territories, once a conviction has been made under the radiation legislation of the relevant jurisdiction, the court determines the amount of the fine and how it is imposed. b)Nearly all radiation regulators report that a licence has never been revoked in their jurisdiction. Queensland reports that a range of regulatory actions are available ranging from imposition of improvement notices, prohibition notices, seizure of equipment as well as revocation of licences and court action. The last prosecution in Queensland occurred in the early 1990's. Seizure of equipment is seen as the most effective means of achieving compliance. In all jurisdictions, radioactive liabilities would remain with the owner of the source whether they were licensed or not.		
Q.No 25	Country United States of America	Article Article 21	Ref. in National Report Section F, Page 33
Question/ Comment	Australia emphasizes the requirement for a "responsible person" for radiation protection. Please elaborate on the distinction between a license holder and the "responsible person." It is not clear whether the responsible person is an individual or a corporate entity. If it is an individual, what provisions are made to transfer responsibilities or determine financial liability? Are they subject to civil or criminal prosecution for errors or noncompliance?		
Answer	"Responsible person" was a term defined in the National Directory for Radiation Protection to allow for the fact that there were differences in terminology in the regulations of jurisdictions regarding responsibility for particular actions. It was then expected that each jurisdictions in adopting the provisions of the National Directory would interpret this definition in a manner consistent with the terminology adopted in		

	its legislation. In some jurisdictions, the responsible person is equivalent to licensee, in others the owner, in others the person required to register radiation equipment. The simplest explanation is that “responsible person” equates to the licensee. The question of whether the “responsible person” is a natural person or corporate entity depends on the legislation of the jurisdiction. In every case, the “responsible person” would be the person/entity that would be prosecuted for non-compliance within that jurisdiction.		
Q.No 26	Country Germany	Article Article 22	Ref. in National Report p. 33; Sec. F
Question/ Comment	In the report is stated that “ARPANSA [Australian Radiation Protection and Nuclear Safety Agency] staff members possess the essential skills, knowledge and expertise to assess the safety of the operation of the spent fuel management and radioactive waste management facilities at ANSTO [Australian Nuclear Science and Technology Organisation] and to conduct the inspection of these facilities for regulatory compliance monitoring.” Is recruiting qualified staff an issue, and if so, how was this encountered in detail?		
Answer	<p>Recruiting qualified staff is an issue as there is a relatively small pool of qualified radiation protection and nuclear safety experts within Australia. The age profile of the staff is also an issue for the regulatory body. Measures have been put in to place to keep up the training and professional development opportunities of younger less experienced staff, staff are recruited internationally, and new staff are being attracted through a targeted graduate recruitment program.</p> <p>In addition, ARPANSA has introduced a graduate recruitment program where graduates in physics, chemistry, environmental science and engineering spend two years being trained in the theory and practice of radiation protection and nuclear safety. The training includes undertaking a specific training program. The graduates gain experience in several aspects of environmental monitoring, ionising and non-ionising radiation, standards of medical, public and occupational radiation exposures, the Commonwealth’s regulatory framework as well as financial and policy matters. Subject to satisfactory completion of the first year’s training program, the graduates undertake 12 months of experiential learning working closely with branch management on project based activities aligned to ARPANSA’s goals and objectives.</p>		
Q.No 27	Country Ukraine	Article Article 22	Ref. in National Report page 34
Question/ Comment	It is stated that in the future there is potential for shortage of adequately trained and experienced staff due to the ageing workforce for regulators and operators. What measures have being taken (or planned to be taken) to prevent the future staff deficiency?		
Answer	<p>ANSTO has an established process for Succession Management. During this process, successors are identified for each role (ie those who are 'Ready Now; Ready within 2 years; Ready 2-5 years'). If areas of deficit are identified in the 'pipeline' for core roles, ANSTO directs resources and develops a strategy to minimise this risk. The strategy may be one of intensive development for successors; or a recruitment drive for this role; or a combination of these methods.</p> <p>In 2008 ANSTO employed 12 graduates who are undertaking a 4 year development program. During years 3 and 4, graduates are encouraged to apply for available positions. ANSTO also has development pathways available for Year in Industry students (1 year program) and Vacation students (3 month program) - Each year these students are recruited for project roles and evaluated for potential future positions.</p>		

	<p>In addition to the measures described in response to Germany in relation to Article 22, ARPANSA is taking a similar approach for succession planning as ANSTO. To ensure leadership continuity, a model of proposed strategies will be considered in mid 2009 by ARPANSA management. Strategies for maintaining critical employees and skills are also being developed for the consideration of ARPANSA management.</p>		
Q.No 28	Country United Kingdom	Article Article 22	Ref. in National Report Section F - Page 34 last para.
Question/ Comment	<p>What steps is the regulator taking to ensure the future availability of adequately trained and experienced staff?</p>		
Answer	<p>Recruiting qualified staff is an issue as there is a relatively small pool of qualified radiation protection and nuclear safety experts within Australia. The age profile of the staff is also an issue for the regulatory body. Measures have been put in to place to keep up the training and professional development opportunities of younger less experienced staff, staff are recruited internationally, and new staff are being attracted through a targeted graduate recruitment program.</p> <p>In addition, ARPANSA has introduced a graduate recruitment program where graduates in physics, chemistry, environmental science and engineering spend two years being trained in the theory and practice of radiation protection and nuclear safety. There are currently 6 graduates in the program that will become permanent staff subject to successful completion of the program. The training includes undertaking a specific training program. The graduates gain experience in several aspects of environmental monitoring, ionising and non-ionising radiation, standards of medical, public and occupational radiation exposures, the Commonwealth's regulatory framework as well as financial and policy matters. Subject to satisfactory completion of the first year's training program, the graduates undertake 12 months of experiential learning working closely with branch management on project based activities aligned to ARPANSA's goals and objectives.</p> <p>ANSTO has an established process for Succession Management. During this process, successors are identified for each role (ie those who are 'Ready Now; Ready within 2 years; Ready 2-5 years'). If areas of deficit are identified in the 'pipeline' for core roles, ANSTO directs resources and develops a strategy to minimise this risk. The strategy may be one of intensive development for successors; or a recruitment drive for this role; or a combination of these methods.</p> <p>In 2008 ANSTO employed 12 graduates who are undertaking a 4 year development program. During years 3 and 4, graduates are encouraged to apply for available positions. ANSTO also has development pathways available for Year in Industry students (1 year program) and Vacation students (3 month program) - Each year these students are recruited for project roles and evaluated for potential future positions.</p> <p>ARPANSA is taking a similar approach for succession planning as ANSTO. To ensure leadership continuity, a model of proposed strategies will be considered in mid 2009 by ARPANSA management. Strategies for maintaining critical employees and skills are also being developed for the consideration of ARPANSA management.</p>		
Q.No 29	Country Argentina	Article Article 25	Ref. in National Report Page 36-38 - Section F

Question/ Comment	Could Australia provide more information about which institution would coordinate the radiological emergencies for protecting the public and the environment in an accident situation such as in the case of loss or theft of a sealed source that could involve more than one jurisdiction?		
Answer	<p>For an incident in a single jurisdiction, it is the responsibility of the State/Territory Government to coordinate the response to a lost or stolen source. Emergency Management Australia which is part of Commonwealth Attorney General's Department is the Australian Government agency responsible for coordination of consequence management activities in support of State and Territory governments in accordance with existing emergency management arrangements. These arrangements are aimed at only the more serious emergencies that might arise and do not presently cover cross-jurisdictional arrangements for minor issues such as locating and retrieving uncontrolled sources.</p> <p>For an incident involving the malevolent use of radioactive material, the coordination of response capability and high-level decision making is guided by the National Counter-Terrorism Plan, and underpinned by State and Territory plans and arrangements. The National Counter-Terrorism Plan lists CBRN incidents as a possible trigger for declaration of a National Terrorist Situation. Specific CBRN operational and procedural arrangements are covered by Guidance on the National Coordination Arrangements for Responding to the Deliberate Use of Chemical, Biological and Radiological Materials.</p>		
Q.No 30	Country Ukraine	Article Article 25	Ref. in National Report page 38
Question/ Comment	<p>It is stated that plans at the national level are reviewed regularly and exercised as required.</p> <p>What are the national requirements on frequency of revising the emergency plans and conducting the exercises at the national level? What agency is responsible for planning and conducting these exercises and what other organisations are participating in these exercises?</p>		
Answer	<p>There is no overarching national nuclear emergency plan in Australia. The responsibility for the immediate radiation emergency response resides with the States and Territories and there are Plans covering both nuclear and radiological emergencies. The State Plans for emergencies relating to Nuclear Powered Warship visits are reviewed every two years by an Australian Government inter-Agency Committee that includes ARPANSA. It is an Australian Government requirement that State Port Plans are exercised at least every two years.</p> <p>The on-site arrangements for emergencies at the OPAL Research Reactor at Lucas Heights are the responsibility of the reactor operator ANSTO. It is a requirement of its ARPANSA License that ANSTO complies with the content of these arrangements, including the annual review and exercising of the emergency arrangements. The off-site arrangements for emergencies at the Lucas Heights facility are covered in a NSW State Sub-Plan and these are reviewed and exercised regularly, in line with other State Plans.</p> <p>Radiation emergencies related to the malevolent use of radioactive material fall within the National Counter Terrorism arrangements. The Australian Government Attorney General Department coordinates a national programme of exercises for crisis and consequence management arrangements for CBRN incidents. The location and type of exercise rotates between States over a multi-year cycle.</p>		

Q.No 31	Country Ukraine	Article Article 25	Ref. in National Report page 38
Question/ Comment	What are the requirements to training of the regulators' personnel involved in emergency response? What forms of training are in practice (workshops, briefings, exercises, etc.)?		
Answer	There is no specific requirement for training of the ARPANSA teams, other than the intent to ensure that the personnel in the teams have the required skills and resources to carry out the task expected of them in an emergency situations. ARPANSA, as the Australian Government radiation regulator, maintains specialised teams to support State and Territory arrangements to respond to radiation emergencies. The requirements and capabilities of these teams are intended to be consistent with the IAEA Radiation Assistance Network teams. ARPANSA provides its own in-house radiation emergency training for the staff forming the ARPANSA teams. This on-going training takes the form lectures, field deployment and exercises at local, national and international level.		
Q.No 32	Country United Kingdom	Article Article 25	Ref. in National Report Section F - Page 38 6th para.
Question/ Comment	(1) What steps is ANSTO taking to ensure the future availability of adequately trained and experienced staff? (2) Does the regulator have regulatory powers to ensure that the duty holders have adequate numbers of qualified staff to perform the required safety-related duties? (3) How does the regulator judge that the numbers of staff within a duty holder having safety-related duties is adequate? (4) Are duty holders required to submit any proposals to reduce the numbers of staff having safety-related duties to the regulator in advance of implementing any proposed reductions?		
Answer	<p>(1) ANSTO has a 'development needs analysis' process which is part of the Annual Performance Appraisal system. Development needs are identified, approved by the manager and forwarded to a centralised department for collation and action. It is the responsibility of the manager to ensure the incumbent completes this development plan.</p> <p>ANSTO has employees who are dedicated Safety and Radiation, and Nuclear-specific trainers.</p> <p>ANSTO has 'preferred supplier' relationships with providers who consistently deliver value-add programs for those areas where we do not have internal expertise.</p> <p>In 2008, ANSTO began the process of capturing, retaining and transferring knowledge, in conjunction with an external organisation with specialist expertise in knowledge retention strategies. Through a combination of facilitated workshops, simple technology and coaching sessions a 'knowledge capsule' which collates and categorises the information is produced. This information is then used as part of ANSTO's employee's development.</p> <p>Refer also to response to Ukraine in relation to Article 22 for details on the Succession Management and Graduate Programs which ensure the future availability of adequately trained and experienced staff.</p> <p>(2) In the case of Commonwealth regulated entities, ARPANSA has the power to ensure that the licence holder has appropriate numbers of qualified staff to perform</p>		

the required safety related duties as ARPANS regulations require an applicant for licence to demonstrate through its plans and arrangements that it can manage safety. The regulatory expectations document sets out the nature of the information that needs to be provided to demonstrate that safety is being managed appropriately including through the stated expectation that “the licence holder is responsible for ensuring that it has arrangements in place to effectively control the technical, administrative and human factors associated with its conduct and dealings. The arrangements must provide a clear description of the lines of communication, responsibilities and authorities, duties and competencies required for each activity.

In the case of uranium mining in the Northern Territory, there is no requirement to advise of a reduction in the number of safety related advisers under the Radiation Protection Act but this will be known when the principal licence is renewed. There are extra requirements for uranium mines.

Under the Mining Management Act the operator of a mine must ensure all workers are trained and competent to perform the work they are employed for. In the case of Ranger Mine and the Ranger Authorisation, the operator must implement a system to control radiological exposure of people. There is radiation reporting and monitoring requirements and the need for a Radiation Safety Officer as defined in the Code of Practice for Radiation Protection and Radioactive Waste Management in Mining and Mineral Processing (ARPANSA, 2005). There is no stipulation on the number of Radiation Safety Officers or any requirement to notify of any changes. In 2007, the responsibility for health and safety on NT mine sites was transferred from Department of Regional Development, Primary Industry, Fisheries and Resources to NT WorkSafe therefore since then radiation safety in relation to personal safety is the jurisdiction of NT WorkSafe. There is no specific requirement for Radiation Safety Officers in the NT Workplace Health and Safety Act.

The Code of Practice states that ‘the operator and employer must ensure that appropriate expertise in the fields of radiation protection and radioactive waste management is available, and appoint a Radiation Safety Officer who has qualifications and experience acceptable to the relevant regulatory authority.’

A Radiation Management Plan (RMP) which meets the objectives of the Code must be approved by the regulator. Any significant changes to the RMP must be authorised by the regulator.

In the case of other jurisdictions, a number of different approaches are used commensurate with the types of sources and expertise of the licence holder. Tasmania requires all licence holders have radiation management plans which specify a radiation safety officer, their duties and the roles and responsibilities of all persons expected to be dealing with radiation sources. Changes to the plan or personnel specified must be approved in advance. Other jurisdictions specify in conditions of licence that adequate staffing is required or that a list of all holders of authority be provided. Remaining jurisdictions advise that inspection of premises to ensure necessary safety requirements are being met and an emphasis on the responsibility of licensee to comply with requirements is used.

Q.No 33	Country United States of America	Article Article 25	Ref. in National Report Section F, Page 38
Question/	The report states that emergency plans are tested "regularly." Please elaborate on the		

Comment	requirements for testing, including off-site participation.		
Answer	<p>The responsibility for the immediate radiation emergency response resides with the States and Territories and there are Plans covering both nuclear and radiological emergencies. The requirements for the frequency of review, testing and exercising of these emergency plans is dependent of the specific plan, as indicated in the response to Ukraine in relation to Article 25.</p> <p>At the national level, there is a rotating exercise schedule covering security, consequence management and other disasters relating to emergency response. The schedule rotates on a two year cycle through the states and territories and is all hazard in its approach. During the cycle, both field and table top exercises are conducted in order to test management and field responses at all levels.</p>		
Q.No 34	Country Canada	Article Article 26	Ref. in National Report
Question/ Comment	It is unclear when financial guarantees are required and the difference (if any) between financial guarantees for premature closure (e.g. bankruptcies) versus bonds to ensure completion of established decommissioning costs. Can Australia please elaborate?		
Answer	<p>South Australia There is no difference between financial guarantees and Bonds. Bonds are used primarily to provide financial assurance that the mine operator does not default on their obligation to appropriately decommission and rehabilitate the mine, regardless of the reason for the closure (planned or unplanned). Bonds are estimated on the maximum liability that may arise during the life of the mine.</p> <p>Northern Territory Securities for all exploration sites and mines in the Northern Territory are calculated by Territory Government based on the disturbance and estimated rehabilitation cost. Mines must annually submit a Mine Management Plan and based on this plan and planned future operations the security is reviewed and upgraded where necessary. The security is lodged with the department and is held against the operator to ensure satisfactory closure and rehabilitation of the site. On successful completion and rehabilitation of sites the security held by the department is refunded to the operator. Securities are held against all authorised exploration and mining sites and are in the form of cash or bank guarantee.</p> <p>The exception is the Ranger Uranium, the only operating uranium mine in the Northern Territory. Regulation of the mine is carried out under a joint working agreement between the Commonwealth and Northern Territory Governments. The security is held by the Commonwealth Government. On successful close out and rehabilitation of the mine the security is returned to the operator.</p>		
Q.No 35	Country Canada	Article Article 26	Ref. in National Report
Question/ Comment	<p>During 2006 Q&A Canada asked “How would the value of a bond for decommissioning a uranium mine be established? Can you provide details on the value and form of the bond for the Beverley uranium project? What process is followed in the revision of the bond and how is the new value established?”</p> <p>As not a lot of detail was provided in the response, Canada respectfully requests further information on this aspect for both South Australia and the Northern Territory.</p>		

Answer	<p>South Australia</p> <p>The current financial security bond for decommissioning the Beverly uranium project in South Australia is \$7,305,000. The value of the bond is revised every year. The Beverly uranium project is required to submit an estimate of the costs involved to rehabilitate the mine site as part of its current Mining and Rehabilitation Program (MARF), which is then assessed and revised if necessary by the State government. Information on the determination of this bond can be found in the MARF 2008 document for the project which has been posted on the Primary Industries and Resources South Australia (PIRSA) website at: http://www.pir.sa.gov.au/__data/assets/pdf_file/0008/86615/MP11v6_MARF_2008.pdf</p> <p>Further details of how the rehabilitation liability is to be calculated can be found in section 9.9 of this document: http://www.pir.sa.gov.au/__data/assets/pdf_file/0020/95024/mg02_preparation_ml_marf_v4.9.pdf</p> <p>The assessment has been accepted by State and Commonwealth Government agencies and the bond has been paid and is being held by PIRSA.</p> <p>Northern Territory</p> <p>In the case of the Ranger Uranium Mine there is requirement for the operator to submit an annual plan of rehabilitation based on a scenario that the mine will cease operations on 31 March of that year and is unable to recommence operations. The operator must outline plans and costing to close and rehabilitate the mine site. Both Commonwealth and Northern Territory Governments review the plan and costs and following agreement with the operator on the total costs, engage an independent assessor to review the costs before approving the plan. The security is updated to the new agreed amount for that year and is held by the Commonwealth Government until the mine is successfully closed and rehabilitated.</p>		
Q.No 36	Country United States of America	Article Article 26	Ref. in National Report Section F, Page 38
Question/ Comment	The challenge of diminishing numbers of qualified staff in the nuclear industry is cited. Some efforts to develop skills are mentioned. Please provide more specific information on specific programs to develop such skills in your national presentation in May 2009.		
Answer	Noted. Measures have been put in to place to keep up the training and professional development opportunities of younger less experienced staff; staff are recruited internationally; and new staff are being attracted through a targeted graduate recruitment program. Please also refer to the response provided to the UK in relation to Article 22.		
Q.No 37	Country Argentina	Article Article 27	Ref. in National Report Section I - Page 63
Question/ Comment	It seems that permission in writing to import a substance could be delivered by the Minister of Health or by an Officer within ARPANSA. Could Australia explain how is the coordination between these two organizations to avoid problems, such as: will a permission denied by either of them be approved by the other?		
Answer	Permission in writing to import a radioactive substance is made by an authorised officer of the Minister for Health under the Customs (Prohibited Imports) Regulations 1956. Applications are normally decided by officers in ARPANSA that have been appointed by the Minister for Health. The customs laws establishing the import control (Regulation 4R of the Customs (Prohibited Imports) Regulations 1956) give		

	the Minister powers to vary or revoke applications that have been granted by authorised officers. The Minister would only make a decision if the decision is to reject the request for permission. All other decisions are made by the delegated officer. There is no overlap or conflict of decision making authority.		
Q.No 38	Country Luxembourg	Article Article 28	Ref. in National Report Page 65
Question/ Comment	What conditions have to be fulfilled for ARPANSA in order to issue export permissions for the export of high activity radioactive sources?		
Answer	<p>Criteria for the approval of an application to export high activity radioactive sources are the same as those set out in the IAEA's Guidance on the Import and Export of Radioactive Sources. Namely, that the intended recipient is authorised to receive and possess the radioactive source, the importing State has the necessary governmental infrastructure to safely and securely manage the radioactive source and consideration of the risk of the radioactive source being diverted for malicious use.</p> <p>The export control regime has been designed to meet Australia's obligations under the International Atomic Energy Agency's Code of Conduct on the Safety and Security of Radioactive Sources (the Code). ARPANSA requires the following information to be provided before it will give permission for the export of a high activity radioactive source: the name of the exporter and the details of the regulatory regime under which the source is managed, the details of the recipient who will receive the source and details of the source proposed to be exported.</p>		
Q.No 39	Country Argentina	Article Article 32	Ref. in National Report Page 11 – Section B
Question/ Comment	When does Australia foresee the implementation of a nationally endorsed radioactive waste classification system?		
Answer	Work is underway on drafting a new national classification scheme for radioactive waste that will provide guidance on characterisation of waste for operational safety and will adopt the recent IAEA classification scheme for storage and disposal and will be consistent with existing Australian guidance on near-surface disposal, disposal of very low level wastes and predisposal management. This new scheme is expected to be fully implemented by the second half of 2009.		
Q.No 40	Country Argentina	Article Article 32	Ref. in National Report Page 15 - Section D
Question/ Comment	It is mentioned that there is an abandoned Interim Storage Facility at Victoria, could Australia give more information about what "abandoned" means from a safety and security point of view? Does that facility contain radioactive waste?		
Answer	<p>Victoria's interim store contains a variety of radioactive material surrendered to the regulator by the owner of the material; or material which has been seized by the regulator for safe keeping over the past 25 years (approximately).</p> <p>The materials in the facility can be considered to be waste in that it is unlikely that there will be any further uses for the materials.</p>		
Q.No 41	Country Canada	Article Article 32	Ref. in National Report
Question/ Comment	Where will the reactor waste from OPAL be disposed?		
Answer	As noted at page 8 of the National Report, the new Commonwealth Government is		

	<p>presently reviewing all aspects of its long-term radioactive waste management strategy.</p> <p>The Australian Government's policy is that low level and short-lived intermediate level radioactive waste generated by operation and decommissioning of OPAL will be disposed of at a near-surface repository. Long-lived intermediate level waste, including spent fuel reprocessing waste, will be placed in long-term storage pending accumulation of a sufficient volume to justify construction of a disposal facility.</p>		
Q.No 42	Country China	Article Article 32	Ref. in National Report B.2.1, p.9
Question/ Comment	Please provide the specific requirements for disused sealed sources and medical radioactive waste when those being collected and stored in Australia. How do you charge the waste storage, whether the cost for disposal covered?		
Answer	<p>The majority of medical waste is short-lived and managed via delay and decay facilities at the point of generation until it can be legally discharged as very low level radioactive waste or disposed as no longer radioactive. It is then managed with other medical wastes.</p> <p>The majority of disused sealed sources in Australia are stored by the owner of the source. Most jurisdictions do not provide for collection or storage of sources and therefore do not charge for the cost of storage. Disposal in these cases is restricted to return to manufacturer where this is available and these costs are borne by the owner of the source.</p> <p>In Queensland, certain sources may be stored in the State's dedicated radioactive waste store and while there is no direct storage cost imposed on the owner of the source, the owner is required to ensure that standards in relation to pre-disposal management of radioactive waste and transport of radioactive materials are met as well as the safety requirements for the waste store.</p> <p>In Western Australia, disposal of sources is available at the State's Intractable Waste Disposal Facility (see page 17-18 of the National Report). Prior to disposal, wastes are transferred to the facility for pre-disposal packaging but no storage costs are charged. Disposal costs are based on cost recovery and is shared amongst waste owners on a pro-rata basis calculated on total packaged volume for the source.</p>		
Q.No 43	Country China	Article Article 32	Ref. in National Report B.2.1, p.11
Question/ Comment	What is your current plan to build the repository for low level- and intermediate- level radioactive waste? When will the repository be available according to the plan?		
Answer	At the time of writing, the Australian Government continues to review its waste management policy. Accordingly, all work on siting a facility has been halted pending a Government decision on how to proceed. Until the Government makes its decision a timetable cannot be provided. Please also refer to the response provided to Canada in relation to Article 32.		
Q.No 44	Country Czech Republic	Article Article 32	Ref. in National Report
Question/ Comment	What is the national policy related to the management of high-level waste generated during the re-processing of spent fuel overseas?		
Answer	Under contractual arrangements with the reprocessing companies, all waste generated		

	by reprocessing must be capable of classification as less than high level waste, as defined in Australia (that is, heat generation less than 2 kWm-3). Long-lived intermediate level waste generated by reprocessing will be placed in long-term storage pending accumulation of a sufficient volume to justify a geological disposal facility.		
Q.No 45	Country Germany	Article Article 32	Ref. in National Report p.7; Sec. B
Question/ Comment	What will happen to the uranium from the reprocessing of research reactor fuel at La Hague or Sellafield?		
Answer	The uranium from the reprocessing of research reactor fuel at La Hague has been sold to AREVA. The uranium from the reprocessing of research reactor fuel at Dounreay was used in the fabrication of fresh fuel elements for HIFAR.		
Q.No 46	Country Korea, Republic of	Article Article 32	Ref. in National Report p.19 (D)
Question/ Comment	According to the report Section D, the decommissioning of the research reactors MOATA will be undertaken in three stages. What are the work scopes for the second stage of decommissioning of the MOATA, that is, during the partial dismantling with continuing care stage?		
Answer	In the event, the second and third stages will be undertaken immediately sequentially. The second stage will entail the removal of: control rod assemblies; the graphite moderator/reflector; the aluminium core tanks and associated pipework; the steel core support frame; and the lead gamma curtain. The removal of these active core components will allow accurate measurements of the activity of the inner surfaces of the concrete bioshield, which will be dismantled in the third stage.		
Q.No 47	Country United Kingdom	Article Article 32	Ref. in National Report Section B, Page 9 2nd para.
Question/ Comment	Radioactive waste management policy - the report states that site investigations were carried out at 4 locations in the Northern Territory during 2006-2008. Can you please describe the results of those investigations and the conclusions drawn from them?		
Answer	The report on the site investigations has been provided to the Australian Government. As the Government is reviewing its waste management policy, it has not yet released this report publicly.		
Q.No 48	Country United Kingdom	Article Article 32	Ref. in National Report Section B, Page 9 5th para.
Question/ Comment	(1) Can you please describe the contents of the radiation management plans required of organisations and employers? (2) Can you please describe the criteria used by the regulatory body to judge the acceptability of these plans? (3) Can you please describe the arrangements for ensuring that the plans are maintained throughout the required lifetimes of facilities?		
Answer	In the case of Commonwealth regulated entities, ARPANSA has published guidance on the expected content of radiation management plans. These are set out in our regulatory guidance document "Review of Plans and Arrangements for managing safety". This document sets out the regulatory expectation and therefore the criteria by which the adequacy of the plan will be judged.		

It is a separate licence condition set out in the ARPANS Regulations that a licence holder must review its plans and arrangements for managing safety (including the radiation management plan) every 12 months and any changes to that plan must be communicated to the CEO of ARPANSA. If a proposed change to those plans has “significant implications for safety” then those proposed plans would require the prior approval of the CEO of ARPANSA.

In the case of States and Territories, the contents of radiation management plans in relation to waste are stipulated in the Code of Practice for the Near-Surface Disposal of Radioactive Waste (NHMRC, 1992) and the Code of Practice for Radiation Protection and Radioactive Waste Management in Mining and Mineral Processing (ARPANSA, 2005). Guidance on the content of radioactive waste management plans for predisposal management is also provided in the Safety Guide for the Predisposal Management of Radioactive Waste (ARPANSA, 2008).

The Code of Practice for the Near-Surface Disposal of Radioactive Waste requires that before the commencement of disposal operations, the operator establish a radiation management plan for operations at the facility which meets the requirements of, and is approved by, the regulator. The purpose of the plan is to establish management practices and procedures to ensure that when waste handling, packaging and disposal operations are carried out there will be no unacceptable risk to employees or members of the public.

The radiation management plan must address operational aspects of radiation safety. The plan includes personnel training, personnel monitoring, maintaining records, monitoring within the operational area of the facility, designation of areas of potential radiation exposure, emergency preparedness, contamination control and protective clothing and apparatus.

The radiation management plan must be reviewed by the operator at approximately three yearly intervals during the period of operation and the operator shall submit a publicly available report detailing this review to the regulator.

The Code of Practice for Radiation Protection and Radioactive Waste Management in Mining and Mineral Processing requires that before the commencement of any stage of an operation to which the Code applies, a Radiation Management Plan (RMP) for that stage must be devised and presented to the regulator for approval. The Plan must be directed towards meeting the objectives of the Code and must be in accordance with best practicable technology and take into account the potential dose delivery pathways. The Radiation Management Plan must include a description of the operations to which it applies, and the measures that are intended to be taken to control the exposure of employees and members of the public to radiation at or from the practice including:

- demonstrated access to appropriate professional expertise in radiation protection;
- a plan for monitoring radiation exposure and for assessing the doses received by exposed employees;
- the provision of appropriate equipment, staffing, facilities and operational procedures;
- details of induction and training courses;

- record keeping and reporting;
- a plan for dealing with incidents, accidents and emergencies involving exposure to radiation; and
- a system of periodic assessment and review of the adequacy and effectiveness of procedures instituted under the Radiation Management Plan to ensure currency and to facilitate a process of continual improvement.

The Code of Practice for Radiation Protection and Radioactive Waste Management in Mining and Mineral Processing and the Safety Guide for the Predisposal Management of Radioactive Waste also contain requirements and guidance for radioactive waste management plans. The Code of Practice for the Near-Surface Disposal of Radioactive Waste contains requirements for environmental management plans.

In some jurisdictions, requirements for radiation management plans for all uses of radioactive materials is detailed in relevant legislation. For example, Regulation 8 of the Tasmanian Radiation Protection Regulations 2006.

In South Australia, the criteria used by the regulator to judge the acceptability of radiation management plans relating to mining of uranium are judged according to the following criteria:

- Qualifications and experience of people nominated as being accessible to give advice on radiation protection matters.
- The methods of monitoring radiation exposures, the frequency of measurements, the accuracy and uncertainty of measurements, the areas to be monitored, evaluation and reporting of monitoring results.
- The specifications / capabilities and numbers of radiation monitoring equipment available as specified in the radiation monitoring plan, the number of staff engaged in carrying out the radiation management plan.
- The contents and adequacy of induction and training courses.
- The contents and adequacy of records and reports on area surveys and monitoring of personnel exposures.
- The contents and adequacy of plans for dealing with radiation accidents and incidents and accident and incident reporting mechanisms.
- In general, the plans are assessed with consideration to the radiological risk to people and the environment from the proposed operation.

In South Australia, where waste disposal from uranium mining occurs, arrangements for ensuring that the plans are maintained throughout the required lifetimes of facilities include:

- Licensees are obligated under conditions on their licence to develop radiation management plan and radioactive waste management plan as appropriate for each stage of the operation, and to implement these plans to the satisfaction of the regulator.
- The regulator maintains surveillance of implementation of these plans and conducts site visits and inspections for this purpose. The regulator also assesses quarterly and annual reports on radiation monitoring and environmental monitoring and reviews compliance with action levels, dose limits, and operating procedures in the plans.

In Western Australia, the Mt Walton East Intractable Waste Disposal Facility is

	operated by the West Australian government. An independent technical auditor is appointed in accordance with the requirements of the Code of Practice for the Near-Surface Disposal of Radioactive Waste. The report on the maintenance of plans is then presented to the independent regulatory council for determination of acceptability.		
Q.No 49	Country United Kingdom	Article Article 32	Ref. in National Report Section B, Page 10 1st para. & Page 12 1
Question/ Comment	(1) Can you please indicate the likely timescale for the replacement of the 1985 Code with the new schedule in the National Directory for Radiation protection? (2) Can you please indicate the likely timescale for the addition of the amendment to the Code to ensure application of exemptions to bulk quantities of raw materials?		
Answer	(1) A draft Schedule to replace the 1985 Code of Practice for Disposal of Wastes by the User (including a set of discharge limits) has been developed. A regulatory impact statement describing the costs and benefits of the proposal and other options is being prepared. This will be followed by a consultation process, before putting final recommendations to the Radiation Health Committee (on which all jurisdictions are represented). After agreement by the Committee, approval of Ministers will be sought. It is expected that this process will be completed within the next 12 months. Please refer to the response provided to the UK in relation to Article 11. (2) This amendment is in relation to exemption levels of the National Directory rather than the Code. The amendment is currently at the final stage requiring Ministerial approval, prior to its incorporation in the Directory which is expected during April 2009.		
Q.No 50	Country United Kingdom	Article Article 32	Ref. in National Report Section B, Page 10 3rd para.
Question/ Comment	(1) Can you please indicate the likely timescale for the development of the guidance for the remediation of, and development of environmental guidance to be applied in areas such as uranium exploration, other NORM situations and radioactive waste disposal? (2) What is the likely timescale for the introduction of such guidance across the States?		
Answer	(1) Current planning for the development of the environmental guidance is focused on recruitment of suitably qualified personnel to undertake the project. At this stage, it is estimated that development of the guidance will require approximately 3 years. (2) As the guidance is advisory, its introduction by radiation regulators can occur as soon as publication takes place. Mandatory requirements, that would become part of the National Directory for Radiation Protection, need to go through the process described in response to the question from the UK in relation to Article 11, which consists of a cost-benefit analysis as part of a regulatory impact analysis, public consultation and formal approval by all jurisdictions before being adopted by each State and Territory into their existing regulatory framework.		
Q.No 51	Country United Kingdom	Article Article 32	Ref. in National Report Section B, Page 11 2nd para.
Question/ Comment	Can you please indicate the likely timescale for Tasmania to conduct the audit of its waste holdings?		

Answer	Tasmania already has the information required by this audit and will prepare a report in the audit format by February 2010.		
Q.No 52	Country United Kingdom	Article Article 32	Ref. in National Report Section B, Page 11 5th para.
Question/ Comment	Can you please describe the progress to date in investigating the options for the establishment of an interim store and repository for low and intermediate radioactive wastes?		
Answer	The South Australian regulator continues to investigate options for establishing an interim store and repository for low-level and intermediate level radioactive waste.		
Q.No 53	Country United Kingdom	Article Article 32	Ref. in National Report Section B, Page 11 last para.
Question/ Comment	(1) Has work commenced on development of a national classification system for radioactive waste? (2) What is the likely timescale for implementation of this system?		
Answer	(1) Work is underway on the development of a national classification scheme for radioactive waste in Australia. A draft document has been produced and a drafting group has been formed to finalise the details. Please refer to the response provided to Argentina in relation to Article 32. (2) It is expected that a new national scheme for characterisation and classification of radioactive waste in Australia will be implemented by the second half of 2009.		
Q.No 54	Country United Kingdom	Article Article 32	Ref. in National Report Section C - Page 16, 5th para.
Question/ Comment	Can you please explain what storage arrangements apply to radioactive material which is not judged acceptable for storage at the Queensland radioactive waste store?		
Answer	Radioactive waste not acceptable for storage is either: (a) conditioned so it is suitable for storage along the lines of the ARPANSA Safety Guide for the Pre-disposal Management of Radioactive Waste; or (b) conditioned so it is acceptable for immediate disposal (release into the environment guided by ARPANSA's National Directory for Radiation Protection and Code of Practice for the Disposal of Radioactive Wastes by the User (NHMRC, 1985)).		
Q.No 55	Country United States of America	Article Article 32	Ref. in National Report Section K, Page 67
Question/ Comment	Section K, Planned Activities to Improve Safety, mentions the Commonwealth Government is reviewing all aspects of Australia's long-term radioactive waste management policy. Please highlight in your national presentation in May 2009 the main issues of concern, progress and schedule for completion.		
Answer	Noted		
Q.No 56	Country United States of America	Article Article 32	Ref. in National Report Section B, Page 9
Question/ Comment	The 2005 Second National Report included the objective of establishing a Commonwealth Radioactive Waste Management Facility. Site investigations were undertaken during 2006-2008 at four locations in the Northern Territory. Please summarize the results of these investigations at your national presentation in May 2009.		

Answer	Noted		
Q.No 57	Country United States of America	Article Article 32	Ref. in National Report Section B, Page 11
Question/ Comment	The 2007 Integrated Regulatory Review Service (IRRS) mission to the Commonwealth of Australia recommended development of a national classification system for radioactive waste. Annex C also provides information on the IRRS review and recommendations. What progress has actually been made in developing a national classification system?		
Answer	A draft document has been produced which provides guidance on characterisation of waste for operational safety during predisposal management of the waste, and will implement the recent IAEA classification scheme for storage and disposal of waste. A drafting group has been formed with expertise in management and regulation of radioactive waste, to finalise the details. Please refer to the response provided to Argentina in relation to Article 32.		
Q.No 58	Country United States of America	Article Article 32	Ref. in National Report Section B, Page 11
Question/ Comment	The 2007 IRRS review complemented ARPANSA on its efforts to achieve regulatory uniformity through its implementation of its National Directory for Radiation Protection. This directory (Edition 1.0) was published in August, 2004. Australia indicated at the Second Review Meeting this Directory would be updated in 2007. What is the status of this document update? What challenges are being encountered in its revision?		
Answer	At the time of the last review meeting it was proposed to update the National Directory by producing a consolidated Edition 2. The main challenges in doing this lay in the regulatory impact assessment work to be completed on any change to the Directory. Some of this work was complex and required significant effort to resolve (mainly in areas of non-ionizing radiation protection). These difficult areas were holding back other amendments where the impact analysis was not so complex. As a consequence, the Radiation Health Committee decided to advance the National Directory by preparing individual amendments rather than a consolidated Edition 2. The first three amendments are currently at the final stage of Ministerial approval and are expected to be adopted by April 2009. A further amendment has recently been agreed by the Committee and will be submitted for Ministerial approval shortly. Other amendments are at various stages of preparation, including some at the stage of development of regulatory impact assessment prior to consultation. Please refer to the response provided to Canada in relation to Article 18.		