

## Kimba Questions for ARPANSA – 6 August 2018

**The 1992 code of practice for the near surface disposal of radioactive waste in Australia, states the site for the Facility should be located in an area which has no known significant natural resource value. I understand this will be in the updated code. Can you please confirm?**

ARPANSA confirms that the site selection criteria remains in the new code. This particular criterion is one of five non-radiological criteria that must be considered, but is not mandatory to comply with.

**Your job as a regulator is to licence the Facility to ensure the safety of people and the environment. I understand that it isn't your role to govern or regulate the Governments selection process. With what you've seen and heard throughout this selection process do you believe it has been conducted fairly and do you believe that the Governments selection process should be somehow regulated?**

ARPANSA is unable to comment. The site selection process is run by the DIIS and we have no oversight or influence. ARPANSA will assess the appropriateness of the site if and when a licence application is received. The integrity of that process could have been compromised if ARPANSA had been a party to the selection process. ARPANSA will also request any environmental impact assessment performed by any other authority, e.g. under the *Environment Protection and Biodiversity Conservation Act* (the EPBC Act), and use it as an input to the decision.

**Is there a clause or prohibition saying you cannot site a facility on agricultural land?**

There is no prohibition or clause in our regulations that states you cannot site a facility on agricultural land. Our Code for Disposal Facilities for Solid Radioactive Waste contains siting criteria that must be considered. In particular, it states:

*“the immediate vicinity of the Facility has no known significant natural resources, including potentially valuable mineral deposits, and which has little or no potential for agriculture or outdoor recreational use”*

This particular criterion is one of five non-radiological criteria that must be considered but is not mandatory to comply with.

**When will the new code of practice for disposal of Radioactive Waste be public?**

The Code for Disposal of Solid Radioactive Waste was approved by the Radiation Health Committee (RHC) in July. The RHC is comprised of state and territory regulatory bodies. It will now be circulated to our Radiation Health and Safety Advisory Council (RHSAC) for consideration and approval to publish (noting that this can happen out of session rather than waiting for the next scheduled meeting). Once approved by RHSAC it would take effect for the Commonwealth as soon as practicable.

When the Code is finalised we will publish the resolution of comments from stakeholder submissions on our website. When responding to comments on the draft Code we indicate whether the proposed change has been 'accepted', 'accepted with modifications', 'not accepted' or 'noted'.

**The federal plan for low level waste is consistent with international best practice but what is ARPANSA's view in regards to ILW and the approach taken on double handling ILW from one interim storage facility to distant regional SA as best practice?**

The proponent would need to present a compelling and credible case to move the stored ILW from one facility to another.

There is no specific international standard or guidance that handles this issue. Other countries have built storage facilities on the site of waste production, or centralised facilities, to operate a number of facilities. The national context, including if the country operates power reactors and thus generates considerably more waste and, in addition, spent fuel, contributes to the way the national framework for waste management is set up.

**Are ARPANSA aware that the Azark Project in Leonora, WA nominated and are also proposing to facilitate a final deep geological disposal pathway for ILW?**

Yes.

**Are you aware of the concerns that people on the Eyre Peninsula or the Barngarla do not feel properly engaged in the consultation process so far?**

Yes.

**What is the process to extend the licensing of the interim storage facility at ANSTO in Lucas Heights?**

There is currently no deadline for removal of the waste from the Interim Waste Store at Lucas Heights. However, under a licence condition, ANSTO must submit a plan to ARPANSA by 30 June 2020 for the removal of the waste. ARPANSA is unable to anticipate what that plan will contain as it is contingent upon progress with the establishment of an ultimate disposal pathway. However, the current licence does not preclude continued storage of waste at the Interim Waste Store beyond 2020.

**When will the parliamentary review be given to ARPANSA regarding the recent incidences at ANSTO?**

We have asked ANSTO to conduct an independent review into their practices given a recent number of events that have led or could have led to exposure to staff. The review was due to start on the 6<sup>th</sup> of August, and information has been received to confirm that it has. The review will be concluded in 60 days, with an interim report delivered to ARPANSA in 30 days.

The direction that ARPANSA delivers will have to be tabled in parliament within 15 sitting days. This will then be available to everyone. However, there is no parliamentary review into ANSTO.

**How do ARPANSA define community and stakeholders?**

It is not up to ARPANSA to define what community means for a particular facility. There is no definition in our regulations. In a licence application we would expect the proponent to define community based on their understanding, including the application of cultural interpretations of what constitutes the appropriate community (for a particular facility). If, and when, ARPANSA receive a licence application we will seek submissions from any interested parties, which is not limited to stakeholders in a defined 'community'.

**Why is there no social licence or social impact assessment in codes and guides on the management and disposal of radioactive waste?**

ARPANSA's remit is protection of health and safety of people and the environment from the harmful effects of radiation and ARPANSA applies the broad definition of 'health' which also includes mental and social wellbeing. The Environmental Impact Statement which is required under the EPBC Act should address social impacts, and this will be considered under the ARPANSA licence application process.

**Do ARPANSA view it as 'world's best practice' to have issued the original licence for storage of intermediate level waste at ANSTO without first requiring clear plans & pathways from ANSTO regarding final disposal of such waste?**

Radioactive waste has been produced at the ANSTO Lucas Heights site since the mid-1950s. Since then, best practice in the disposal of radioactive waste has evolved significantly. More recently the Australian Government has committed to developing a disposal pathway in its radioactive waste management policy. Furthermore, in licensing recent facilities at ANSTO such as the Interim Waste Store and the ANSTO Nuclear Medicines facility, ARPANSA has required a commitment to establishing a disposal pathway for intermediate level waste.

**International Best Practice requires a disposal pathway to be in place prior to licensing. Will the Facility receive a licence to store ILW if there is no solution in place for its disposal?**

ARPANSA has stated the proponent will need to demonstrate that there are credible plans in place to develop a disposal pathway for the ILW.

**How was the situation able to arise where the storage of LLW at Woomera was compromised?**

While the storage conditions at Woomera Test Range do not meet current standards, it is not correct to say the storage has been compromised. The waste materials stored at Woomera Test Range are largely so low in radiation they will not require any controls, or are Low Level Waste (>95% of drums) and it is expected that less than 5% would be considered Intermediate Level Waste. These materials were placed at Woomera Test Range in 1994 before ARPANSA came into existence. When ARPANSA was created we appropriately placed that material under regulatory control by issuing a licence to CSIRO for its management. Over time, ARPANSA has conducted a range of inspections, site visits, and environmental measurements and has continuously monitored the storage of the radioactive waste. ARPANSA understands that the decision to move this waste to Woomera was never intended to be a permanent solution and at the time it was expected that a national radioactive waste management facility would have been operational. Nevertheless, the drums have a design lifetime of 40 years.

**What steps are being taken to address this?**

ARPANSA has required CSIRO to work towards characterising the inventory at Woomera Test Range more accurately in order to establish the future management actions required. This first but important step allows a licence holder to determine the hazards, control the risks and repackage the materials in accordance with best practice. Until this characterisation work is complete, it will be difficult for CSIRO to establish and implement the necessary strategies for its permanent management. In early 2018, ARPANSA received a request for regulatory approval from CSIRO to initiate a pilot program aimed at testing a range of technologies to assist in characterising the inventory. After approving the request, ARPANSA inspectors travelled to Woomera to monitor the safe implementation of these tests. ARPANSA will

continue to monitor CSIRO's activities closely as part of our compliance and enforcement program.

**Does ARPANSA understand that this reality has caused increased concern in affected communities in relation to competency, capacity and governance.**

Yes.

**ANSTO has the room and space for intermediate waste. Does this mean it can stay at Lucas Heights until a permanent facility can be found?**

Contrary to what might be perceived, ARPANSA has not stated that there is an urgency to remove the waste from ANSTO. In the long run, ANSTO cannot be the site for permanent storage or disposal. This would be against the ANSTO legislation. In the meantime ARPANSA has licenced facilities at ANSTO that ARPANSA considers safe. This means there is no urgency in the movement, however there must be plans in place for a final disposal facility for ILW.

Further, if an application is received to move the waste out of Lucas Heights, there must be a justification for this and a credible case as to why it must be moved. ARPANSA would also require a credible case for the establishment of a permanent disposal facility. The government has committed to this process. This will take place at a location other than the sites being currently discussed.

**As the authority issuing the licence for the storage of intermediate level waste, what specific act in the constitution is allowing the Federal Government to over-ride state law that prohibits nuclear waste in South Australia?**

Section 109 of the Constitution provides that where there is inconsistency between Commonwealth laws and State laws, the State law will be invalid to the extent of the inconsistency. This assumes that the Commonwealth law has been validly enacted utilising a head of power vested in the Commonwealth by the Constitution. The head of power will arise either through a specific category of power enunciated in Part 5 of the Constitution or through the exercise of the Commonwealth's executive power pursuant to section 61 of the Constitution.

Whether or not a Commonwealth law has been validly enacted is a matter for the High Court of Australia to determine, not ARPANSA.

Notwithstanding the above, it is a matter for the applicant to satisfy the CEO that they are able to lawfully operate the Facility and that they have obtained all necessary powers to do so. The CEO will apply the law of Australia as it applies at the time of making the licensing decision and will, if required, obtain legal advice to ascertain the state of the law at that time.

**Many South Australians are aware of the low level waste in Woomera being compromised again and this has caused scepticism of the Government's ability to manage waste. What assurances do we have that Kimba will be any different, and how does ARPANSA propose to address the current situation in Woomera?**

It is not correct to say the waste at the Woomera Test Range has been compromised. The radioactive waste at Woomera held by CSIRO is licensed under an ARPANSA source licence due to the low hazard of the waste inventory. The proposed national facility will be licensed as a nuclear installation which requires a much higher level of regulatory oversight, including inspections and site visits. Since 2016, ARPANSA has undertaken a number of inspections and two site visits of the Woomera Test Range waste facility, including independent soil samples which have been measured in the ARPANSA laboratories. These sample measurements indicate that radioactivity levels in the surrounding soil are at background levels and that no environmental releases have occurred.

**The current proposal for ILW will involve transport and double handling, and storage which is well below world's best practice. The new Radioactive Waste Management Framework is consistent with the ILW staying at Lucas Heights temporarily, during which time which the disposal location can be established. Then storage can occur at the ultimate disposal site, while disposal logistics are determined. Can ARPANSA licence the ILW to stay at Lucas Heights temporarily, given this will avoid double handling and enable a proper disposal process?**

The ILW at Lucas Heights is currently licensed to be stored there, and is subject to an ongoing programme of inspections and compliance monitoring. There is no urgency from the safety perspective to move the waste from Lucas Heights. There is no deadline for removal of the ILW from Lucas Heights, although there is a licence condition which requires ANSTO to submit a plan to ARPANSA by 30 June 2020 for its removal. This plan is contingent upon progress with the ultimate disposal pathway.

**Is there a regulatory impediment to the ILW continuing to be held at Lucas Heights until a disposal site is found, given disposal is consistent with international best practice?**

No, contingent on periodic review and assessment of the safety of continued storage at Lucas Heights.

**Can the intermediate level waste stay at its current storage location? Is there a regulatory reason that it cannot remain at Lucas Heights? Is there a genuine need to remove the ILW from its current location to a second interim location?**

From ARPANSA's perspective there is no urgency in moving waste from Lucas Heights, but it must happen eventually as per the legislation. A justifiable reason will have to be given by the proponent to move the waste from Lucas Heights to an interim storage facility prior to a disposal facility. This will be judged on the basis of the justification and what risks or exposures may occur due to the double handling. It falls back to the proponent to provide a credible, defensible case for this to occur. The final plans for disposal would also be required.

**If the intention is for Australia to have one, single National Radioactive Waste Management Facility, why does it not make most sense to first select the final disposal site for ILW, and have the LLW follow the ILW to that facility?**

ARPANSA has no role in the site selection process but notes the commitment to start a site selection process for a disposal facility for ILW at a suitable location.

**What is your response to a suggestion that the CSIRO waste stored in Woomera got to the state it is currently in due to its remote location? What assurances can you give to the community that the waste at the proposed facility will not end up the same state?**

ARPANSA is a commonwealth regulator with 35 licence holders across Australia. There are licence holders in every state or territory, with many located in remote places. ARPANSA does not believe the remoteness of any of the proposed sites will have any impact on the regulatory oversight. The oversight is planned many years in advance and activities such as monitoring and inspection are well known ahead of time. The Woomera Test Range site has no permanent staff in place whereas any national facility would be staffed and constantly monitored. ARPANSA has taken considerable interest in Woomera Test Range waste, with extensive testing being conducted to determine its integrity. There is no indication of any leakage at from materials stored Woomera Test Range. CSIRO has been collaborating with ANSTO to further investigate the waste in Woomera Test Range, and similarly CSIRO has found no evidence of leakage or elevated radiation in the area. ARPANSA is confident that the remoteness of the site will not affect the regulatory oversight due to the extensive planning that is applied to all ARPANSA licensing.

**There is recent information in the media about the waste being moved via sea, has this been considered and does this need to be approved by ARPANSA, and will consultation occur?**

ARPANSA is given the responsibility for the safe transport of radioactive material and ensures national uniformity in the way waste is transported. One of the national codes that has been adopted is the RPSC2: Code for the safe transport of radioactive material, adopted by all jurisdictions within Australia. This takes into account the international guidelines. The Australian Maritime Safety Authority also takes into account sea transport.

Consultation on transport is dependent on the site chosen and what transport routes are considered. From ARPANSA's perspective, provisions from consultation are outlined, and once the proposal is known, submissions on transportation can be received. Consultation as well as collaboration will be used for establishing transport protocols, as first responders and police are involved. At that point in time, a lot of collaboration with the state agencies and authorities around transport and security will happen.

## **Hawker/Quorn Questions for ARPANSA – 7 August 2018**

**How can ARPANSA be sure of their existence for the next 200-400 years?**

ARPANSA cannot be sure. This is a matter of Government policy.

**Why did ARPANSA approve OPAL with no long term waste proposal? Why believe it's any different now with the proposed "interim" storage of ILW, not long term disposal?**

The CEO of ARPANSA issued a licence to the OPAL reactor on the basis that the Australian Federal Government is strongly committed to the management of radioactive waste and spent fuel. This has been demonstrated by the establishment of the Commonwealth Radioactive Waste Management Act (2005) and the National Radioactive Waste Management Act (2012) which has led to the current siting process in South Australia.

**It is generally accepted there are 130 Australian radioactive storage areas, is this figure correct? How many of those storage areas could be eliminated with the commissioning of the proposed facility? How many would be downgraded to transitory storage, such as a hospital generating waste would have to store it until dispatch?**

According to the Australian Joint Convention report on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management, it states that there are at least over 100 radioactive waste stores located across Australia. ARPANSA are unable to answer the last 2 questions as these storage facilities are under the regulation of States and Territories.

**Will ARPANSA come out on country with the Adnyamathanha Traditional Lands Association so you can learn first-hand about our culture?**

Yes, we would appreciate that. ARPANSA has reached out to the CEO of ATLA on a number of occasions since 2016 and has received no response. I understand the CEO does not speak for all 16 family groups, but it is very difficult for us to know what the right way to go about this is. We do not pretend to understand the cultural protocols and we would be grateful for an invitation from ATLA to come to country and learn first-hand about the Adnyamathanha culture.

ARPANSA was invited to come out on country by members of the Viliwarinha Yura Aboriginal Corporation (members of ATLA) which ARPANSA graciously accepted.

**What is ARPANSA's view on the SA nuclear prohibition act?**

Section 109 of the Constitution provides that where there is inconsistency between Commonwealth laws and State laws, the State law will be invalid to the extent of the inconsistency. This assumes that the Commonwealth law has been validly enacted utilising a head of power vested in the Commonwealth by the Constitution. The head of power will arise either through a specific category of power enunciated in Part 5 of the Constitution or through the exercise of the Commonwealth's executive power pursuant to section 61 of the Constitution.

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**Why can't the waste be stored at Lucas Heights?**

**Adi Paterson:** ANSTO's Lucas Heights campus is only licensed by the independent nuclear regulator, ARPANSA, to store waste on a temporary basis, and on the condition that a plan is developed by the end of the decade for a final disposal pathway for its waste. Also, multiple commitments have been given to the community around Lucas Heights over many years that the waste could only be stored at Lucas Heights on an interim basis until a purpose-built facility was available. Importantly, ANSTO is a science and research organisation, not a waste management organisation.

**Bruce Wilson:** This is more than just considering what to do with waste at ANSTO. The project will be taking waste not just from ANSTO but from a number of sources. Waste at places like Woomera has to relocate, and so it makes sense to bring all ILW holdings to a new purpose built, central state-of-the-art facility.

**Dr Carl-Magnus Larsson:** ARPANSA maintains what it has expressed in the past, that is we consider the waste currently stored at ANSTO to be managed in an appropriate and safe manner, and that ANSTO currently holds a licence to do so, however there has to be an end to this given the legislation says that the waste cannot be disposed of at ANSTO.

#### **How much low level and intermediate level waste will be transported?**

ARPANSA will understand the amount of low level waste and intermediate level waste when we receive a site licence application whereby the application, Safety Case and supporting documents will articulate the inventory expected to be disposed of and stored at the Facility.

In that regard, ARPANSA does not know at this stage the final amount of waste that will be transported to the Facility.

#### **Why has the EPBC and ARPANSA processes not been followed before the community goes to a vote?**

ARPANSA is not the organisation that is driving the voting process. At this point in time the vote is to establish whether community support is present.

**DIIS:** The department has undergone the consultation process to establish community support prior to undertaking the licencing and regulatory processes. Site suitability has still been assessed to establish whether there are any major issues that would prevent any of the proposed sites from being used. The community is at the centre of the process, the licensing and regulatory work will come afterwards.

#### **When will the parliamentary review be given to ARPANSA regarding the recent incidences at ANSTO?**

ARPANSA have asked ANSTO to conduct an independent review into their practices given a recent number of events that have led to or could have led to exposure to staff. The review was due to start on the 6<sup>th</sup> of August, and information has been received to confirm that it has. The review will be concluded in 60 days with an interim report delivered to ARPANSA in 30 days.

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