

Fingerboards Mineral Sands Project Inquiry and Advisory Committee

Technical note

TN No: TN 021

Date: 17 May 2021

Subject: Response to IAC Request for Information dated 10 May 2021 (Tabled Document 294) – Q 1

1. Regarding the discussion at Point 33 in the expert meeting statement (Table Document 234) can the Proponent clarify the legal issues for the IAC around the export of Heavy Mineral Concentrate and the potential for extraction of uranium and thorium once exported from Australia.

Response to Question 1

Point 33 in Document 234 considers the EES description of the ‘nuclear action’ provisions in the *Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act)* - in particular, the explanation contained in Part 7.4 of Appendix 006 as to how the Project triggered the ‘nuclear action’ provisions. However, the discussion in Paragraph 33 appears to conflate two legal issues – the designation and assessment of ‘nuclear actions’ under the EPBC Act, and the Commonwealth’s regulation of exporting radioactive materials. This is not a criticism of the experts, as these are legal issues, not matters of expert opinion.

Kalbar’s response to the Committee’s question is set out below.

EPBC Act issues

When the Project was determined to be a controlled action that required assessment and approval under the EPBC Act, four sets of ‘controlling provisions’ were found to be relevant to the Project.¹ Two of these controlling provisions are sections 21 and 22A, which apply to ‘nuclear actions’ that have or are likely to have a significant effect on the environment. In broad terms, these sections prohibit a person from undertaking the ‘nuclear action’ unless the action has been assessed and approved under the EPBC Act.

There are no published reasons as to why the Minister’s delegate determined that the Project was a ‘nuclear action.’ However, in its correspondence to Kalbar advising of its decision, the Minister’s delegate confirmed the Project was found to trigger the ‘nuclear action’ controlling provisions because:

‘the proposed action has the potential to significantly impact the environment via stockpiling and storage of naturally occurring radioactive materials within the produced heavy metal concentrate in exceedance of the activity level threshold prescribed in the EPBC Regulations 2000.’

The date of this correspondence is 6 July 2017, and it is attached to this Technical Note (Attachment 4). The delegate’s decision appears to have been made, at least in part, on the basis of information provided by Coffey to the Department of Environment and Energy dated 26 May 2017, and advice the Department received from ARPANSA by letter dated 16 June 2017. Both letters are attached to this Technical Note (Attachments 2 and 3 respectively).

¹ [Notification of referral decision and designated proponent](#), 7 July 2017

The letter from ARPANSA confirms that, in its view, the level of naturally occurring radioactive material in the tailings and overburden was less than the activity level prescribed in the EPBC Regulations, but that the storage of HMC on-site and off-site may exceed the activity level. It is presumably on this basis that the Minister's delegate determined that the Project was a controlled action.

Further information about the statutory basis of this decision-making process is set out below.

A 'nuclear action' is defined by section 22 of the EPBC Act to mean any of the following:

- (a) establishing or significantly modifying a 'nuclear installation;'
- (b) transporting 'spent nuclear fuel' or radioactive waste products arising from 'reprocessing;'
- (c) establishing or significantly modifying a facility for storing 'radioactive waste' products arising from 'reprocessing;'
- (d) mining or milling uranium ore;
- (e) establishing or significantly modifying a 'large-scale disposal facility' for radioactive waste;
- (f) de-commissioning or rehabilitating any facility or area in which an activity described in paragraph (a), (b), (c), (d) or (e) has been undertaken; and
- (g) any other action prescribed by the regulations.

A 'nuclear installation' means any of the following:

- (a) a nuclear reactor for research or production of nuclear materials for industrial or medical use (including critical and sub-critical assemblies);
- (b) a plant for preparing or storing fuel for use in a nuclear reactor as described in paragraph (a);
- (c) a nuclear waste storage or disposal facility with an activity level that is greater than the activity level prescribed by regulations made for the purposes of this section; and
- (d) a facility for production of radioisotopes with an activity that is greater than the activity level prescribed by regulations made for the purposes of this section.

Section 22 also defines the concepts of 'radioactive waste,' 'reprocessing,' 'spent nuclear fuel' and 'large-scale disposal facility.' The full definition of section 22 is included in Attachment 1 to this Technical Note, but it is submitted that these defined terms are irrelevant to categorising the Project as a 'nuclear action.'

The Project does not meet any of the limbs of the definition of 'nuclear installation.' It is not a nuclear reactor, nor does it involve the preparation or storage of fuel for use in a nuclear reactor. The Project is not a nuclear waste storage or disposal facility, nor is it involved in the production of radioisotopes.

The Project likewise does not meet any of limbs (a)-(f) of the definition of 'nuclear action.' It does not involve the transport or reprocessing of radioactive waste products or spent nuclear fuel, concern the mining or milling of uranium ore, nor does it concern the disposal of radioactive waste. However, limb (g) enables regulations to prescribe additional limbs to the definition of 'nuclear action.'

Regulation 2.01 of the *Environment Protection and Biodiversity Conservation Regulations 2000 (Cth)* prescribes that ‘establishing, significantly modifying, decommissioning or rehabilitating a facility where radioactive materials at or above the activity level mentioned in regulation 2.02 are, were, or are proposed to be used or stored’ is also a ‘nuclear action.’ The Project is clearly a facility, but it will only be a ‘nuclear action’ if radioactive materials exceed the activity levels in regulation 2.02. Regulation 2.02 adopts the activity levels for sealed and unsealed Type 1 nuclides under the *Australian Radiation Protection and Nuclear Safety Regulations 2018 (Cth)*. The EES assumes the Commonwealth applied the activity levels for unsealed radioactive materials, as either the concentrate was at the time proposed to be unsealed.

Part 7.4 of Appendix 006 correctly states that the only radioactive material associated with the Project that exceed the activity levels prescribed under regulation 2.02 is the mineral concentrate. This is also consistent with the advice of ARPANSA and the reasons for decision provided to Kalbar by the Department. The activity levels of the ore and the tailings are orders of magnitude lower than the prescribed activity. Nevertheless, the environmental effects of the entire Project need to be assessed to satisfy the requirements of the EPBC Act.

The EPBC Act does not regulate or address the export of nuclear material or products, and in the past, the Minister has not imposed conditions that regulate such matters.² The export of radioactive materials, including the export of uranium ore or concentrate from uranium mines, is regulated under Commonwealth export laws. These are addressed below.

Export of radioactive materials

The Department of Industry, Science, Energy and Resources has a web page “Applying to export uranium and controlled ores” which explains the circumstances where permission is required to export certain materials containing radioactive minerals (see Attachment 5).

Such export is subject to Regulation 9 of the *Customs (Prohibited Exports) Regulations 1958 (Cth)*. (See extracts in Attachment 6).

Regulation 9 applies to the goods specified in Schedule 7 of the Regulations. In substance, permission is required from the Minister or his delegate for such export. Applications need to be accompanied by an end-user statement. The end-user statement needs to include the buyer’s certification that it does not intend to re-export the ore, and describe how the nuclear material will be used and disposed of.

Permission may be granted subject to conditions. These permissions typically mandate the companies and destinations that may receive the ore, and require the permission holder to periodically report on the quantity and destination of exported ore, and the concentrations of uranium and thorium in the ore.

Schedule 7 provides (with relevant parts underlined for emphasis):

Source material, as follows:

- (a) uranium containing the mixture of isotopes occurring in nature;
- (b) uranium depleted in the isotope 235;

² *Buzzacott v Minister for Sustainability, Environment, Water, Population and Communities (No 2)* [2012] FCA 403. See also Full Court decision in *Buzzacott v Minister for Sustainability, Environment, Water, Population and Communities* [2013] FCAFC 111.

- (c) thorium;
- (d) any of the materials mentioned in paragraphs (a), (b) and (c) in the form of metal, alloy, chemical compound, ore or concentrate, including monazite, tantalum concentrates and tantalum glass;

but not including:

- (e) thorium alloys containing less than 1.5% by weight of thorium; or
- (f) any of the materials mentioned in paragraphs (a) to (d) when contained in medicinals; or
- (g) any ore or concentrate:
 - (i) containing less than 0.05% by weight of a material mentioned in paragraph (a), (b) or (c), or of a combination of those materials;³ and
 - (ii) not excluded from this paragraph by a list or document formulated by the Minister referred to in regulation 9.

The mineral concentrate to be exported from the Fingerboards mine will exceed 0.05% by weight of a combination of uranium and thorium. Consequently, Kalbar will require permission from the Minister or his delegate under Regulation 9 to export concentrate from the Project to overseas markets.

Moreover, the export of nuclear material from Australia to China is regulated under the Australia-China Nuclear Transfer Agreement (see Attachment 7). This agreement aims to prevent the use of controlled ore for military purposes. For example, it prohibits China from using nuclear material exported from Australia in the manufacture of nuclear weapons, places limits on the extent to which China can enrich nuclear materials, and obligates China to adhere to the safeguard arrangements it has agreed with the International Atomic Energy Agency under the Nuclear Non-Proliferation Treaty. This agreement also places controls on China's capacity to re-transfer nuclear material and to reprocess nuclear material, as set out in Appendices A and C of the agreement.

In any event, the extraction of uranium or thorium from mineral sands, for military use, is extremely unlikely having regard to:

- (a) the concentration of uranium in mineral sands (typically in the order of 200-300ppm in the mineral concentrate⁴);
- (b) the availability of uranium ores and uranium ore concentrate with much higher concentrations than in mineral sands concentrate, including ores exported from Australia; and
- (c) the type and quality of uranium needed for military use.

³ Additional regulatory requirements apply to the export of uranium ore concentrate, but these obviously do not apply to the Project.

⁴ By way of comparison, the concentrations of uranium in magnetic concentrate from Fingerboards is 180-240ppm and for non-magnetic concentrate is 220-300ppm – EES Appendix 11, Table 11.

Environment Protection and Biodiversity Conservation Act 1999

22 What is a *nuclear action*?

(1) In this Act:

nuclear action means any of the following:

- (a) establishing or significantly modifying a nuclear installation;
- (b) transporting spent nuclear fuel or radioactive waste products arising from reprocessing;
- (c) establishing or significantly modifying a facility for storing radioactive waste products arising from reprocessing;
- (d) mining or milling uranium ore;
- (e) establishing or significantly modifying a large-scale disposal facility for radioactive waste;
- (f) de-commissioning or rehabilitating any facility or area in which an activity described in paragraph (a), (b), (c), (d) or (e) has been undertaken;
- (g) any other action prescribed by the regulations.

nuclear installation means any of the following:

- (a) a nuclear reactor for research or production of nuclear materials for industrial or medical use (including critical and sub-critical assemblies);
- (b) a plant for preparing or storing fuel for use in a nuclear reactor as described in paragraph (a);
- (c) a nuclear waste storage or disposal facility with an activity that is greater than the activity level prescribed by regulations made for the purposes of this section;
- (d) a facility for production of radioisotopes with an activity that is greater than the activity level prescribed by regulations made for the purposes of this section.

Note: A nuclear waste storage or disposal facility could include a facility for storing spent nuclear fuel, depending on the regulations.

radioactive waste means radioactive material for which no further use is foreseen.

reprocessing means a process or operation to extract radioactive isotopes from spent nuclear fuel for further use.

spent nuclear fuel means nuclear fuel that has been irradiated in a nuclear reactor core and permanently removed from the core.

(2) In this Act:

large-scale disposal facility for radioactive waste means, if regulations are made for the purposes of this definition, a facility prescribed by the regulations.

Attachment 2



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coffey.com

Lisa Hogan
Department of the Environment and Energy
GPO Box 787
Canberra, ACT, 2600

26 May 2017

Attention: Lisa Hogan

Dear Lisa

RE: Request for additional information for the Fingerboards Mineral Sands Project, East Gippsland, Victoria (2017/7919)

Thank you for your response to the EPBC Referral for the Fingerboards Mineral Sands Project (2017/7919), requesting further information regarding the proposed action not being a nuclear action. Please find below our response to clarify aspects relating to storage of radioactive materials and that uranium will not be produced for sale. As mentioned in your response this information does not form part of the documentation for public exhibition.

As previously described in the EPBC Referral, the proposed action does not involve secondary processing of the heavy mineral concentrate (HMC) into individual product streams, unlike other mineral sands projects in Victoria and Australia. The HMC will be exported for further processing at a mineral separation plant in Asia, into commercial products such as rutile, zircon, ilmenite and rare earth concentrate.

The HMC will be contracted for sale. Kalbar Resources are targeting a forecasted gap in the commercial market for 2019 for HMC. The HMC market is currently the largest growing sector in the mineral sands market. No HMC will be produced without a contract for sale. There is no proposal for large HMC stockpile areas in the general arrangement layout of the proposed mine.

All sources of radiation from the ore to be mined and processed into HMC are naturally occurring radioactive materials (NORM). The materials proposed to be mined at the Fingerboards contain NORM including the zircon, xenotime, monazite and titanium minerals. Importantly, the parent nuclides (uranium and thorium) will be in secular equilibrium (i.e., remains constant) with the daughter nuclides because they will not be subjected to chemical or thermal processing. Kalbar Resources will not sell uranium or thorium as products.

Processing

The action proposes to process ore from the Fingerboards in a wet concentrator plant. This primary processing will produce the HMC. The HMC contains all of the heavy mineral suite including those

that are NORM. The non-economic sand, clay and fines are removed from the ore during primary processing as tailings.

It is during secondary processing (in a mineral separation plant) that the radioactive materials are separated from the HMC. This will occur in Asia for this proposal. Therefore there is no need for the proposed action to establish a facility for on-site storage of radioactive waste products (tailings) arising from secondary processing (processing in a mineral separation plant).

Tailings produced from primary processing (wet concentrator plant) will include very small amounts of NORM. The activity level of the tailings will be significantly lower than the source ore as the NORM will be in the HMC. The expected concentrations and activity of uranium and thorium across the processing stream are provided in Table 1.

The calculations in Table 1 have been derived from the following equation (Department of Mines and Petroleum, 2010)

$$[Th(ug/g) \times (4.09 \times 10^{-3} \text{ Bq/ug Th} - 232)] + [U(ug/g) \times (1.25 \times 10^{-2} \text{ Bq/ug U} - 238)]$$

Table 1 Radiation balance in the processing stream

	Tonnes	Weight (%)	Uranium (ppm)	Thorium (ppm)	Bq/g
Ore	1250	100%	21	113	0.71
Oversize material (+1mm)	33	2.6%	7	29	0.20
Clay/silts tailings (-38um)	280	22.4%	11	51	0.34
Sand tailings	862	69.0%	5	10	0.10
HMC	75	6%	250	1600	9.48

The predicted radiation balances across the processing stream shown in Table 1, indicate total concentration of nuclides within the tailings is expected to be in the order of 0.1 to 0.34 Bq/g (all NORM) and the HMC to be approximately 9.48 Bq/g. As mentioned previously there will be no large long-term stockpile of HMC. The sand tailings and clay/silts tailings from the wet concentrator plant will be combined in roughly a 5:1 ratio so the average level of activity will be below 0.34 Bq/g. This will not exceed any of the activity concentrations for uranium or thorium prescribed in the ARPNS Regulations as cross-referenced in the EPBC Regulations (s2.02) and listed in Table 2. The tailings storage facility or in-void disposal of tailings is therefore not considered to meet the criteria of a large scale disposal facility for nuclear waste as prescribed in the EPBC Regulations (s2.02) and defined in Section 22 of the EPBC Act.

Table 2 Prescribed activity concentration values and activity values for uranium and thorium

Item	Nuclide	Activity concentration (Bq/g)	Activity (Bq)
676	Th-226 ^a	1 x 10 ³	1 x 10 ⁷
677	Th-227	1 x 10 ¹	1 x 10 ⁴
678	Th-228 ^a	1 x 10 ⁰	1 x 10 ⁴
679	Th-229 ^a	1 x 10 ⁰	1 x 10 ³
680	Th-230	1 x 10 ⁰	1 x 10 ⁴
681	Th-231	1 x 10 ³	1 x 10 ⁷

Item	Nuclide	Activity concentration (Bq/g)	Activity (Bq)
682	Th-232	1×10^1	1×10^4
683	Th-nat ^a	1×10^0	1×10^3
684	Th-234 ^a	1×10^3	1×10^5
692	U-230 ^a	1×10^1	1×10^5
693	U-231	1×10^2	1×10^7
694	U-232 ^a	1×10^0	1×10^3
695	U-233	1×10^1	1×10^4
696	U-234	1×10^1	1×10^4
697	U-235 ^a	1×10^1	1×10^4
698	U-236	1×10^1	1×10^4
699	U-237	1×10^2	1×10^6
700	U-238 ^a	1×10^1	1×10^4
701	U-nat ^a	1×10^0	1×10^3
702	U-239	1×10^2	1×10^6
703	U-240	1×10^3	1×10^7
704	U-240 ^a	1×10^1	1×10^6

Note: ^a marks parent nuclides

Source: Part 2 of Schedule 2 to the ARPNS Regulations

Tailings storage facility

For the first few months of mining operations tailings will be stored in a surface tailings storage facility (TSF). The TSF will hold up to four million bank cubic metres, which will be approximately six months of sand and slimes tailings or 18 months of slimes tailings. The construction of the TSF will require the building of perimeter walls 2 to 3 m high, and 8 m high embankment on the water collection side. The TSF will be constructed by first excavating ore from the proposed location. The excavated void in that location will then be engineered to store tailings during start up and as a contingency.

The design, construction and operation of the TSF will be in accordance with Victorian Management of Tailings Storage Facilities (Department of Primary Industries, 2004). Construction of the tailings storage will involve:

- Removal of topsoil and subsoil.
- Removal of overburden and ore.
- Use of overburden, which will be clay and Haunted Hills soils, to form walls.
- Use of local clay for lining.
- Compaction of clay to seal the base and prevent seepage from fines.
- Installation of a decant system, including drains and sumps, to harvest water for use in the process water circuit.
- Construction of spoon drains along the perimeter to divert any surface runoff from outside the facility.

Once the active mine void is of sufficient size, tailings will be discharged directly into the mine void. Up to six co-disposal cells will be required per annum. These cells will require engineering design and

will likely be clay lined to restrict water loss. The tailings will be dewatered (with collected water being recirculated into the process water dam) and allowed to settle before progressive rehabilitation (overburden, subsoil and topsoil replaced in their original sequence). Rehabilitation will be continuously progressive and commence as soon as possible after mining.

Transport

The HMC will be transported to port via a combination of road and rail. A loading facility will be constructed at the wet concentrator plant, where HMC will be loaded onto trucks or alternatively into containers for rail transport.

The wet concentrator plant will produce temporary HMC stockpiles that will be loaded onto trucks or into containers on an almost continual basis. Transport will be 24-hours a day, seven days per week. The loading facility area will be bunded and kept damp to prevent HMC becoming mobilised through wind or water. No stockpiles of HMC are likely to remain on site for more than 24 hours.

Road transport will deliver the HMC to Port Anthony via B-double trucks via approximately 26 B-double trucks per day. A loaded truck will leave the wet concentrator plant every hour, with an empty truck returning from port every hour.

The most likely route by road will be from the project site and east along Bairnsdale-Dargo Road to Lindenow-Glenaladale Road, and south to the Princes Highway to Sale. From Sale, the trucks transporting the heavy mineral concentrate will continue along South Gippsland Highway to Port Anthony on Barry Road, Agnes.

Transport of the HMC by rail would be using containers. The containers would be trucked to a siding either south of the mine site or at Bairnsdale. From there rail would take it to Port of Melbourne. If the Avon River rail bridge crossing is not upgraded prior to mine production, containerised HMC would be road transported to a rail siding near Sale and loaded onto rail there.

Management measures

Other management measures that Kalbar will implement to reduce the risk of radiation exposure include:

- Radiation and radioactive waste management plans will be prepared in accordance with the national code of practice for mining and mineral processing, which will include licensing requirements, radiation monitoring program details (including personal dosimetry), control of exposures, training, emergency procedures, and transport requirements.
- All reasonable steps are taken to stow and secure any package in a freight container or on a vehicle.
- Any radiation monitoring or personal dose assessment requirements as outlined in the radiation management plan (to be prepared) are complied with.
- Kalbar Resources and the Department of Health and Human Services are notified immediately of any accident involving the transport vehicle and loss of containment of radioactive materials.
- Monitoring and assessment of site radiation levels.
- Appointment of a Radiation Safety Officer to oversee the development, implementation and maintenance of both the radiation management plan and radioactive waste management plan
- Determination of personal protective equipment requirements on the basis of job safety analysis.
- Education and training of all mine and transport personnel about radiation safety and implementation of control measures.
- Development of emergency procedures for inclusion in the emergency response plan.

Request for additional information re Fingerboards Mineral Sands Project, East Gippsland, Victoria
(2017/7919)

- Maintenance of records and reporting of performance, as required by relevant licences and government departments.

Conclusion

It is Kalbar Resources' intention to produce and sell a HMC product with an expected production of six million tonnes of HMC over the life of mine. As mentioned above the HMC will not be separated into individual product streams here in Australia. The only product being produced for sale is the HMC.

If you have any further questions or have requirements for further information regarding the Fingerboards Mineral Sands Project please don't hesitate to contact me.

Yours sincerely



Carolyn Balint
Senior Principal

cc Neil O'Loughlin, Managing Director, Kalbar Resources



Australian Government
Australian Radiation Protection
and Nuclear Safety Agency



16 June 2017

Ref: MC17-011021

Ms Tiffeny Horwood
Director, Victoria and Tasmania Assessment Section
Assessments (Qld, Tas, Vic) & Policy Implementation Branch
Department of the Environment and Energy
GPO Box 787
CANBERRA ACT 2601
(CC: Email: Tiffeny.Horwood@environment.gov.au)

Re: Fingerboards Mineral Sands Project East Gippsland, Victoria (EPBC 2017/7919)

Dear Ms Horwood

I refer to your letter on 26 May 2017 inviting comment on referral (EPBC 2017/7919) for the Fingerboards Mineral Sands Project East Gippsland, Victoria. The purpose of this communication is to provide information relevant to the assessment as to whether the proposed action is likely to be considered a 'nuclear action' or a 'nuclear installation' under the Environmental Protection and Biodiversity Act 1999 (the EPBC Act).

Kalbar Resources Ltd is proposing to develop an open-cut mine in order to extract 6 Mt of Heavy Mineral Concentrate (HMC) over the lifetime of the mine. The mined ore will undergo primary processing to produce the HMC, with the HMC containing elevated levels of Naturally Occurring Radioactive Materials (NORM). The level of NORM in the waste overburden and tailings from the primary processing is less than the specified 1 Bq/g in the EPBC regulations.

The EPBC Act also describes a nuclear action as including establishing a facility where radioactive materials are stored. Based on additional information provided by Kalbar Resources Ltd dated 29 May 2017 the EPBC regulations may be triggered for both activity and activity concentration if volumes are allowed to exceed 100 tonnes of produced HMC both onsite and offsite. No information on the variability of the activity concentration of the produced HMC is provided.

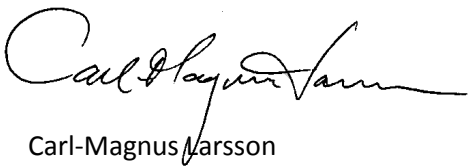
- HMC Storage Onsite: Based on additional information provided (Table 1) the processing stream will produce less than 100 tonnes of HMC under normal operating conditions. No information is provided on the maximum volume that could be stockpiled onsite or treatment options for dealing with abnormal operating conditions (e.g. accidents, lack of transport) that may impact the stockpiling of HMC.
- HMC Storage Offsite: The produced HMC will be stockpiled at Port Anthony in a "specific enclosed shed". No information is provided on the holding capability of the shed.

ARPANSA confirms the assessment by Kalbar Resources Ltd, that the proposal is not considered a nuclear action under the EPBC Act for dealing with tailings. However, there is insufficient information regarding the stockpiling of produced HMC to evaluate if it triggers the EPBC Act or if the EPBC Act is appropriate to assess offsite storage.

We also note that compliance with Victorian state regulations for radiation protection and management and the safe transport of radioactive material will be required.

Please contact Dr Rick Tinker on (03) 9433 2326 or rick.tinker@arpansa.gov.au if you have any questions regarding this matter.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Carl-Magnus Larsson', written in a cursive style.

Carl-Magnus Larsson
CEO of ARPANSA



Attachment 4

EPBC Ref: 2017/7919

Mr Neil O'Loughlin
Managing Director
Kalbar Resources Ltd
PO Box 849
Randwick NSW 2031

Dear Mr O'Loughlin

Decision on referral

Fingerboards mineral sands project, East Gippsland, Victoria (EPBC 2017/7919)

Thank you for submitting a referral under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). This is to advise you of my decision about the referral of the proposed action to construct, operate, decommission and rehabilitate a mineral sands mine, approximately 22 kilometres west of Bairnsdale, Victoria.

As a delegate of the Minister for the Environment and Energy, I have decided under section 75 of the EPBC Act that the proposed action is a controlled action and, as such, it requires assessment and a decision about whether approval for it should be given under the EPBC Act.

The information that I have considered indicates that the proposed action is likely to have a significant impact on the following matters protected by the EPBC Act:

- Ramsar wetlands (sections 16 & 17B)
- Listed threatened species and communities (sections 18 & 18A)
- Listed migratory species (sections 20 & 20A)
- Nuclear actions (sections 21 & 22A)

Construction and operation of the mine is likely to have significant impacts on the Gippsland Lakes Ramsar site, including listed threatened species and the following migratory species recognised as part of the ecological character of the Ramsar listing:

- Little tern (*Sterna albifrons*)
- Red-necked stint (*Calidris ruficollis*)
- Sharp-tailed sandpiper (*Calidris acuminata*)

The proposed action also involves the potential clearance of up to 148 ha of habitat suitable for the following species and ecological communities:

- Giant burrowing frog (*Heleioporus australiacus*); New Holland mouse (*Pseudomys novaehollandiae*) – vulnerable; and long-nosed potoroo (*Potorous tridactylus tridactylus*) (SE mainland) – vulnerable
- Regent honeyeater (*Anthochaera phrygia*) – critically endangered

- Dwarf kerrawang (*Commersonia prostrata*) and gaping leek-orchid (*Prasophyllum correctum*) – both endangered; and swamp everlasting (*Xerochrysum palustre*) – vulnerable
- Gippsland red gum (*Eucalyptus tereticornis* subsp. *mediana*) grassy woodland and associated native grassland – critically endangered.
- Seasonal herbaceous wetlands (freshwater) of the temperate lowland plains – critically endangered

The proposed action has the potential to significantly impact the environment via stockpiling and storage of naturally occurring radioactive materials within the produced heavy mineral concentrate in exceedance of the activity level threshold prescribed in the EPBC Regulations 2000.

Please note that this decision only relates to the potential for significant impacts on matters protected by the Australian Government under Chapter 2 of the EPBC Act.

The Victorian Government has advised the Department that your project will be assessed under the bilateral agreement by an Environmental Effects Statement under the *Environment Effects Act 1978* (Vic). A copy of the document recording this decision is enclosed (Attachment A).

Please note, under subsection 520(4A) of the EPBC Act and the *Environment Protection and Biodiversity Conservation Regulations 2000*, your assessment is subject to cost recovery. Please find attached the fee schedule (Attachment B) for your proposal and an invoice for Stage 1 (Attachment C). Fees will be payable prior to each stage of the assessment proceeding.

If you disagree with the fee schedule provided, you may apply under section 514Y of the EPBC Act for reconsideration of the method used to work out the fee. The application for reconsideration must be made within 30 business days of the date of this letter and can only be made once for a fee. Further details on cost recovery and the reconsideration process can be found on the Department's website at: <http://www.environment.gov.au/epbc/cost-recovery>.

You may elect under section 132B of the EPBC Act to submit a management plan for approval at any time before the Minister makes an approval decision of the proposed action under section 133 of the EPBC Act. If an election is made under section 132B of the EPBC Act, cost recovery will apply to the approval of any action management plans you submit after the granting of an approval. Please refer to Attachment D for more details.

Please also note that once a proposal to take an action has been referred under the EPBC Act, it is an offence under section 74AA to take the action while the decision making process is on-going (unless that action is specifically excluded from the referral or other exemptions apply). Persons convicted of an offence under this provision of the EPBC Act may be liable for a penalty of up to 500 penalty units. The EPBC Act is available online at: <http://www.environment.gov.au/epbc/about/index.html>.

If you have any questions about the referral process or this decision, please contact the project manager, Lisa Hogan, by email to lisa.hogan@environment.gov.au, or telephone 02 6274 1975 and quote the EPBC reference number shown at the beginning of this letter.

Yours sincerely



James Barker
Assistant Secretary
Assessments and Governance Branch
6 July 2017

Attached:

- A: Decision notice
- B: Fee schedule
- C: Invoice for stage 1
- D: Action Management Plan fee election form

Applying to export uranium and controlled ores

Under Regulation 9 of the [Customs \(Prohibited Exports\) Regulations 1958](#), you must have permission to export:

- uranium oxide concentrate or uranium ore concentrate (UOC)
- controlled ores and other nuclear material

All uranium produced in Australia is exported for use in nuclear energy generation or research reactors. It can only be used for peaceful purposes in countries Australia has approved.

Our export controls reflect Australia's stringent nuclear safety and security requirements, including [Australia's non-proliferation obligations](#).

Which materials are subject to export controls?

Controlled materials include:

- uranium (including UOC)
- depleted uranium (DU) transport containers
- other materials such as laboratory reagents containing 500 parts per million (ppm) (0.05% per cent by weight) or more of uranium and thorium combined
- other nuclear materials including plutonium, americium, curium, and californium
- controlled ores or concentrates containing 500 ppm or more of uranium and thorium combined, including:
 - monazite
 - tantalum concentrates
 - tantalum glass
 - zircon

Which countries can receive UOC?

Australian UOC can only be exported to countries that have a [nuclear cooperation agreement](#) with Australia. Countries must also have a Comprehensive Safeguards Agreement and [Additional Protocol](#) with the International Atomic Energy Agency (IAEA).

Applying to export UOC

There is no standard application form for this process. Before you begin, please contact us to discuss the nature of your proposal. This will avoid processing delays and help you to meet the application requirements. For example, you'll need to provide:

- background on the exporting company
- benefits arising from current and future operations
- benefits arising from the export opportunity
- project details on the UOC source (e.g. a copy of the mining lease or other evidence)
- information on the status of Commonwealth and state approval processes, including environmental safeguards
- a list of compliant countries you propose to export to
- justification for how long you require the permission (usually 10 years)

You must also have a permit to possess or transport nuclear material from the [Australian Safeguards and Non-Proliferation Office \(ASNO\)](#).

Submitting an application to export UOC

Please send your hardcopy application to: Senator the Hon Keith Pitt, Minister for Resources, Water and Northern Australia, PO BOX 6100, Parliament House, Canberra ACT 2600.

If you are issued with an export permission, you must:

- obtain approval from us for each shipment of UOC

- adhere to strict safeguards, reporting and other conditions determined by the [Minister for Resources, Water and Northern Australia](#)
- advise us of any changes to mining proposals

Applying to export controlled ores, residues and concentrates, and other nuclear materials

Applications for Controlled Ores and Other Nuclear Materials are managed in the [Export Permissions Portal \(EPP\)](#).

If you haven't applied for mineral export permission before, please [email us to request access](#) to the EPP. Include your full name and company.

Your application must include all of the following:

- a brief background on the exporting company and the export opportunity
- a description, including the source, of the material
- a chemical data sheet (or similar)
- gross weight of the material
- uranium and thorium content, or content of other nuclear material
- proposed export quantity
- export arrangements (expected dates and whether it is likely to be a one-off or longer term arrangement)
- commercial benefits from the proposed export (approximate export value)

Complete the application form

[Application to Export Controlled Ores \[158KB DOCX\]](#)

Provide an end-user statement

We require a statement from the intended end-user(s) of the material. We encourage you to use the [end-user template \[60KB DOCX\]](#).

An end-use statement must include details on:

- ownership and operations of the end-user
- how the end-user will use and dispose of the Australian material (including advice on whether there will be any re-exports)
- how the nuclear material (thorium and uranium) will be used and disposed of, including possible:
 - final disposal as irrecoverable waste
 - storage as recoverable waste
- extraction of the nuclear material for any nuclear purpose
- re-export in any form
- ownership and location of the waste containing nuclear material
- government controls and arrangements for storage or disposal of nuclear material content

All intended traders of the material (not just the manufacturer or processor) must provide an end-user statement.

Exports to China

If you are exporting a controlled ore to China (directly or indirectly), additional information is required. To satisfy Australia's reporting obligations in [Annex D of the Australia-China Nuclear Transfer Agreement](#), please include:

- receiver name
- address and contact details of the senior representative (including all import agents and end-users)
- intermediate processor in a third country (if applicable)
- projected monthly delivery schedule

Submitting applications to export controlled ores, residues and concentrates, and other nuclear materials

Please email a scanned copy of your application to: Manager, Resources Stewardship & Environment Section, Resources Division at Uranium.IndustrySection@industry.gov.au

Assessment process

Applications are considered on a case-by-case basis.

Permissions to export controlled materials are granted by the [Minister for Resources, Water and Northern Australia](#) or an authorised person in the department.

We treat all information, including our initial discussion with you, as commercial-in-confidence.

Contact us

Email Uranium.IndustrySection@industry.gov.au

Customs (Prohibited Exports) Regulations 1958

9 Exportation of goods specified in Schedule 7 (nuclear material)

(1) In this regulation:

authorised person means a person authorised in writing by the Minister for this regulation.

Minister means the Minister administering the *National Radioactive Waste Management Act 2012*.

(2) This regulation applies to the goods specified in Schedule 7.

(3) The exportation from Australia of goods to which this regulation applies is prohibited unless:

- (a) a permission in writing to export the goods or a class of goods in which the goods are included has been granted by the Minister or an authorised person; and
- (b) the permission is produced to the Collector.

(3A) A permission granted for the purposes of subregulation (3) (not being a permission so granted in exchange for a permission surrendered in accordance with subregulation (3B)) may specify, and a permission granted for the purposes of subregulation (3) in exchange for a permission surrendered in accordance with subregulation (3B) shall specify, that the permission may, subject to this regulation, be:

- (a) assigned; or
- (b) surrendered in exchange for the granting to the holder of the surrendered permission of another permission or other permissions to export goods of the same kind as the goods to which the surrendered permission relates.

(3B) Where a permission so specifies that the permission may be assigned or surrendered, the permission may be so assigned or surrendered only with the consent in writing of the Minister or an authorised person.

(3C) A permission referred to in subregulation (3B) may be assigned as provided by that subregulation notwithstanding that the permission has previously been assigned as provided by that subregulation.

(3D) A consent in writing under subregulation (3B) to the assignment of a permission shall be endorsed on or annexed to the permission.

(3E) A permission granted for the purposes of subregulation (3) may specify conditions or requirements to be complied with by the holder of the permission and may, in respect of any such condition or requirement, specify the time (being a time before or after the exportation of the goods to which the permission relates) at or before which the condition or requirement shall be complied with by the holder.

(3EA) The person who is the holder of the permission when the goods, for which the permission was granted, are exported must comply with any condition or requirement specified in the permission.

(3F) Where, in relation to the proposed assignment of a permission, being a permission that specifies conditions or requirements to be complied with by the holder of the permission, the Minister or an authorised person is of the opinion that any such condition or requirement is incapable of applying, or of applying without variation or modification, to

the proposed assignee, the Minister or authorised person may, by writing endorsed on or annexed to the permission at the time of the giving of the consent to the assignment:

- (a) omit that condition or requirement;
- (b) vary or modify that condition or requirement to enable it to apply in relation to the assignee; or
- (c) omit the condition or requirement and substitute other conditions or requirements, being conditions or requirements that are of the same kind as the omitted condition or requirement and are not inconsistent with any other condition or requirement specified in the permission.

(3G) Where:

- (a) the Minister or an authorised person grants a permission or 2 or more permissions in exchange for surrendered permission; and
- (b) the surrendered permission specifies conditions or requirements to be complied with by the permission;

the permission, or each permission, so granted shall specify, as conditions or requirements to be complied with by the holder of the permission:

- (c) such of the conditions or requirements referred to in paragraph (b), with or without such variation or modification as the Minister or authorised person may consider necessary for the purpose, as are capable in the circumstances of applying in relation to the holder of the permission; and
- (d) such other conditions or requirements, if any, being conditions or requirements not inconsistent with any of the conditions or requirements referred to in paragraph (c), as the Minister or authorised person may determine.

(3H) The Minister or an authorised person shall not unreasonably refuse:

- (a) to grant a permission for the purposes of subregulation (3); or
- (b) to consent to the assignment or surrender of a permission referred to in subregulation (3B).

(3J) Where:

- (a) a permission granted for the purposes of subregulation (3) is subject to a condition or requirement to be complied with by a person; and
- (b) the person fails to comply with the condition or requirement;

the Minister or an authorised person may revoke the permission, whether or not the person is charged with an offence against subsection 112(2B) of the Act in respect of the failure to comply with the condition or requirement.

Schedule 7—Goods the exportation of which is prohibited without the permission of the Minister referred to in regulation 9 or an authorised person

(regulation 9)

1 Source material, as follows:

- (a) uranium containing the mixture of isotopes occurring in nature;
- (b) uranium depleted in the isotope 235;
- (c) thorium;
- (d) any of the materials mentioned in paragraphs (a), (b) and (c) in the form of metal, alloy, chemical compound, ore or concentrate, including monazite, tantalum concentrates and tantalum glass;

but not including:

- (e) thorium alloys containing less than 1.5% by weight of thorium; or
- (f) any of the materials mentioned in paragraphs (a) to (d) when contained in medicinals; or
- (g) any ore or concentrate:
 - (i) containing less than 0.05% by weight of a material mentioned in paragraph (a), (b) or (c), or of a combination of those materials; and
 - (ii) not excluded from this paragraph by a list or document formulated by the Minister referred to in regulation 9.

Note: A list or document mentioned in subparagraph (ii):

- (a) is a list or document of a type mentioned in paragraph 112(2A)(aa) of the Act; and
- (b) is a legislative instrument under the *Legislation Act 2003*.

2 Special fissionable material as follows:

- (a) plutonium-239;
- (b) uranium-233;
- (c) material containing any of the materials referred to in paragraphs (a) and (b);
- (d) uranium containing either or both of the isotopes 235 and 233 if the abundance ratio of that isotope, or the sum of those isotopes, to the isotope 238 is more than the ratio of isotope 235 to the isotope 238 occurring in nature (isotopic ratio: 0.71%);

but not including:

- (e) plutonium with an isotopic concentration of plutonium-238 exceeding 80%; or
- (f) any of the materials mentioned in paragraphs (a), (b) and (c) when used in quantities of 1 gram or less as a sensing component in instruments; or
- (g) any of the materials mentioned in paragraphs (a) to (d) when contained in medicinals.

3 Other fissionable materials, as follows:

- (a) americium-242;
- (b) curium-245;
- (c) curium-247;
- (d) californium-249;
- (e) californium-251;
- (f) compounds, alloys and mixtures of any of the materials to which paragraphs (a) to (e) apply;

in quantities greater, either singly or in combination, than 0.1 g (or 0.3 g when contained in a sensing component or sensing instrument).

Transfer of Nuclear Material Agreement

Transfer of Nuclear Material Agreement

AGREEMENT BETWEEN THE GOVERNMENT OF AUSTRALIA AND THE GOVERNMENT OF THE PEOPLE'S REPUBLIC OF CHINA ON THE TRANSFER OF NUCLEAR MATERIAL

The Government of Australia (hereinafter referred to as "Australia") and the Government of the People's Republic of China (hereinafter referred to as "China"), both hereinafter referred to as "the Parties";

Desiring to continue and expand their existing friendly relationship;

Reaffirming their commitment to ensure that the international development and use of nuclear energy for peaceful purposes furthers the objective of the non-proliferation of nuclear weapons;

Mindful that both Australia and China are Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, done at London, Moscow and Washington on 1 July 1968 (hereinafter referred to as "the Treaty");

Recognizing that Australia, a non-nuclear-weapon State, has, under the Treaty, undertaken not to manufacture or otherwise acquire nuclear weapons or other nuclear explosive devices, and that it concluded an agreement with the International Atomic Energy Agency (hereinafter referred to as "the Agency") on 10 July 1974 for the application of safeguards in connection with the Treaty;

Recognizing that China is a nuclear-weapon State as defined by the Treaty, and that it concluded a safeguards agreement with the Agency on 20 September 1988 for the application of safeguards in China;

Affirming their support for the objectives and provisions of the Treaty and their desire to promote universal adherence to the Treaty;

Affirming their support for the Agency safeguards system and their desire to work together to ensure its continued effectiveness;

Confirming the desire of the Parties to cooperate in the development and application of nuclear energy for peaceful purposes;

Desiring to establish conditions consistent with their commitment to non-proliferation under which nuclear material can be transferred between Australia and China for peaceful non-explosive purposes;

Have agreed as follows:

ARTICLE I

Within this Agreement:

(a) "military purpose" means, for the purposes of this Agreement only, direct military applications of nuclear energy or nuclear material such as nuclear weapons or military nuclear reactors, but does not include indirect uses such as power for a military base drawn from a civil power network, or production of radioisotopes to be used for diagnosis in a military hospital;

(b) "peaceful purposes" means all uses other than use for a military purpose;

(c) "nuclear material" means any "source material" or "special fissionable material" as those terms are defined in Article XX of the Statute of the Agency. Any determination by the Board of Governors of the Agency under Article XX of the Statute of the Agency which amends the list of material considered to be "source material" or "special fissionable material" shall only have effect under this Agreement when both Parties have informed each other in writing that they accept such amendment.

ARTICLE II

This Agreement shall be implemented between the Parties through the designated authorities nominated by them. For Australia, the designated authority will be the Australian Safeguards and Non-Proliferation Office. For China, the designated authority will be the China Atomic Energy Authority. A Party may from time to time notify the other Party in writing of a change to the designated authority.

ARTICLE III

This Agreement shall apply to:

(a) nuclear material transferred between Australia and China for peaceful non-explosive purposes, whether directly or through a third country;

(b) all forms of nuclear material prepared by chemical or physical processes or isotopic separation from nuclear material subject to the Agreement; if nuclear material subject to the Agreement is mixed with other nuclear material, the quantity of nuclear material so prepared which falls within the scope of this Agreement shall be an amount equivalent to the proportion which the nuclear material subject to this Agreement bears to the total quantity of nuclear material;

(c) all generations of nuclear material produced by neutron irradiation of nuclear material subject to the Agreement; if nuclear material subject to the Agreement is

irradiated together with other nuclear material, the proportion of nuclear material so produced which falls within the scope of this Agreement shall be equal to the proportion of the nuclear material irradiated that is subject to this Agreement;

(d) nuclear material produced, processed or used in, or produced through the direct and major contribution of material, equipment, components or technology transferred between Australia and China, in accordance with the provisions of the Agreement between the Government of the People's Republic of China and the Government of Australia for Cooperation in the Peaceful Uses of Nuclear Energy (hereinafter referred to as "the Nuclear Cooperation Agreement").

ARTICLE IV

1. Nuclear material referred to in Article III shall remain subject to the provisions of this Agreement until:

(a) it has been consumed or diluted in such a way that it is no longer useable for any nuclear activity; or

(b) it is practicably irrecoverable for processing into a form in which it is useable for any nuclear activity; or

(c) it has been transferred beyond the territorial jurisdiction of Australia or beyond the territorial jurisdiction of China in accordance with paragraph 1 of Article IX of this Agreement; or

(d) the Parties otherwise agree.

2. For the purpose of determining when nuclear material subject to this Agreement is no longer useable or is practicably irrecoverable for processing into a form in which it is useable for any nuclear activity, both Parties shall accept a determination made by the Agency. For the purpose of this Agreement such determination shall be made by the Agency in accordance with the provisions for the termination of safeguards of the relevant safeguards agreement between the Party concerned and the Agency.

ARTICLE V

Nuclear material subject to this Agreement shall not be used for, or diverted to, the manufacture of nuclear weapons or other nuclear explosive devices, research on or development of nuclear weapons or other nuclear explosive devices, or be used for any military purpose.

ARTICLE VI

1. Where nuclear material subject to this Agreement is within the territory of Australia, compliance with Article V of this Agreement shall be ensured by a system of safeguards in accordance with the Safeguards Agreement concluded on 10 July 1974 between Australia and the Agency in connection with the Treaty.

2. Where nuclear material subject to this Agreement is within the territory of China, compliance with Article V of this Agreement shall be ensured by a system of safeguards in accordance with the Safeguards Agreement concluded on 20 September 1988 between China and the Agency for the application of safeguards in China.

ARTICLE VII

If, notwithstanding the efforts of both Parties to support the Treaty and the Agency, the Agency, for whatever reason at any time, is not administering the safeguards referred to in Article VI of this Agreement in the territory of one or the other Party in which nuclear material subject to this Agreement is present, the Parties shall forthwith arrange for the application of safeguards satisfactory to both Parties which conform with Agency safeguards principles and procedures and which provide reassurance equivalent to that intended to be secured by the safeguards system they replace. The Parties shall consult and assist each other in the application of such a safeguards system.

ARTICLE VIII

1. Each Party shall ensure that adequate physical protection measures are applied to nuclear material subject to this Agreement. The responsibility of a Party for ensuring the nuclear material is adequately protected extends to the international transport thereof, until that responsibility is properly transferred to another state, as appropriate.

2. In addition to its obligations under the Convention on the Physical Protection of Nuclear Material, done at Vienna on 3 March 1980 and as amended from time to time, each Party shall apply, insofar as they are reasonable and practicable, the recommendations of Agency document INFCIRC/225/Rev.4 entitled, "The Physical Protection of Nuclear Material and Nuclear Facilities", as updated from time to time, or any subsequent document replacing INFCIRC/225/Rev.4. Any alteration to or replacement of document INFCIRC/225/Rev.4 shall have effect under this Agreement only when the Parties have informed each other in writing that they accept such alteration or replacement.

ARTICLE IX

1. Nuclear material subject to this Agreement shall not be transferred beyond the territorial jurisdiction of the recipient Party without the prior written consent of the supplier Party, except in accordance with Annex A.

2. Nuclear material subject to this Agreement shall not be:

(a) enriched to 20% or greater in the isotope uranium 235; or

(b) reprocessed;

without the prior written consent of the supplier Party.

3. Nuclear material subject to this Agreement in China shall be subject to the safeguards referred to in paragraph 2 of Article VI and shall be processed or used:

(a) only within the Delineated Chinese Nuclear Fuel Cycle Program defined in accordance with Annex B; or

(b) in accordance with the procedures referred to in paragraph 1 of Annex B.

4. The supplier Party shall not withhold consent for the purpose of securing commercial advantage.

ARTICLE X

1. Each Party shall establish and maintain a system of accounting for and control of all nuclear material subject to this Agreement.

2. The designated authorities of both Parties shall establish an Administrative Arrangement to ensure the effective fulfilment of the obligations of this Agreement. The Administrative Arrangement established pursuant to this paragraph may be changed with the mutual consent in writing of the designated authorities of both Parties.

3. Nuclear material subject to this Agreement shall be transferred pursuant to this Agreement only to a natural or legal person identified by the recipient Party to the supplier Party as duly authorised to receive it.

4. If nuclear material subject to this Agreement is present in the territory of a Party, that Party shall, upon the request of the other Party, provide the other Party in writing with the overall conclusions which the Agency has drawn from its verification activities, insofar as they relate to nuclear material subject to this Agreement.

5. The Parties shall take adequate measures to ensure protection of any trade secrets acquired through the operation of this Agreement.

ARTICLE XI

1. The Parties shall consult regularly, or at any time at the request of either Party, in order to ensure the effective implementation of this Agreement, or to review matters relating to the peaceful uses of nuclear energy.

2. The Parties may jointly invite the Agency to participate in such consultations.

ARTICLE XII

1. The supplier Party has the right to suspend or cancel further transfers of nuclear material and to require the recipient Party to take corrective steps if the recipient Party:

(a) does not comply with any provisions of Article III to XI or Article XIII of this Agreement; or

(b) does not comply with, or rejects, Agency safeguards arrangements.

2. The supplier Party has the right to require the return of nuclear material subject to this Agreement if corrective steps are not taken by the recipient Party within a reasonable time.

3. Nothing in this Article shall preclude recourse to dispute settlement under Article XIII.

ARTICLE XIII

1. If any dispute between the Parties arises relating to the interpretation or application of this Agreement, the Parties shall in the first place settle the dispute by negotiation.

2. If the Parties fail to reach a settlement of the said dispute within twelve months, the Parties may settle such dispute through diplomatic channels or through arbitration.

3. Within a period of sixty days from the date of receipt by either Party from the other Party of a note through the diplomatic channel requesting arbitration of the dispute by a tribunal, each Party shall nominate an arbitrator. Within a period of sixty days from the nomination of the arbitrators, the two arbitrators shall appoint a

president of the tribunal who shall be a national of a third state. If within sixty days after one of the Parties has nominated its arbitrator, the other Party has not nominated its own or, if within sixty days following the nomination of the second arbitrator, both arbitrators have not agreed on the appointment of the president, either Party may request the President of the International Court of Justice to appoint an arbitrator or arbitrators as the case requires.

4. Except as otherwise determined by the Parties or prescribed by the tribunal established pursuant to paragraph 3 of this Article, each Party shall submit a memorandum within forty-five days after the tribunal is fully constituted. Replies shall be due sixty days later. The tribunal shall hold a hearing at the request of either Party, or at its discretion, within thirty days after replies are due.

5. The tribunal shall attempt to give a written decision within thirty days after completion of the hearing, or, if no hearing is held, after the date both replies are submitted. The decision shall be taken by a majority vote.

6. The Parties may submit requests for clarification of the decision within fifteen days after it is received and such clarification shall be issued within fifteen days of such request.

7. The Parties undertake to comply with any arbitration decision given under this Article.

8. The expenses of arbitration under this Article shall be shared equally between the Parties.

9. If and for as long as either Party fails to comply with a decision under paragraph 5 of this Article, the other Party may limit, suspend or revoke any rights or privileges which it has granted by virtue of this Agreement to the Party in default.

ARTICLE XIV

The terms of this Agreement may be amended at any time by agreement between the Parties. Such amendment shall enter into force on the date on which the Parties have notified each other in writing that their respective internal procedures necessary for its entry into force have been completed.

ARTICLE XV

1. This Agreement shall enter into force after each Party has notified the other in writing that all domestic requirements for entry into force for this Agreement and the

Nuclear Cooperation Agreement have been completed. The date of entry into force of this Agreement shall be thirty days after the date of the last notification.

2. The Agreement shall remain in force for an initial period of thirty years. The Agreement shall terminate:

(a) if either Party notifies the other Party at least 180 days prior to the expiry of the initial thirty year period, or 180 days after notice of termination thereafter; or

(b) upon the termination of the Nuclear Cooperation Agreement;

whichever is the sooner.

3. Unless otherwise agreed in writing between the Parties, termination, suspension or expiration of this Agreement or any cooperation under it for any reason shall not release the Parties from obligations under this Agreement in respect of nuclear material transferred while the Agreement was in force.

4. The Annexes to this Agreement form an integral part of this Agreement.

IN WITNESS WHEREOF , the undersigned, being duly authorised thereto by their respective Governments have signed this Agreement.

Done, in duplicate in English and Chinese, both texts having equal validity, at Canberra on third day of April 2006

FOR THE GOVERNMENT OF AUSTRALIA

FOR THE GOVERNMENT OF THE PEOPLE'S REPUBLIC OF CHINA

ANNEX A

CONSENT TO CERTAIN RETRANSFERS

Both Parties agree that the provisions of paragraph 1 of Article IX of this Agreement will apply in accordance with the following conditions:

1. Transfers of nuclear material subject to this Agreement from China to third countries which have an Agreement in force with Australia concerning nuclear transfers, in relation to which Agreement Australia has not advised China that it has found it necessary to suspend, cancel or refrain from making nuclear transfers, can take place for conversion, enrichment below 20% in the isotope uranium 235, fuel fabrication and, where applicable, use in a reactor.

2. China shall promptly notify Australia, in accordance with procedures set out in the Administrative Arrangement pursuant to paragraph 2 of Article X of this Agreement, of such transfers.

3. Australia shall provide China with, and keep up to date, the list of countries to which transfers may be made in accordance with paragraph 1 above.

ANNEX B

DELINEATED CHINESE NUCLEAR FUEL CYCLE PROGRAM

1. Uranium ore concentrates transferred to China under this Agreement shall be substituted by an equivalent quantity of converted natural uranium in the form of uranium hexafluoride in accordance with procedures set out in the Administrative Arrangement established pursuant to Article X of this Agreement.

2. Following conversion to uranium hexafluoride in accordance with paragraph 1 above, nuclear material subject to this Agreement in China shall be processed and used only in those facilities specified in the Delineated Chinese Nuclear Fuel Cycle Program.

3. The facilities specified in the Delineated Chinese Nuclear Fuel Cycle Program shall be determined by mutual decision of the designated authorities. These facilities shall be included in the List of facilities designated by China in accordance with the provisions of the safeguards agreement referred to in paragraph 2 of Article VI of this Agreement.

4. The facilities in the Delineated Chinese Nuclear Fuel Cycle Program shall be specified under the following headings:

1. Facilities for enrichment;
2. Facilities for conversion to UO₂;
3. Facilities for fuel fabrication;
4. Reactors;
5. Development and demonstration projects;
6. Storage;
7. Others.

Facilities may be added to or deleted from the Delineated Chinese Nuclear Fuel Cycle Program by mutual decision of the designated authorities.

ANNEX C

REPROCESSING OF NUCLEAR MATERIAL SUBJECT TO THIS AGREEMENT

Paragraph 2 of Article IX of this Agreement provides that nuclear material subject to the Agreement shall not be reprocessed without the prior written consent of the supplier Party.

The Parties acknowledge that the separation, storage, transportation and use of plutonium require particular measures to reduce the risk of nuclear proliferation.

Australia recognises the interest of China in reprocessing as part of its civil nuclear energy program in order to ensure efficient energy use and management of substances contained in spent fuel.

Australia also recognises the interest of China in predictable and practical implementation of consent rights under the Agreement, taking into account the shared non-proliferation objectives of the Parties and the long-term needs of China's nuclear fuel cycle program.

Australia shall provide consent on a long term basis to reprocessing under paragraph 2 of Article IX of this Agreement, on the following understandings:

(a) long term consent shall be given for reprocessing for exclusively peaceful purposes under Agency safeguards referred to in paragraph 2 of Article VI, in accordance with the Delineated Chinese Nuclear Fuel Cycle Program referred to in Annex B of this Agreement, amended as necessary by mutual decision of the designated authorities; and

(b) the separated plutonium shall be stored and used, under Agency safeguards referred to in paragraph 2 of Article VI, in accordance with the Delineated Chinese Nuclear Fuel Cycle Program.

Australia shall provide consent as outlined above at such time that China's plans for reprocessing are sufficiently advanced to nominate the facilities, reactors and other facilities concerned for inclusion in the Delineated Chinese Nuclear Fuel Cycle Program.

ANNEX D

NUCLEAR MATERIAL CONTAINED IN ORES AND ORE CONCENTRATES TRANSFERRED BETWEEN AUSTRALIA AND CHINA

1. This Annex applies to ores or concentrates containing nuclear material, other than uranium ore concentrates, which are transferred from Australia to China directly or

through a third country, and which transfer has been notified by the designated authority of Australia to the designated authority of China.

2. China agrees not to extract nuclear material for nuclear use from such ores or concentrates. If there is any change in China's intentions in this regard, nuclear material shall not be extracted until the Parties have consulted and agreed safeguards measures to apply to such nuclear material.

3. The Administrative Arrangement established pursuant to Article X of this Agreement shall include procedures for Australia to notify China of transfers of ores and ore concentrates pursuant to paragraph 1 of this Annex.

ANNEX E

INTERPRETATION OF THE SCOPE OF THE TERM "MILITARY PURPOSE"

The following records the interpretation given by the Parties regarding the scope of the definition of the term "military purpose" contained in paragraph (a) of Article I of this Agreement. The Parties agree that nuclear material subject to this Agreement shall not be used: for the production of tritium for military purposes; for military nuclear propulsion; or for direct military non-nuclear applications, such as munitions, including depleted uranium munitions.