

Submission to the Joint Standing Committee on Treaties

**Agreement between the Government of Australia and the Government of India on
Cooperation in the Peaceful Uses of Nuclear Energy**

Interpreting the Australia-India Nuclear Cooperation Agreement

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The views expressed in this submission are those of the author and not those of any institution.

Summary and Recommendations

This submission focuses on the interpretation of provisions of the Agreement between the Government of Australia and the Government of India on Cooperation in the Peaceful Uses of Nuclear Energy, signed 5 September 2014 (referred to here as the ‘Australia-India Agreement’). It argues:

- 1) The proposed supply of nuclear material to India under the Australia-India Agreement does not represent a violation of Australia’s international treaty obligations. (See Subsection 1.7 of this submission.)
- 2) The Australia-India Agreement should be assessed by comparison with Australia’s nuclear cooperation (safeguards) agreements with other states. Based on the nature of their nuclear fuel cycles and the manner in which the International Atomic Energy Agency (IAEA) applies safeguards, the proposed nuclear cooperation with India is most analogous to Australia’s nuclear cooperation with China and Russia. (See Subsection 1.5 of this submission.)
- 3) The Australia-India Agreement should include safeguards-related provisions of a standard that is not weaker than Australia’s nuclear cooperation agreements with China and Russia.
- 4) The Joint Standing Committee on Treaties should seek additional information relevant to the interpretation and application of the safeguards-related provisions in the Australia-India Agreement. The main point of comparison should be the provisions in the agreements with China and Russia. Specifically this submission recommends:
 - a) The Committee should consult with nuclear fuel cycle experts on the issue of Indian nuclear facilities that may only come under safeguards temporarily while nuclear material subject to the Australia-India Agreement is present. It should seek to determine the circumstances in which India could realistically process unsafeguarded nuclear material that it intends to use for nuclear weapons alongside nuclear material subject to the Australia-India Agreement. (See Subsection 2.2 of this submission.)
 - b) The Committee should seek to confirm that the effect of article VI of the Australia-India Agreement is that India will not be permitted to reprocess unsafeguarded nuclear material at any reprocessing facility designated to handle nuclear material subject to the Australia-India Agreement. The Committee should also seek to confirm that, in the event that the United States and India decide to

modify their ‘arrangements and procedures’ document,¹ India still would not be permitted to reprocess unsafeguarded nuclear material for nuclear weapons at a reprocessing facility that handles nuclear material subject to the Australia-India Agreement. (See Subsection 2.3 of this submission.)

- c) The Committee should seek confirmation from the Australian Safeguards and Non-Proliferation Office that the administrative arrangements under the Australia-India Agreement will conform with the document ‘A Guide to Administrative Arrangements’ presented to the Committee in 2008.² If possible, the Committee should request access to parts of the administrative arrangements relevant to tracking (before the Committee makes its recommendations). (See Subsection 2.4 of this submission.)
- d) The Committee should consider how Australia could proceed in a hypothetical case in which a dispute arose with India under the Australia-India Agreement and the dispute could not be resolved to the satisfaction of the parties within a reasonable time. It may be possible for Australia to invoke the jurisdiction of a judicial or arbitral body. (See Subsection 2.7 of this submission.)

This submission does not comment on the possibility of modifying the text of the Australia-India Agreement or entering into additional treaty-level agreements with India. If it is reasonably possible for Australia and India to re-open the existing text of the Agreement, this would be an opportunity to directly address many of the issues highlighted in this submission.

¹ *Arrangements and Procedures Agreed between the Government of the United States and the Government of India, Pursuant to Article 6(iii) of Their Agreement for Cooperation Concerning Peaceful Uses of Nuclear Energy*, 29 March 2010, <<http://www.state.gov/p/sca/rls/139194.htm>>.

² ‘A Guide to Administrative Arrangements’ in Evidence to Joint Standing Committee on Treaties, Report 94, Parliament of Australia, Canberra, 14 May 2008, pages 8-10 (Australian Safeguards and Non-Proliferation Office, Supplementary Submission No 22.1). This document was originally published on pages 45 to 47 of Australian Safeguards Office, *Annual Report of the Director of Safeguards 1993-1994* (Canberra: 1994).

In order to determine the effect of these provisions and their consistency with existing laws and policies, this submission will refer to the following international agreements.

List of international agreements

Abbreviation	International agreement
Australia-China Cooperation Agreement	<i>Agreement between the Government of Australia and the Government of the People's Republic of China for Cooperation in the Peaceful Uses of Nuclear Energy</i> , signed 3 April 2006, [2007] ATS 4 (entered into force 3 February 2007).
Australia-China Transfer Agreement	<i>Agreement between the Government of Australia and the Government of the People's Republic of China on the Transfer of Nuclear Material</i> , signed 3 April 2006, [2007] ATS 3 (entered into force 3 February 2007).
Australia-India Agreement	<i>Agreement between the Government of Australia and the Government of India on Cooperation in the Peaceful Uses of Nuclear Energy</i> , signed 5 September 2014, [2014] ATNIF 26 (not yet in force).
Australia-Russia Agreement	<i>Agreement between the Government of Australia and the Government of the Russian Federation on Cooperation in the Use of Nuclear Energy for Peaceful Purposes</i> , signed 7 September 2007 [2010] ATS 22 (entered into force 11 November 2010).
IAEA-India Agreement	<i>Agreement between the Government of India and the International Atomic Energy Agency for the Application of Safeguards to Civilian Nuclear Facilities</i> , signed 2 February 2009, IAEA Doc INCRIRC/754 (entered into force 11 May 2009).
IAEA-US Agreement	<i>Text of the Agreement of 18 November 1977 between the United States of America and the Agency for the Application of Safeguards in the United States of America</i> , IAEA Doc INFCIRC/288 (December 1981) (entered into force 9 December 1980).
India's Additional Protocol	<i>Protocol Additional to the Agreement between the Government of India and the International Atomic Energy Agency for the Application of Safeguards to Civilian Nuclear Facilities</i> , signed 15 May 2009, IAEA Doc INFCIRC/754/Add.6 (entered into force 25 July 2014).
NPT	<i>Treaty on the Non-Proliferation of Nuclear Weapons</i> , opened for signature 1 July 1968, 729 UNTS 161 (entered into force 5 March 1970).
SPNFZT	<i>South Pacific Nuclear Free Zone Treaty</i> , opened for signature 6 August 1985, 1445 UNTS 178 (entered into force 11 December 1986).

1 International Legal Context of the Australia-India Agreement

This section briefly introduces nuclear safeguards. It provides a basis for comparing the Australia-India Agreement with Australia's other nuclear cooperation agreements. It also establishes that the supply of Australian uranium to India on the terms of the Australia-India Agreement would not be a violation of Australia's other international treaty obligations.

Australia has a network of nuclear cooperation (safeguards) agreements with various states, including Argentina, Canada, China, Egypt, Japan, Mexico, New Zealand, the Republic of Korea, Philippines, Russia, the United Arab Emirates, the United States and the European Union (including an agreement with the European Atomic Energy Community). Each nuclear cooperation agreement is also supported by administrative arrangements between the designated authority in Australia (the Australian Safeguards and Non-Proliferation Office) and its foreign counterpart. Administrative arrangements are documents of less-than-treaty status. They are treated as confidential between the parties.

1.1 The meaning of Australian obligated nuclear material (AONM) and nuclear material subject to the agreement (NMSA)

Each of the nuclear cooperation agreements referred to in this submission uses the term 'nuclear material subject to the agreement' (NMSA). The meaning of NMSA depends on the precise terms of the particular nuclear cooperation agreement in question.³ In general, NMSA can be taken to mean:

- (a) any nuclear material supplied under the nuclear cooperation agreement,
- (b) any nuclear material produced or processed from material supplied under the nuclear cooperation agreement, and
- (c) any nuclear material produced, processed or used by certain types of nuclear technology supplied under the nuclear cooperation agreement.

The archetypal case is that Australia supplies uranium ore concentrate to a state under one of its nuclear cooperation agreements. The recipient then processes this uranium ore concentrate into nuclear fuel and the fuel is irradiated in a reactor. The process of irradiation produces some plutonium. Irradiated fuel can either be disposed of or it can be reprocessed to make fresh reactor fuel. Throughout each of these stages of the nuclear fuel cycle, the nuclear materials (i.e. uranium, as well as any plutonium produced) may change forms but they remain classed as NMSA.

A recipient may choose to mix NMSA with other nuclear material. Consequently, NMSA must be defined by principles of proportionality and equivalence. These principles are described in Report 81 of the Joint Standing Committee on Treaties.

³ See eg, Australia-India Agreement, article III.1.

The term NMSA refers to nuclear material subject to a particular agreement. The term ‘Australian obligated nuclear material’ (AONM) refers collectively to uranium supplied by Australia (and nuclear material derived from that uranium) under all of its nuclear cooperation agreements.

1.2 IAEA safeguards

Safeguards are arrangements for verifying that states are in compliance with international agreements or undertakings relating to the peaceful use of nuclear material. Safeguards provide a mechanism for validating the behaviour of states, thereby building confidence within the international community that states are abiding by their respective non-proliferation commitments.

The International Atomic Energy Agency (IAEA) is the main body responsible for administering safeguards. Most states have a safeguards agreement with the IAEA. Each state makes declarations to the IAEA about its nuclear activities and the IAEA verifies these declarations by independent accounting, measurement, surveillance, containment and on-site access (see Subsection 1.5 below).

1.3 Treaty on the Non-Proliferation of Nuclear Weapons (NPT)

The Treaty on the Non-Proliferation of Nuclear Weapons (NPT) is an agreement among states parties outlining their rights and obligations with respect to nuclear non-proliferation, disarmament and the peaceful uses of nuclear energy.

In the 44 years since its entry into force, the NPT has become nearly universal. The effect of this is that different states have different rights and obligations under international law with respect to non-proliferation. Today, these states can be broadly classed as follows:

- 1) **Nuclear-weapon states** as defined by article IX.3 of the NPT. These states are China, France, Russia, the United Kingdom and the United States.
- 2) **Non-nuclear-weapon states parties to the NPT**, which means all parties to the NPT other than the five nuclear-weapon states. As of 2014, every state is a non-nuclear-weapon state party to the NPT except for China, the Democratic People’s Republic of Korea,⁴ France, India, Israel, Pakistan, Russia, South Sudan,⁵ the United Kingdom and the United States.
- 3) States that are not parties to the NPT (**‘non-NPT states’**). For present purposes, this can be taken to mean India, Israel and Pakistan.

⁴ The Democratic People’s Republic of Korea announced its withdrawal from the NPT in 2003. This submission does not comment on the legal status of safeguards with respect to the Democratic People’s Republic of Korea.

⁵ South Sudan has not yet ratified the NPT.

1.4 India will not join the NPT in the foreseeable future

Put simply, according to the accepted interpretation of the NPT, India cannot become a party to the NPT unless and until it dismantles all of its nuclear weapons and any other nuclear explosive devices and declares all of its nuclear material and nuclear activities to the IAEA. This submission proceeds upon the assumption that this will not happen in the foreseeable future.⁶

1.5 Types of IAEA safeguards

Each of Australia's nuclear cooperation agreements specifies that NMSA must be placed under the recipient state's safeguards agreement with the IAEA. Safeguards operate in different ways depending on the status of the recipient state with respect to the NPT.

In terms of IAEA safeguards agreements, there are three basic categories of states:

- 1) Each of the **nuclear-weapon states** has concluded a voluntary offer safeguards agreement with the IAEA. Each of these states maintains a list of civilian nuclear facilities that are eligible for IAEA safeguards on an ongoing basis. Australia has nuclear cooperation agreements with each of these states. When Australia supplies uranium to one of these states, the AONM is restricted to these safeguarded facilities.
 - a) In the case of the United States, effectively all civilian facilities are listed as eligible for safeguards under the IAEA-US Agreement.⁷
 - b) In the cases of the United Kingdom and France, the combined effect of IAEA safeguards and European Atomic Energy Commission (Euratom) safeguards is that all civilian facilities are subject to safeguards.
 - c) In the cases of Russia and China, only some civilian facilities are listed as eligible for IAEA safeguards. Under the Australia-Russia Agreement and the Australia-China Transfer Agreement, the parties agree on a subset of these safeguarded facilities where AONM may be used. Australia's approval is required for each facility using AONM.
- 2) Each of the **non-nuclear-weapon states parties to the NPT** is required by article III.1 of the NPT to accept safeguards for the purpose of verifying fulfilment of its obligations under the NPT, principally the obligation not to manufacture nuclear explosive devices.⁸

⁶ The basis for this assumption is explained in Crispin Rovere and Kalman A Robertson, 'Australia's Uranium and India: Linking Exports to CTBT Ratification' (Autumn 2013) 9(1) *Security Challenges* 51-61.

⁷ *Text of the Agreement of 18 November 1977 between the United States of America and the Agency for the Application of Safeguards in the United States of America*, IAEA Doc INFCIRC/288 (December 1981) (entered into force 9 December 1980) article 1. The actual wording of this agreement is that IAEA safeguards apply to all nuclear material in all facilities in the United States except facilities that the United States decides have 'direct national security significance'.

⁸ As of August 2014, 12 non-nuclear-weapon states parties to the NPT have not yet concluded comprehensive safeguards agreements with the IAEA. None of these states is believed to have significant nuclear activities. South Sudan has not yet ratified the NPT. This submission does not comment on the legal status of safeguards with respect to the Democratic People's Republic of Korea, which announced its withdrawal from the NPT in 2003.

In accordance with Article III.1, comprehensive safeguards agreements apply to all nuclear material in all nuclear activities in the state or under its control.⁹ These safeguards are known as ‘comprehensive safeguards’ or ‘full-scope safeguards’.¹⁰ Australia has nuclear cooperation agreements with some of these states.

- 3) **India, Israel and Pakistan** are not parties to the NPT (referred to as ‘non-NPT states’) but they have item-specific safeguards agreements over some of their peaceful nuclear activities.¹¹ Each of these states maintains a list of nuclear facilities that are subject to ongoing IAEA safeguards.
 - a) In the case of India, it is also possible for other nuclear facilities (known to the IAEA but not normally subject to safeguards) to come under safeguards temporarily while material subject to safeguards is present.
 - b) Australia does not have nuclear cooperation agreements with Israel or Pakistan.

Compared with other states in Australia’s network of nuclear cooperation agreements, the safeguards applied by the IAEA in India most closely resemble safeguards in China and Russia. That said, India’s safeguards are distinct in a number of respects (see Section 2 of this submission).

1.6 Additional protocols to safeguards agreements

Many states have also concluded an ‘additional protocol’, an agreement with the IAEA in addition to the original safeguards agreement that extends the state’s safeguards obligations.¹² Among the six nuclear-armed states with additional protocols (China, France, India, Russia, the United Kingdom and the United States), there is a significant variation in terms of the scope and effect of the protocol.

Australia maintains a policy of only concluding new nuclear cooperation agreements with states that have additional protocols. India’s conclusion of an additional protocol was a pre-condition for the export of Australian uranium.¹³ India’s additional protocol entered into force on 25 July 2014.¹⁴ It is largely restricted to provision of information on India’s exports and the right of the IAEA to use communication systems to transmit safeguards data. India’s

⁹ Comprehensive safeguards agreements contain specific provisions for exempting nuclear material under certain conditions.

¹⁰ The standard structure and content of these safeguards for non-nuclear-weapon states parties to the NPT was established by the IAEA in *The Structure and Content of Agreements between the Agency and States Required in Connection with the Treaty on the Non-Proliferation of Nuclear Weapons*, IAEA Doc INFCIRC/153 (Corrected) (June 1972), and, where relevant, extended by the *Model Protocol Additional to the Agreements between State(s) and the International Atomic Energy Agency for the Application of Nuclear Safeguards*, IAEA Doc INFCIRC/540(Corrected) (1 September 1997).

¹¹ On the structure of these agreements, see *The Agency’s Safeguards System*, IAEA Doc INFCIRC/66/Rev.2 (16 September 1968).

¹² See *Model Protocol Additional to the Agreements between State(s) and the International Atomic Energy Agency for the Application of Nuclear Safeguards*, IAEA Doc INFCIRC/540(Corrected) (1 September 1997).

¹³ *Australian Safeguards and Non-Proliferation Office Annual Report 2013-2014*, p 15.

¹⁴ *Protocol Additional to the Agreement between the Government of India and the International Atomic Energy Agency for the Application of Safeguards to Civilian Nuclear Facilities*, signed 15 May 2009, IAEA Doc INFCIRC/754/Add.6 (entered into force 25 July 2014).

additional protocol obligations are of little direct relevance to assessing the consistency of the Australia-India Agreement with other Australian policies.

1.7 Consistency with Australia's existing international legal obligations

Australia is a party to both the NPT and the South Pacific Nuclear Free Zone Treaty (Treaty of Rarotonga or SPNFZT).

In principle, the supply of Australian uranium to India, subject to India's existing item-specific safeguards agreement with the IAEA, is not a violation of Australia's obligations under the NPT or the SPNFZT. I have dealt with this issue in my 2012 article in the journal *Security Challenges*.¹⁵ This subsection contains a very brief summary of the relevant arguments. It then considers whether or not the supply of Australian uranium under the Australia-India Agreement, by virtue of its specific terms as it is currently drafted, could be a violation of the SPNFZT.

Some scholars have attempted to argue that the supply of Australian uranium to India, subject to India's existing item-specific safeguards agreement with the IAEA, would inevitably contravene article 4(a) of the SPNFZT.¹⁶ If this interpretation of the SPNFZT had been intended by the drafters, it would have effectively banned any party to the SPNFZT from supplying nuclear material to any non-NPT state (other than China and France during the period when they were not parties to the NPT, see article 4(a)(ii) of the SPNFZT). It would be difficult to interpret the treaty as effectively establishing such a ban in the absence of either express words or necessary intention.

The argument that the SPNFZT prohibits supply of nuclear material to India is not consistent with the text of the SPNFZT. The NPT contains a provision (article III.2) about the conditions under which a party to the NPT may provide nuclear material to a non-nuclear-weapon state. Based on state practice, the accepted interpretation of article III.2 of the NPT is that it does not prohibit supply of nuclear material to India.¹⁷ The wording of article 4(a)(i) of the SPNFZT is effectively the same as the wording of article III.2 of the NPT. In the absence of a legal basis for giving article 4(a)(i) of the SPNFZT a different interpretation from article III.2 of the NPT, the correct interpretation of the SPNFZT is that it does not prohibit supply of Australian uranium to India.

Some scholars have also tried to argue that a statement made in 1996 by the then Minister for Foreign Affairs, Alexander Downer, to Parliament demonstrates that the SPNFZT effectively

¹⁵ Kalman A Robertson, 'The Legality of the Supply of Australian Uranium to India' (Autumn 2012) 8(1) *Security Challenges* 25-34.

¹⁶ 'Australia-India Deal "Illegal"', International Campaign to Abolish Nuclear Weapons, 28 November 2011, <<http://www.icanw.org/australiaindia>>.

¹⁷ For a brief analysis of the history of state practice in the application of this provision, see pages 29 to 32 of Kalman A Robertson, 'The Legality of the Supply of Australian Uranium to India' (Autumn 2012) 8(1) *Security Challenges* 25-34.

prohibits the supply of Australian uranium to India.¹⁸ The Foreign Minister's statement was made during consideration of uranium exports to Taiwan. The Foreign Minister's statement relates to the legal status of the Republic of China's deposit of an instrument of ratification of the NPT in 1970 and the subsequent establishment of comprehensive safeguards in Taiwan. (Essentially, this matter is resolved by treating Taiwan, for the purposes of safeguards, in a manner equivalent with a non-nuclear-weapon state party to the NPT.) The relevant part of the record simply shows that the Foreign Minister repeated the text of article 4(a) of the SPNFZT. The Foreign Minister's statement does not contain any additional information relevant to determining the effect of the SPNFZT on the legality of the supply of Australian uranium to India.

In principle, the supply of Australian uranium to India, subject to India's existing item-specific safeguards agreement with the IAEA, is not a violation of the terms of the NPT or the SPNFZT. This is true even while India maintains a nuclear weapons program.

Section 2 of this submission compares the Australia-India Agreement with the Australia-China Transfer Agreement and the Australia-Russia Agreement and finds that some of the safeguards-related conditions in the Australia-India Agreement may not be as strict as they could have been. An opponent of the Australia-India Agreement could conceivably argue that, due to these specific shortcomings, the text of the Australia-India Agreement does not meet the requirements of the final part of article 4(a) of the SPNFZT: 'Any such provision shall be in accordance with strict non-proliferation measures to provide assurance of exclusively peaceful non-explosive use'. If this argument were successful, the supply of Australian uranium under the Australia-India Agreement would be a violation of the SPNFZT, unless and until the Australia-India Agreement is modified to address the specific issues raised in Section 2 of this submission. Since the wording 'strict non-proliferation measures' is open to interpretation, it is reasonable to assume that a legal challenge on these grounds would fail.

It must therefore be concluded that the proposed supply of nuclear material to India under the Australia-India Agreement does not represent a violation of Australia's international treaty obligations.

¹⁸ Leonard S Spector and Leah Kuchinsky, 'Australian Foreign Minister Said South Pacific Nuclear Treaty Bans Australian Uranium Exports to India' (27 August 2007) James Martin Centre for Nonproliferation Studies <<http://cns.miis.edu/stories/pdfs/070827.pdf>>.

2 Consistency with Australia's Safeguards Standards

This section compares the Australia-India Agreement with Australia's other nuclear cooperation agreements. It also considers the consistency of the Australia-India Agreement with Australian legislation and policy. It makes recommendations aimed at ensuring that the safeguards standard embodied in the Australia-India Agreement is not significantly lower than the standard in Australia's nuclear cooperation agreements with China and Russia.

Australian policy is to include safeguards-related conditions in nuclear cooperation agreements that are additional to the requirements of IAEA safeguards. These conditions aim to build confidence between the parties (and among other members of the international community) about their peaceful intentions.

In general, IAEA safeguards do not prohibit:

- Conducting research that may be relevant to the manufacture of nuclear weapons, provided that, if the activities involve nuclear material or are otherwise covered by reporting requirements in the safeguards agreement, these activities are in fact declared to the IAEA.
- Using nuclear material for military nuclear propulsion (i.e. nuclear-powered submarines).
- Using nuclear material for military non-nuclear applications, such as depleted uranium munitions.
- Producing, processing, using and storing nuclear material that could be directly weapons usable, including uranium with an enrichment level of 90% or higher (i.e. with 90% or more of the uranium atoms being the isotope uranium-235) or plutonium that has been separated via reprocessing from other elements in irradiated uranium.
- Retransfer of imported nuclear material to a third state.
- Withdrawal, suspension or termination of the safeguards agreement with the IAEA in accordance with international law.

To rectify this, Australia's nuclear cooperation agreements from the last decade have each contained provisions limiting or prohibiting the use by recipient states of AONM in these activities. Many of these conditions are the product of policy decisions by the government of Australia.

In analysing the safeguards-related conditions in nuclear cooperation agreements, it is important to bear in mind that Australian legislation also contains relevant requirements. Section 51 of the *Nuclear Non-Proliferation (Safeguards) Act 1987* (Cth) requires the Director General of the Australian Safeguards and Non-Proliferation Office to provide an annual report to the Minister including information on AONM outside of Australia. This information must include the total quantities at each stage of the nuclear fuel cycle in each recipient state. This statutory requirement can only be met if each recipient state tracks

AONM as it progresses through the fuel cycle and reports this progress to Australia on a regular basis.

2.1 What is distinct about the text of the Australia-India Agreement?

Compared with Australia's previous nuclear cooperation agreements, the Australia-India Agreement is unusual in terms of:

- 1) The broad manner in which the Australia-India Agreement defines the facilities where NMSA may be used
- 2) The consent to reprocessing, which is included in the text of the agreement itself
- 3) One of the provisions related to the requirement that the recipient account for NMSA
- 4) The absence of a provision containing a right of return of NMSA in the event of a failure to comply with the agreement by the recipient
- 5) The 'fallback safeguards' provision
- 6) The absence of an arbitration clause

Before moving to consider each of these six issues, it should be noted that a number of other aspects of the Australia-India Agreement operate in a manner analogous with previous agreements and therefore will not be investigated further in this submission:

- Enrichment by India of uranium subject to the agreement to 20% or above in the isotope uranium-235 can only be undertaken with the prior consent of Australia (article VI.5 of the Australia-India Agreement).
- Australia keeps a list of third states to which retransfers by India are authorised. Presumably, Australia's list of third states would be restricted to Australia's bilateral network of nuclear cooperation agreements. The only way that India could supply to any other state would be 'with the prior written consent' of Australia (article IX of the Australia-India Agreement).¹⁹ Furthermore, Article IX.3 includes the words 'nuclear fuel cycle processes that may apply in each third State'. This means that, if Australia has not provided consent to reprocessing in the third state, that limit would apply to the state if it receives a retransfer from India. For example, if India retransfers NMSA to the Republic of Korea, the Republic of Korea cannot reprocess the NMSA.
- Physical protection standards are covered by article VIII of the Australia-India Agreement.
- The effect of articles I and VII of the Australia-India Agreement is to prohibit the use of NMSA for any military purpose, including for depleted uranium munitions.

¹⁹ For example, the combined effect of article IX.1 and Annex A of the Australia-China Transfer Agreement is analogous with article IX of the Australia-India Agreement.

2.2 Facilities where NMSA may be used

Articles 11 and 14 of the IAEA-India Agreement specify that IAEA safeguards shall apply:

- (a) at the facilities listed in the Annex to the IAEA-India Agreement on a **continual** basis, and
- (b) to any nuclear material (or equipment, etc) supplied to India which is required to be safeguarded pursuant to a bilateral or multilateral agreement (eg, the Australia-India Agreement). Even a facility that is not listed in the Annex to the IAEA-India Agreement may produce, process, use or store such nuclear material provided that the facility is placed under safeguards **temporarily** while the material is present. If safeguarded material is mixed with unsafeguarded material during processing in one of these facilities, then the total is pro-rated so that a proportion of material produced is unsafeguarded and may be available for use in nuclear weapons.

Each of Australia's previous nuclear cooperation agreements with other states has restricted AONM to facilities eligible for safeguards on a continual basis.²⁰

Article VII.4 of the Australia-India Agreement allows NMSA to be used in both continually safeguarded facilities and temporarily safeguarded facilities. It is not clear that India would be motivated to process (eg, convert or irradiate) NMSA alongside nuclear material that it intended to use for nuclear weapons in a facility temporarily under IAEA safeguards. However, this behaviour is not categorically prohibited by the Australia-India Agreement or the IAEA-India Agreement.

For example, India could hypothetically burn fuel containing a mix of 75% unsafeguarded nuclear material and 25% NMSA in a reactor for a short period of time in order to produce irradiated fuel containing weapons-grade plutonium.²¹ Once irradiation in the reactor is complete, and provided that 25% of the irradiated fuel remained under safeguards, the other 75% could be taken to an unsafeguarded facility and used as a source of plutonium for nuclear weapons. If this scenario is likely to occur in practice, then it would be reasonable to argue that Australian uranium could indirectly benefit an Indian nuclear weapons program and that this represents a significant lowering of the safeguards standard when compared with the agreements with Russia and China.

The Joint Standing Committee on Treaties should consult with nuclear fuel cycle experts to determine the circumstances in which India could realistically process unsafeguarded nuclear material that it intended to use for nuclear weapons alongside NMSA in a single facility under temporary safeguards. This would help to determine whether or not this provision should be considered to represent a significantly weaker safeguards standard than previous nuclear cooperation agreements. It may or may not be the case that, although it is legally permissible

²⁰ For example, in the case of China, each facility must be on a list determined by mutual decision of the designated authorities of China and Australia, which is a subset of the list of facilities eligible for IAEA safeguards in China. See Australia-China Transfer Agreement, Annex B.

²¹ IAEA-India Agreement, article 25.

for India to mix NMSA with nuclear material destined for nuclear weapons under specific circumstances, India would be very unlikely to do this in practice because:

- a) The sorts of facilities that India is likely to place under safeguards temporarily may not be particularly effective at producing material suitable for further processing into weapons-usable material, or
- b) The fact that IAEA safeguards apply to the NMSA may mean that the IAEA would acquire information about the unsafeguarded material as well; this could give international inspectors more insight into India's nuclear weapons program than India would wish to make available.

In other words, it *may* be the case that, on any realistic scenario, India would rationally choose to keep any nuclear material destined for nuclear weapons separate from NMSA. This is a complex technical judgment, which merits further investigation by nuclear fuel cycle experts. The alternative is to seek an undertaking from India that NMSA will not be mixed with unsafeguarded nuclear material.

The provisions of the Australia-India Agreement on reprocessing of NMSA are different from other nuclear fuel cycle activities. This is dealt with in the next subsection of this submission.

2.3 Consent to reprocessing

Reprocessing by separation of plutonium from spent fuel tends to be proliferation sensitive because plutonium could be used in nuclear weapons. Reprocessing is also a means of producing nuclear material for fresh reactor fuel. India is seeking to establish a civilian nuclear fuel cycle in which reprocessing plays a major role.

It is a standard term of Australia's nuclear cooperation agreements that AONM must not be reprocessed without the prior written consent of Australia.

Australia has provided consent to the reprocessing of AONM at specific facilities in Japan and the EU.²² In approving reprocessing, Australia specifies the facilities (usually specific fuel fabrication facilities and nuclear reactors) that may use the resulting separated plutonium. Similarly, Annex C of the Australia-China Transfer Agreement states that Australia will provide long term consent for reprocessing in facilities designated by both states.

The Australia-India Agreement is unique in that the Agreement itself contains consent to reprocessing. Article VI of the Australia-India Agreement states that Australia grants consent for India to reprocess NMSA at 'facilities dedicated to reprocessing safeguarded nuclear material under IAEA safeguards' described in an 'arrangements and procedures' document agreed between the United States and India. The words '*dedicated to...safeguarded nuclear material*' (emphasis added) imply that NMSA can **only** be reprocessed in facilities that are

²² See *Exchange of Notes Constituting an Agreement between Australia and Japan to Amend, by Replacing the Delineated and Recorded Japanese Nuclear Fuel Cycle Program, the Agreement for Cooperation in the Peaceful Uses of Nuclear Energy of 5 March 1982, as amended, 23 November 2006* [2006] ATS 18.

subject to safeguards on a **continual** basis. The US-India ‘arrangements and procedures’ document provides for two new reprocessing plants which India intends to build.²³ Article 1(4) of the US-India ‘arrangements and procedures’ document foresees the establishment of additional reprocessing facilities in India ‘dedicated’ to safeguarded material.

The Joint Standing Committee on Treaties should seek to confirm that the effect of article VI of the IAEA-India Agreement is that India will not be permitted to reprocess unsafeguarded nuclear material for nuclear weapons at a reprocessing facility that also handles NMSA. Assuming this is true, the Committee should also seek to confirm that, in the event that the United States and India decided to modify their ‘arrangements and procedures’ document, India still would not be permitted to reprocess unsafeguarded nuclear material for nuclear weapons at a reprocessing facility that also handles nuclear material subject to the Australia-India Agreement.

2.4 Tracking

Accounting under Australia’s bilateral nuclear cooperation agreements requires identification of the specific nuclear material to which the agreement applies, as distinct from other safeguarded nuclear material. In other words, the recipient must provide information to Australia specifically accounting for AONM as it progresses through the fuel cycle (i.e. ‘tracking’). This is distinguishable from and addition to the requirements of IAEA safeguards, which generally treat all safeguarded nuclear material in the same way regardless of the nation of origin.

According to article III.5 of the Australia-India Agreement, Australia and India must each ‘maintain a system of accounting for and control of items subject to this Agreement’. The Australia-China Transfer Agreement and the Australia-Russia Agreement contain similar provisions.²⁴

Article III.4 of the Australia-India Agreement requires the Australian Safeguards and Non-Proliferation Office and its Indian counterpart to establish an administrative arrangement. Although article III.4 states that this arrangement will include ‘exchange of information’, it does not detail the type of information to be exchanged. The Australia-China Transfer Agreement and the Australia-Russia Agreement each contain a more specific provision requiring the recipient state to provide Australia with the overall conclusions which the IAEA has drawn from administering safeguards, insofar as they relate to AONM.²⁵ This specific provision could have been useful to maintaining Australia’s safeguards standards if it had been included in the Australia-India Agreement. However, none of these agreements contains detailed tracking provisions.

²³ *Arrangements and Procedures Agreed between the Government of the United States and the Government of India, Pursuant to Article 6(iii) of Their Agreement for Cooperation Concerning Peaceful Uses of Nuclear Energy*, 29 March 2010, article 1(3), <<http://www.state.gov/p/sca/rls/139194.htm>>.

²⁴ Australia-China Transfer Agreement, article X.1; Australia-Russia Agreement, article XII.1.

²⁵ Australia-China Transfer Agreement, article X.4; Australia-Russia Agreement, article XII.3.

In other words, it is already established practice that nuclear cooperation agreements may not contain detailed tracking provisions. Instead, tracking is left to confidential administrative arrangements. Concerns were expressed about the confidential nature of administrative arrangements during previous Committee inquiries.²⁶ This is understandable because confidentiality means that the public does not have access to any document agreed to by the proposed recipient of Australian uranium expressly stating that the recipient will furnish the Australian Safeguards and Non-Proliferation Office with enough information to allow the Office to meet the requirements of section 51(2) of the *Nuclear Non-Proliferation (Safeguards) Act 1987* (Cth).

There are several reasons why tracking is particularly sensitive under the Australia-India Agreement. Firstly, the Agreement allows NMSA to be used in facilities that also produce material for India's nuclear weapons program (see Subsection 2.2 above). Secondly, the Agreement allows NMSA to be reprocessed into plutonium (see Subsection 2.3). Thirdly, in the event that a dispute about tracking arises under the Agreement that cannot be resolved by negotiation in a reasonable time, the avenues available to Australia are limited (see Subsections 2.5-2.7). Finally, media reports claim that Indian officials are not agreeing to provide Australia with reports accounting for NMSA.²⁷ Since this submission focuses on the text of the Agreement, it does not address the media reports.

Ideally, these concerns about tracking would be addressed by making the relevant parts of the administrative arrangements available to the Joint Standing Committee on Treaties before the Committee makes its recommendations. There may also be a number of ways in which these concerns could be partially alleviated:

- (1) The Committee could note that some standard of tracking of NMSA, distinct from the requirements of IAEA safeguards, is implied by the existence of a provision in the Australia-India Agreement requiring the recipient to 'maintain a system of accounting'. If any attempt were made by either party to interpret article III of the Australia-India Agreement in a manner that did not require tracking and reporting specifically on NMSA, then the Australian Safeguards and Non-Proliferation Office would not be able to meet the requirements of the *Nuclear Non-Proliferation (Safeguards) Act*.
- (2) The Committee could note that the willingness of the recipient to track AONM to some standard is implied by other articles of the agreement. For example, it would be impossible to meet the requirements of the retransfer provision (article IX) if India did not specifically account for NMSA prior to transferring the material to the third state. In the cases of the nuclear cooperation agreements with Russia and China, their

²⁶ See, eg, Joint Standing Committee on Treaties Report 94, page 12; Joint Standing Committee on Treaties Report 81, Dissenting Report by Senator Andrew Bartlett, page 87.

²⁷ Stephanie March, 'Nuclear Deal: Australia's Uranium Deal with India May Include Weaker Monitoring Safeguards', *ABC News* (19 November 2013) <<http://www.abc.net.au/news/2013-11-19/australia27s-nuclear-deal-with-india/5101030>>. See John Carlson, 'Is the Abbott Government Abandoning Australia's Nuclear Safeguards Standards for India?' *Lowy Interpreter* (1 October 2014) <<http://www.lowyinterpreter.org>>.

willingness to adhere to some standard of tracking is also implied by the existence of the ‘right of return’ of nuclear material (see Subsection 2.5 below).

- (3) The Australian Safeguards and Non-Proliferation Office could confirm that all administrative arrangements conform with the document ‘A Guide to Administrative Arrangements’ presented to the Committee in 2008.²⁸
- (4) The Committee could adopt the recommendations in Subsections 2.2 and 2.3 of this submission.

2.5 Consequences of failure to comply

Most of Australia’s nuclear cooperation agreements have a provision dealing with the consequences of a failure by the recipient state to comply with the core provisions of the nuclear cooperation agreement (or a failure by the recipient state to comply with its safeguards agreement with the IAEA). For example, article XII of the Australia-China Transfer Agreement permits Australia to suspend supply to China and require the return of nuclear material previously supplied under the Agreement. Article XV of the Australia-Russia Agreement contains a similar ‘right to suspend’ and a ‘right to require the return of nuclear material subject to this Agreement’.

The Australia-India Agreement does not contain an analogous provision. Whether or not this represents a significant reduction to the standard of safeguards is a matter of judgment.

If Australia concluded that India had committed a material breach of the Australia-India Agreement and the breach could not be resolved in a timely manner, suspension of supply would be a legally permissible countermeasure (despite the absence of an express provision in the Agreement to this effect).²⁹ However, in absence of a ‘right of return’ provision, it would be difficult for Australia to assert a legal right to the return of NMSA previously supplied under the Agreement.

Even with good faith participation by the recipient state, the logistics of exercising a ‘right of return’ could be challenging for Australia if the material to be returned included large quantities of plutonium. However, this is not itself a justification for leaving the ‘right of return’ out of a safeguards agreement.

Short of re-negotiating the Australia-India Agreement with India, it may be impossible for Australia to read a ‘right of return’ into the Australia-India Agreement. It is debatable whether or not the absence of this provision represents a significant weakening of safeguards standards.

²⁸ ‘A Guide to Administrative Arrangements’ in Evidence to Joint Standing Committee on Treaties, Report 94, Parliament of Australia, Canberra, 14 May 2008, pages 8-10 (Australian Safeguards and Non-Proliferation Office, Supplementary Submission No 22.1). This document was originally published on pages 45 to 47 of Australian Safeguards Office, *Annual Report of the Director of Safeguards 1993-1994* (Canberra: 1994).

²⁹ The relevant principle of international law, that the operation of a bilateral treaty may be suspended by one party in response to the other party’s material breach, is embodied in article 60(1) of the *Vienna Convention on the Law of Treaties*, opened for signature 23 May 1969, 1155 UNTS 331 (entered into force 27 January 1980).

2.6 Fallback safeguards

Most of Australia's nuclear cooperation agreements refer to an alternative nuclear safeguards system which would be arranged if, for any reason, IAEA safeguards cease to apply over AONM. These non-IAEA safeguards are often referred to as 'fallback safeguards'. For example, Article VII of the Australia-China Transfer Agreement provides that if the IAEA, 'for whatever reason at any time', is not administering safeguards, then Australia and China shall arrange 'for the application of safeguards satisfactory to both Parties'. Article VII also provides that these safeguards shall conform with IAEA safeguards principles and provide an equivalent level of reassurance of the peaceful nature of the recipient's nuclear activities. Article VIII.3 of the Australia-Russia Agreement is analogous.

By comparison, article VII.5 of the Australia-India Agreement simply provides that, if the IAEA is unable to apply safeguards, 'the Parties shall consult and agree on appropriate verification measures'. There is no express requirement that these 'verification measures' be in any way equivalent to IAEA safeguards. In this respect, the Australia-India Agreement is less clear than the agreements with Russia and China.

None of these nuclear cooperation agreements contains detailed information on how verification would be set up in the absence of IAEA safeguards. In the event that one of these three recipient states attempts to replace IAEA safeguards with a new verification system negotiated with Australia, it would be a matter of judgment whether or not the new system provided an equivalent level of reassurance with the IAEA system. It could be argued that this provision in the Australia-India Agreement is not significantly weaker than the corresponding provisions in the agreements with Russia and China.

This submission simply flags 'fallback safeguards' as a potential issue.

2.7 Dispute settlement

In absence of a 'right of return' and given the lack of clarity in the 'fallback safeguards' provision, it is important that the Australia-India Agreement is backed by effective dispute resolution mechanisms. Each of Australia's nuclear cooperation agreements contains a provision requiring the parties to settle any disputes arising out of the interpretation or application of the agreement by negotiation. Most of the agreements contain provisions for either party to submit the dispute to an arbitral tribunal if the dispute has not been settled by negotiation within a reasonable time period (i.e. 12 months).³⁰ It is implied that, if one party invokes arbitration then the other party is required to participate in the arbitration.

³⁰ For example, Australia-Russia Agreement article XVI; Australia-China Transfer Agreement article XIII; Australia-China Cooperation Agreement XVI.

By contrast, the Australia-India Agreement simply provides that the parties shall settle any dispute by negotiation. There is no provision to deal with the possibility that negotiations are unsuccessful in resolving a dispute. Although it may be highly unlikely that a dispute would remain outstanding between Australia and India for a prolonged period, it is important that Australia demonstrates that it will not permit significant disputes to remain unresolved under any agreement with any state.

The Joint Standing Committee on Treaties should consider how Australia could proceed in a hypothetical case in which a dispute arose with India under the Australia-India Agreement and the dispute could not be resolved to the satisfaction of the parties within a reasonable time. It may be possible for Australia to invoke other judicial or arbitral bodies despite the absence of an express provision in the Agreement.