15 April 2015

Australia-India Nuclear Cooperation Agreement

Treaty tabled on 28 October 2014

Supplementary Submission for JSCOT Review – John Carlson

This supplementary submission responds to **Submission number 22** from the Department of Foreign Affairs and Trade, which provided explanations on the operation of the proposed agreement following JSCOT's hearing of 12 February 2015.

I have not attempted to address all the points with which I take issue in these explanations. The particular points I wish to draw to JSCOT's attention are as follows.

1. Separation of India's civil and military nuclear activities

DFAT's explanation of India's "separation plan" is confused. DFAT's statement that the plan provides for 22 facilities to be placed under IAEA safeguards is not correct. Actually India undertakes to identify and place under safeguards 14 out of 22 *thermal* reactors in operation or under construction as at the date of the plan (2005), together with a number of *upstream* facilities (conversion, fuel fabrication, fuel storage) linked to these reactors. To date India has placed a total of 22 facilities under safeguards – the 14 reactors plus 8 upstream facilities. India excluded eight heavy water reactors from the separation plan, these are the eight unsafeguarded reactors referred to by DFAT.

India reserves as its sole determination whether additional facilities will be added to the list of IAEA safeguarded facilities. In the case of imported facilities, India will be obliged by the suppliers to place these under safeguards. For indigenous facilities, such as enrichment facilities, fast breeder reactors and other power reactors, India will take into account "… the nature of the facility concerned, the activities undertaken in it, the national security significance of materials and the location of the facilities …" when considering which to add to the list of safeguarded facilities.

While the DFAT explanation refers to only eight unsafeguarded facilities (namely the eight heavy water reactors), there are already other reactors and associated facilities excluded from safeguards, and there may be many more unsafeguarded facilities in the future decades over which the agreement is intended to apply.

DFAT gives no explanation for its assertion that "AONM cannot be used in these unsafeguarded reactors." This assertion cannot be reconciled with the texts of the Australia-India and India-IAEA agreements. The proposed agreement requires AONM to be "subject to IAEA safeguards in accordance with" the India-IAEA agreement.[1] As I have explained in previous submissions, the India-IAEA agreement expressly allows for safeguarded material to be used in normally unsafeguarded facilities.[2] The IAEA will apply safeguards at these facilities temporarily while safeguarded material is present, but the IAEA agreement sets out

1. Article VII.4.
2. See e.g. Articles 11(f), 14(b), 25.

circumstances in which India can obtain, free of safeguards, plutonium that has been produced using safeguarded material.[3]

Perhaps DFAT is relying on the provision in the Australia-India agreement that items subject to the agreement may be used only for *peaceful purposes*.[4] However, this does not exclude use in normally unsafeguarded reactors – the fact they are unsafeguarded does not mean that they are necessarily non-peaceful, otherwise the IAEA agreement would not allow safeguarded material to be used in these facilities.

2. Flexibility to move material between safeguarded and unsafeguarded programs

This has been partly discussed under the previous heading – the two topics are closely linked.

DFAT says that India cannot legally use its safeguarded program to further any military purpose. The problem, however, is one of proof. Once material is removed from temporarily safeguarded facilities and removed from safeguards – which the IAEA agreement allows India to do[5] – the IAEA and outside governments will lose visibility of what happens to that material.

DFAT asserts that the relevant provisions have been rarely used under similar IAEA agreements with other countries and are "unlikely to be used in India." If it is the case that such provisions have been rarely used, the reason is that safeguarded material is not usually supplied to countries with these agreements, except in the form of <u>fuel assemblies</u> which are designed and supplied for specific, safeguarded, reactors (and are not suited for use in other facilities). The claim that the provisions are <u>unlikely</u> to be used in India is not convincing. It has been Australia's practice in nuclear agreements to exclude activities that are unacceptable to us without depending on any judgment about likelihood (considering the many decades the agreement will operate, any such judgment will be speculative). <u>If India has no intention of using these provisions with AONM, it should have no difficulty in formally confirming this</u>.

The proposed agreement should have followed all other Australian agreements by <u>limiting AONM to facilities that are designated for IAEA safeguards</u>. An exchange of letters with India to this effect would resolve this particular concern.

3. Accounting and tracking
4. Indian facilities eligible to use AONM

DFAT appears to be acknowledging the concerns raised in my previous submissions, without saying anything specific about how these concerns will be addressed. The administrative arrangement is of fundamental importance both to whether the agreement will work satisfactorily and whether it will enable ASNO to meet statutory requirements. It is imperative for the administrative arrangement to be made public, or at least be made available for JSCOT review, when the text is concluded.

---

3. See Article 25.
4. Article VII.1.
5. Article 30(b).

5. Consent rights

DFAT says the Australian understandings on how the consent provisions of the proposed agreement are supposed to operate have been discussed with India and are set out in the National Interest Analysis. DFAT's explanation, however, does not make clear whether India shares Australia's understandings. If the proposed agreement had applied Australia's usual language there would be no room for doubt about its interpretation. It is of concern that this agreement is not clearly drafted – DFAT's explanation does little to assuage these concerns.

6. Australia's non-proliferation standards

DFAT's explanation that "Australia and India had different perspectives or goals for the agreement" is not reassuring, and highlights why the many concerns raised in submissions to JSCOT need to be properly addressed.

The assertion that "the final result is at least as strong as any other country has negotiated with India" is not correct – the US agreement is stronger in important respects, especially the limiting of material to facilities that have been submitted to IAEA safeguards, and the provisions on return of material.

7. Right to ask for IAEA reports

As discussed in my first submission, this was a shorthand way of referring to Australia having the right to ask for the IAEA's safeguards findings as they might relate to AONM. Other Australian agreements provide for this right. DFAT admits that India would not agree to this.

DFAT's explanation that Australia would have access to reports to the IAEA Board of Governors on safeguards compliance is totally unconvincing. Apart from the annual and very general Safeguards Implementation Report, only major safeguards violations are reported to the Board of Governors – we must hope that India's performance never reaches the point where such reports are made. Australia has a strong interest in knowing of safeguards problems affecting AONM before they become major violations. It is disturbing that India is unwilling to allow this.

It is equally disturbing for ASNO to admit that the IAEA's reports to India are "rudimentary" and do not include material balance evaluations. The way DFAT has phrased this is misleading – it implies this may be some problem on the part of the IAEA, but actually the problem is that India is not applying contemporary safeguards accounting. The reason why the IAEA is unable to prepare material balance evaluation reports is that India is not performing material balance accounting. As I mentioned in an earlier submission, the IAEA is in the process of introducing contemporary nuclear accounting to India. These circumstances make it all the more important for Australia to be able to find out from the IAEA how Indian nuclear accounting works in practice.

8. Safeguards and other commitments by India

DFAT's claims that India is performing "well" on the various commitments listed does not stand up to scrutiny. For example, this is patently incorrect with regard to the IAEA's

additional protocol for strengthening safeguards. In its agreement with the US India undertook to apply the additional protocol to its civilian nuclear facilities. However, even a cursory reading of India's additional protocol will show that, contrary to India's commitment (and DFAT's narrative), Indian facilities have been excluded from the scope of this protocol.

As to India's separation of military and civilian programs, this can hardly be described as satisfactory, in view of the number of facilities which India has chosen to leave outside safeguards and the provisions in the India-IAEA agreement allowing movement of nuclear material in and out of the safeguarded program.

This are other areas referred to by DFAT where India can hardly be described as performing "well". For example, although India is maintaining its unilateral nuclear test moratorium, it is one of only three Annex 2 states that have not signed the CTBT (the others being Pakistan and North Korea), and it refuses to allow the installation of CTBT monitoring stations in India. As regards its commitment to work towards a fissile material cut-off treaty, in fact India is one of the few states (again, in the company of Pakistan and North Korea) still producing fissile material for weapons.

DFAT makes the curious statement that "the frequency and intensity of IAEA inspections on India's civil nuclear facilities is (sic) greater than for most NPT parties." This is described as a "benefit" – the implication seems to be that somehow this gives greater reassurance about the situation in India than is the case in other countries. However, the reason for the intensity of IAEA safeguards in India is that India's indigenous power reactors are of the "on-load refuelling" type. These require more intensive safeguards, compared with typical power reactors (light water reactors), because they present much higher proliferation risk. Fortunately only a few countries operate on-load refuelling reactors.

Recommendation to JSCOT

As is apparent from the comments in this submission, I do not consider that DFAT's responses have resolved the concerns which I and others have raised in our submissions to JSCOT. I am firmly of the view that, unless the proposed agreement is revised along the lines discussed in my submission 1.4 of 17 February 2015, there is only one way that Australian uranium can be supplied to India consistent with legal requirements for AONM to be identifiable and accounted for, and the policy position that AONM must not contribute to military purposes. This is set out as follows:

1. Provided the administrative arrangements on tracking recently agreed in principle between United States and Indian officials are satisfactorily concluded, Australian uranium may be supplied to India only after enrichment and fabrication into fuel assemblies in the United States. Compared with uranium in "bulk" form, fuel assemblies are readily identifiable and trackable.
2. Such fuel assemblies would be transferred to India under both the US-India agreement and the Australia-India agreement (i.e. the low enriched uranium contained therein would be "dual-flagged", as both AONM and USONM). Coverage by the US-India agreement would make up for most deficiencies in the Australia-India agreement, e.g. the US-India agreement excludes the possibility of safeguarded material being used in facilities not subject to permanent IAEA safeguards.
3. Fuel assemblies transferred to India under the US-India agreement would be limited to use in US-supplied reactors. Under the US-India administrative arrangements,

India will supply information to the US sufficient for the US to be able to track the assemblies and material contained therein. It will be necessary for ASNO to establish arrangements with its US counterpart for the sharing of information required to track AONM.

4. This solution is not perfect – if the fuel assemblies are reprocessed in the future, both the US and Australia will face the problem of how to track material that is in bulk form. However, once the reprocessed material is fabricated into new fuel assemblies these will be covered by the US-India tracking arrangements. One can hope that by the time reprocessing takes place India will have brought its nuclear accounting practices into line with international practice.

5. It might be possible to permit the supply of AONM to India after enrichment and fabrication in a country other than the US, provided the country concerned has an agreement and supporting arrangements that replicate all the conditions applying under the US-India agreement.

17 February 2015

Australia-India Nuclear Cooperation Agreement

Suggested revisions to the text of 5 September 2014, as requested by JSCOT at the hearing of 9 February 2015

John Carlson

This document includes those articles of the current Agreement where revisions are suggested, with the revisions indicated by underlining and side-lining.

These have been drafted as revisions to the text of the Agreement because this is what JSCOT has requested, and also because this is the most useful way to help JSCOT's understanding of the deficiencies in the Agreement. There is no doubt that the best way to address these deficiencies is to revise the Agreement. However, if the two Governments are not prepared to re-open the text as signed, these revisions could instead be reformulated as an exchange of letters elaborating on the text and recording a common understanding of the Parties' intentions.

The revisions cover the following matters: **Page**

1. Accounting and tracking (Article III.5 and Administrative Arrangement) 2

2. Consent rights (Article VI) 4

   (a) Programmatic consent (*not in current Agreement*) 6

3. Limiting AONM to safeguarded facilities (*not in current Agreement*) 7

4. Right to IAEA reports (*not in current Agreement*) 9

5. Fallback safeguards (Article VII) 10

Article VII showing all proposed amendments (points 3, 4 and 5 above) 11

6. Dispute resolution (Article XII) 12

7. Right of return (*not in current Agreement*) 13

8. Substitution (*not in current Agreement*) 14

1. Accounting and Tracking

Current text, showing proposed revision

ARTICLE III - Implementing Provisions

1. Items subject to this Agreement are:

   (a) nuclear material, non-nuclear material, equipment, components and technology transferred between Australia and India, whether directly or through a third State;

   (b) equipment produced by the application of technology so transferred;

   (c) nuclear material and non-nuclear material that is produced or processed by the use of any equipment, components or technology subject to this Agreement; and

   (d) nuclear material that is produced or processed by the use of any nuclear material or non-nuclear material subject to this Agreement.

2. Nuclear material, non-nuclear material, equipment, components and technology referred to in this Article shall remain subject to the provisions of this Agreement until:

   (a) in the case of nuclear material, it has been determined by the Agency, in accordance with the provisions for the termination of safeguards in the agreement between the Party concerned and the Agency that it has been consumed or diluted in such a way that it is no longer usable for any nuclear activity relevant from the point of view of Agency safeguards, or has become practicably irrecoverable; or

   (b) transferred beyond the territory, jurisdiction or control of Australia or beyond the territory, jurisdiction or control of India in accordance with Article IX of this Agreement; or

   (c) the Parties otherwise mutually determine in writing through diplomatic channels that it should no longer be subject to this Agreement.

3. 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 India, the designated authority will be the Nuclear Controls and Planning Wing of the Department of Atomic Energy. A Party may from time to time notify the other Party in writing through diplomatic channels of a change to the designated authority.

4. The designated authorities of both Parties shall establish an Administrative Arrangement to facilitate the effective implementation of this Agreement. This Arrangement will include such exchange of information as is mutually determined by the designated authorities to implement and administer the provisions of this Agreement. The Administrative Arrangement established pursuant to this paragraph may be amended with the mutual consent in writing of the designated authorities of both Parties.

5. Each Party shall establish and maintain a system of accounting for and control of items subject to this Agreement sufficient to effectively identify and account for such items as being subject to the Agreement.

6. Items subject to this Agreement shall be transferred only to a legal entity of Australia or India which the designated authority of the receiving Party notifies the designated authority of the supplier Party as being duly authorised to receive such items.

Comments:

Accounting and tracking of nuclear material subject to the Agreement is of fundamental importance to the effective operation of the Agreement. Despite the intent of paragraph 5 of Article III that each Party shall establish and maintain a system of accounting for and control of items subject to *this* Agreement, it appears that Indian officials are not prepared to do so. It seems they consider inclusion of AONM (Australian obligated nuclear material)* in the inventory of material under the India-IAEA agreement satisfies Article III.5. The suggested amendment to paragraph 5 reinforces the requirement to clearly identify items (which include materials) as being subject to *this* Agreement.

If this amendment is *unacceptable to India*, it will be **absolutely essential** for the Government not to authorize any export of nuclear material to India except under arrangements where there is confidence that the material will be identified and accounted for as being subject to this Agreement. In practice this might mean that:

(a) Australian uranium can be supplied to India only through being enriched and fabricated as fuel assemblies in the US and being transferred to India under the US-India nuclear cooperation agreement, **provided** ASNO is satisfied that the administrative arrangements currently being developed by US and Indian officials are sufficient to enable Australian material to be accounted for (NB this would also require appropriate arrangements for information-sharing between the US and Australia);

(b) Australian uranium could also be supplied to India through being enriched and fabricated in another country if that country establishes arrangements equivalent to the US-India arrangements (again, assuming that the US-India arrangements prove satisfactory to ASNO);

(c) Australian uranium *should not be supplied to India other than in accordance with the arrangements outlined in (a) and (b)* until such time that India is prepared to implement the same accounting, tracking and reporting arrangements as Australia's other bilateral partners. **JSCOT should recommend** that the Government provide an assurance to this effect.

Details of the accounting and associated reporting procedures are to be set out in the **Administrative Arrangement**, referred to in paragraph 4 of this Article. Because of the critical importance of the substance of the Administrative Arrangement to whether the Agreement works effectively, it is **essential for JSCOT to have the opportunity to review the text of the Administrative Arrangement** before it is concluded. (Such review has not been necessary under previous agreements because this is the first case of substantial departure from established practice.)

The JSCOT review can be held *in camera* if necessary. Because of the specialized nature of this subject, JSCOT should be free to seek the advice of expert witnesses, under appropriate confidentiality arrangements.

Note (*): in common with other agreements, this Agreement does not refer specifically to *AONM* but rather is expressed in reciprocal terms applicable to either Party, i.e. *nuclear material subject to the Agreement* (or in the case of Article III.5 of this Agreement, *items subject to the Agreement*, defined as including nuclear material).

2. Consent rights

Current text, showing proposed revision

ARTICLE VI - Reproccessing and Enrichment

A. Preferred proposal

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

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

(b) reprocessed, except in accordance with paragraph 2;

without the prior written consent of the supplier Party.

~~1.~~2. The Government of Australia grants consent to the Government of the Republic of India for reprocessing or otherwise altering in form or content nuclear material subject to this Agreement in facilities dedicated to reprocessing safeguarded nuclear material under IAEA safeguards and modalities thereof described in the *Arrangements and Procedures Agreed between the Government of the United States of America and the Government of India pursuant to Article 6(iii) of their Agreement for Cooperation Concerning Peaceful Uses of Nuclear Energy*, done at Washington D.C. on 30 July 2010.

~~2.~~3. The provisions of paragraph ~~1~~2 shall only apply:

(a) as long as the modalities described in paragraph ~~1~~2 of this Article continue to apply;
(b) as long as the India-IAEA Safeguards Agreement remains in force; and
(c) where any special fissionable material that may be separated thereby is stored or used only for the purpose of producing nuclear fuel for facilities in India under Agency safeguards to implement India's planned nuclear energy programme.

~~3.~~4. The Government of India shall notify the Government of Australia in writing when it has established a facility described in paragraph ~~1~~2 of this Article. The notification shall contain the following:

(a) such information as is available to the Government of India on the IAEA safeguards approaches for the facility that is not classified as "Safeguards Confidential"; and

(b) a confirmation that the physical protection measures required by Article VIII of this Agreement will be applied to the facility.

~~4.~~5. At the request of either Party, the Parties shall consult on the implementation of this Article. If the provisions of paragraph ~~2~~3(a) no longer apply the Parties shall immediately enter into consultations on the implementation of this Article.

~~5. Enrichment of nuclear material subject to this agreement may be carried out to less than twenty percent in the isotope 235 of uranium. Enrichment of twenty percent and above in the isotope of uranium 235 shall be undertaken with prior consent of the Supplier Party.~~

[Existing paragraph 5 is no longer required as it is covered by new paragraph 1.]

B. Alternative proposal

1. The Government of Australia grants consent to the Government of the Republic of India for reprocessing or otherwise altering in form or content nuclear material subject to this Agreement in facilities dedicated to reprocessing safeguarded nuclear material under IAEA safeguards and modalities thereof described in the *Arrangements and Procedures Agreed between the Government of the United States of America and the Government of India pursuant to Article 6(iii) of their Agreement for Cooperation Concerning Peaceful Uses of Nuclear Energy*, done at Washington D.C. on 30 July 2010.

2. The provisions of paragraph 1 shall only apply:

(a) as long as the modalities described in paragraph 1 of this Article continue to apply;
(b) as long as the India-IAEA Safeguards Agreement remains in force; and
(c) where any special fissionable material that may be separated thereby is stored or used only for the purpose of producing nuclear fuel for facilities in India under Agency safeguards to implement India's planned nuclear energy programme.

3. The Government of India shall notify the Government of Australia in writing when it has established a facility described in paragraph 1 of this Article. The notification shall contain the following:

(a) such information as is available to the Government of India on the IAEA safeguards approaches for the facility that is not classified as "Safeguards Confidential"; and

(b) a confirmation that the physical protection measures required by Article VIII of this Agreement will be applied to the facility.

4. At the request of either Party, the Parties shall consult on the implementation of this Article. If the provisions of paragraph 2(a) no longer apply the Parties shall immediately enter into consultations on the implementation of this Article. Such consultations may include the conditions under which the Government of Australia is prepared to grant its consent to reprocessing other than in accordance with paragraph 1.

5. Enrichment of nuclear material subject to this agreement may be carried out to less than twenty percent in the isotope 235 of uranium. Enrichment of twenty percent and above in the isotope of uranium 235 shall be undertaken only with the prior consent of the Supplier Party.

Comments:

Given the critical importance to Australia's safeguards policy of consent rights over reprocessing and high enrichment, it is essential for the Agreement to be absolutely clear on this point. There should be no room for any ambiguity. Proposal A above is Australia's standard text, and makes the intention absolutely clear. If India is unwilling to accept this formulation, proposal B is a least-change formulation that is clearer than the signed text.

Note – there is a possible **substantive issue** with the way paragraph 2(c) is drafted. This provides that plutonium may be stored ***or*** used to produce fuel. This suggests storage or fuel are *alternatives*, i.e. that India has an option to stockpile plutonium. This is contrary to evolving international practice that plutonium should not be stockpiled, but rather, separation and use should be kept in balance. By comparison, Australia's reprocessing consent to the EU says plutonium may be stored **and** used etc. – a small difference, but with important implications. This discussion shows the importance of *programmatic consent*, see next page.

2.(a) Consent for reprocessing – programmatic basis

Comment:

Separation and use of plutonium raise a number of issues which governments need to address very carefully. For example, as mentioned on the previous page, there is increasing international recognition of the need to maintain plutonium separation and use in balance so as to avoid increasing plutonium stockpiles. One assumes Australia would not wish to facilitate plutonium stockpiling.

Another issue is separation of weapon-grade plutonium. India plans to use fast breeder reactors specifically to produce weapon-grade plutonium for use as *driver fuel* in thorium reactors – but weapon-grade plutonium presents serious strategic and terrorism concerns. In the past Australia has acted to discourage production and use of this material.

These are just a couple of illustrations of why, until this Agreement, Australia has given reprocessing consent only on a **programmatic** basis, i.e. the specific facilities and uses of plutonium are subject to Australia's approval. The approval in the current Agreement – for storage ***or*** for the purpose of producing fuel for facilities under safeguards to implement India's planned nuclear energy program – is too broad to ensure that Australia's concerns about plutonium use are adequately covered. The US reprocessing consent given to India, on which the Australian consent depends, also seems too general to meet Australia's concerns, though we have yet to see how this will work in practice (this might not be apparent for some years).

Australia's standard condition is that reprocessing shall take place for the purpose of energy use in accordance with a nuclear fuel cycle program mutually determined in writing through consultation between the designated authorities of both Parties. In the agreements where Australia has given reprocessing consent – Japan and the EU – this basic condition is elaborated by more detailed provisions, but inclusion of the principle in the India Agreement would help to preserve Australia's interests in this highly sensitive and potentially contentious area.

This could be achieved through revision of current paragraph 2 along these lines:

2. The provisions of paragraph 1 shall only apply:

   (a) as long as the modalities described in paragraph 1 of this Article continue to apply;

   (b) as long as the India-IAEA Safeguards Agreement remains in force; and

   (c) where any special fissionable material that may be separated thereby is stored ~~or~~ and used only for the purpose of producing nuclear fuel for facilities in India under Agency safeguards ~~to implement India's planned nuclear energy programme~~ in accordance with a nuclear fuel cycle programme mutually determined in writing through consultation between the designated authorities of both Parties.

3. Limiting AONM to safeguarded facilities

Current text, showing proposed revision

ARTICLE VII - Peaceful Use and IAEA Safeguards

1. The Parties shall ensure that the items subject to this Agreement as well as by-products are used only for peaceful and non-explosive purposes. Both Parties shall comply with the provisions contained in the IAEA document GOV/1999/19/Rev.2 with regard to by-products subject to this Agreement. With regard to tritium, the Parties shall exchange annually information pertaining to the disposition of tritium for peaceful purposes.

2. IAEA safeguards shall apply to India's civilian nuclear facilities in accordance with the Agreement between India and the International Atomic Energy Agency for the Application of Safeguards to Civilian Nuclear Facilities done at Vienna on 2 February 2009 (IAEA INFCIRC/754).

3. Where items subject to this Agreement are within the territory of Australia, under its jurisdiction or under its control anywhere, they shall remain subject to IAEA safeguards in accordance with the "Agreement between Australia and the International Atomic Energy Agency for the Application of Safeguards in connection with the Treaty on the Non-Proliferation of Nuclear Weapons of 1 July 1968" done at Vienna on 10 July 1974 and the Protocol Additional to that agreement, done at Vienna on 23 September 1997.

4. Where items subject to this Agreement are within the territory of India, under its jurisdiction or under its control anywhere, they shall remain subject to IAEA safeguards in accordance with the "Agreement between the Government of India and the International Atomic Energy Agency for the Application of Safeguards to Civilian Nuclear Facilities" done at Vienna on 2 February 2009 and the Protocol Additional to that agreement done at Vienna on 25 February 2009. Such items shall be processed, used or held only in facilities listed in the Annex to the India-IAEA agreement cited above unless otherwise agreed by the Parties.

5. Safeguards, as applicable, shall be maintained with respect to all items subject to this Agreement, so long as the items remain under the jurisdiction or control of a Party. If the IAEA decides that the application of IAEA safeguards is not possible, the Parties shall consult and agree on appropriate verification measures.

Comments:

As outlined in my submissions to JSCOT, under the India-IAEA agreement safeguards apply to Indian facilities in two situations:

(a) facilities listed in the Annex to that agreement are subject to IAEA safeguards on a permanent basis;

(b) other facilities will be covered by IAEA safeguards on a temporary basis, if India chooses to use, process or store safeguarded material at such facilities.

The Australia-India Agreement as signed does not distinguish between these two types of facility. Paragraph 4 specifies only that AONM "shall remain subject to IAEA safeguards in

accordance with the India-IAEA agreement." The problem is that use of AONM in a facility not listed in the Annex (i.e. a facility normally unsafeguarded) *would be* in accordance with the India-IAEA agreement.

This is not a situation Australia would want to see. As discussed in my submissions, there are circumstances under the India-IAEA agreement where safeguarded material could be used in a normally unsafeguarded facility to produce unsafeguarded material. This is contrary to Australian policy. Limiting AONM to facilities **listed in the Annex** to the India-IAEA agreement, as proposed here, will avoid this risk.

4. Right to IAEA reports

Current text, showing proposed revision

ARTICLE VII - Peaceful Use and IAEA Safeguards

1. The Parties shall ensure that the items subject to this Agreement as well as by-products are used only for peaceful and non-explosive purposes. Both Parties shall comply with the provisions contained in the IAEA document GOV/1999/19/Rev.2 with regard to by-products subject to this Agreement. With regard to tritium, the Parties shall exchange annually information pertaining to the disposition of tritium for peaceful purposes.

2. IAEA safeguards shall apply to India's civilian nuclear facilities in accordance with the Agreement between India and the International Atomic Energy Agency for the Application of Safeguards to Civilian Nuclear Facilities done at Vienna on 2 February 2009 (IAEA INFCIRC/754).

3. Where items subject to this Agreement are within the territory of Australia, under its jurisdiction or under its control anywhere, they shall remain subject to IAEA safeguards in accordance with the "Agreement between Australia and the International Atomic Energy Agency for the Application of Safeguards in connection with the Treaty on the Non-Proliferation of Nuclear Weapons of 1 July 1968" done at Vienna on 10 July 1974 and the Protocol Additional to that agreement, done at Vienna on 23 September 1997.

4. Where items subject to this Agreement are within the territory of India, under its jurisdiction or under its control anywhere, they shall remain subject to IAEA safeguards in accordance with the "Agreement between the Government of India and the International Atomic Energy Agency for the Application of Safeguards to Civilian Nuclear Facilities" done at Vienna on 2 February 2009 and the Protocol Additional to that agreement done at Vienna on 25 February 2009.

5. Upon the request of either Party, the other Party shall report or permit the IAEA to report to the requesting Party on the status of all inventories of items subject to this Agreement.

~~5.~~6. Safeguards, as applicable, shall be maintained with respect to all items subject to this Agreement, so long as the items remain under the jurisdiction or control of a Party. If the IAEA decides that the application of IAEA safeguards is not possible, the Parties shall consult and agree on appropriate verification measures.

Comment:

The right to IAEA reports is a standard condition in Australia's nuclear agreements. This is particularly important in this case because it seems Indian officials are not prepared to provide Australia with the information usually provided by bilateral partners. It is not clear why this provision has been omitted from this Agreement. India has agreed to such a provision in its agreements with the US and Canada (Article 10.7 and Article 11.4 respectively). The proposed paragraph 5 is drawn from the India-US agreement, and would meet Australia's interests.

5. Fallback safeguards

Current text, showing proposed revision

ARTICLE VII - Peaceful Use and IAEA Safeguards

1. The Parties shall ensure that the items subject to this Agreement as well as by-products are used only for peaceful and non-explosive purposes. Both Parties shall comply with the provisions contained in the IAEA document GOV/1999/19/Rev.2 with regard to by-products subject to this Agreement. With regard to tritium, the Parties shall exchange annually information pertaining to the disposition of tritium for peaceful purposes.

2. IAEA safeguards shall apply to India's civilian nuclear facilities in accordance with the Agreement between India and the International Atomic Energy Agency for the Application of Safeguards to Civilian Nuclear Facilities done at Vienna on 2 February 2009 (IAEA INFCIRC/754).

3. Where items subject to this Agreement are within the territory of Australia, under its jurisdiction or under its control anywhere, they shall remain subject to IAEA safeguards in accordance with the "Agreement between Australia and the International Atomic Energy Agency for the Application of Safeguards in connection with the Treaty on the Non-Proliferation of Nuclear Weapons of 1 July 1968" done at Vienna on 10 July 1974 and the Protocol Additional to that agreement, done at Vienna on 23 September 1997.

4. Where items subject to this Agreement are within the territory of India, under its jurisdiction or under its control anywhere, they shall remain subject to IAEA safeguards in accordance with the "Agreement between the Government of India and the International Atomic Energy Agency for the Application of Safeguards to Civilian Nuclear Facilities" done at Vienna on 2 February 2009 and the Protocol Additional to that agreement done at Vienna on 25 February 2009.

5. Safeguards, as applicable, shall be maintained with respect to all items subject to this Agreement, so long as the items remain under the jurisdiction or control of a Party. If the IAEA decides that the application of IAEA safeguards is not possible, the Parties shall ~~consult and agree on appropriate verification measures.~~ forthwith arrange for the application of safeguards satisfactory to both Parties which conform with IAEA 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.

Comment:

The greater specificity on fallback safeguards providing equivalent assurance as IAEA safeguards is a standard provision in Australia's nuclear agreements. The proposed text is drawn from the Australia-China agreement (Article VII).

ARTICLE VII - Peaceful Use and IAEA Safeguards

Text showing all proposed revisions to Article VII

[Limiting AONM to safeguarded facilities, right to IAEA reports, and fallback safeguards]

1. The Parties shall ensure that the items subject to this Agreement as well as by-products are used only for peaceful and non-explosive purposes. Both Parties shall comply with the provisions contained in the IAEA document GOV/1999/19/Rev.2 with regard to by-products subject to this Agreement. With regard to tritium, the Parties shall exchange annually information pertaining to the disposition of tritium for peaceful purposes.

2. IAEA safeguards shall apply to India's civilian nuclear facilities in accordance with the Agreement between India and the International Atomic Energy Agency for the Application of Safeguards to Civilian Nuclear Facilities done at Vienna on 2 February 2009 (IAEA INFCIRC/754).

3. Where items subject to this Agreement are within the territory of Australia, under its jurisdiction or under its control anywhere, they shall remain subject to IAEA safeguards in accordance with the "Agreement between Australia and the International Atomic Energy Agency for the Application of Safeguards in connection with the Treaty on the Non-Proliferation of Nuclear Weapons of 1 July 1968" done at Vienna on 10 July 1974 and the Protocol Additional to that agreement, done at Vienna on 23 September 1997.

4. Where items subject to this Agreement are within the territory of India, under its jurisdiction or under its control anywhere, they shall remain subject to IAEA safeguards in accordance with the "Agreement between the Government of India and the International Atomic Energy Agency for the Application of Safeguards to Civilian Nuclear Facilities" done at Vienna on 2 February 2009 and the Protocol Additional to that agreement done at Vienna on 25 February 2009. Such items shall be processed, used or held only in facilities listed in the Annex to the India-IAEA agreement cited above unless otherwise agreed by the Parties.

5. Upon the request of either Party, the other Party shall report or permit the IAEA to report to the requesting Party on the status of all inventories of items subject to this Agreement.

~~5.~~6. Safeguards, as applicable, shall be maintained with respect to all items subject to this Agreement, so long as the items remain under the jurisdiction or control of a Party. If the IAEA decides that the application of IAEA safeguards is not possible, the Parties shall ~~consult and agree on appropriate verification measures.~~ forthwith arrange for the application of safeguards satisfactory to both Parties which conform with IAEA 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.

6. Dispute resolution

Current text, showing proposed revision

ARTICLE XII

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

2. If the Parties fail to reach a settlement of the said dispute within twelve months, the Parties shall submit the dispute to arbitration, unless they have agreed on an alternative means of dispute settlement.

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.

Comment:

All Australia's nuclear agreements except that with the US contain arbitration provisions. The text added here is based on the Australia-China agreement (Article XIII.2).

7. Right of return

Current text, showing proposed revision

ARTICLE XIV - Entry into Force, Duration and Termination

1. This Agreement shall enter into force on the last date upon which the Parties notify each other in writing that all domestic requirements for entry into force of this Agreement have been completed. The Agreement shall remain in force for a period of forty years and it shall be automatically renewed for periods of twenty years. A Party that does not wish to renew this Agreement shall notify the other Party by giving at least six months' written notice before a renewal.

2. Either Party may terminate this Agreement by giving one year's written notice to the other Party. A Party giving notice of termination under this paragraph shall provide the reasons for seeking such termination. Both Parties consider it extremely unlikely that actions would be taken by either Party which would cause the other Party to terminate this Agreement. If a Party seeking termination cites a violation of the Agreement as the reason for notice for seeking termination, Parties shall consider whether the action was caused inadvertently or otherwise and whether the violation could be considered as material. <u>Where the supplier Party asks the recipient Party to take corrective steps and these are not taken by the recipient Party within a reasonable time, the supplier Party has the right to require the return of nuclear items subject to this Agreement.</u> This Agreement shall terminate one year from the date of the written notice, unless the notice has been withdrawn by the providing Party in writing prior to the date of termination. The Party seeking termination may cease further cooperation under this Agreement if it determines that a mutually acceptable resolution of outstanding issues has not been possible or cannot be achieved through consultations.

3. Unless otherwise mutually determined in writing between the Parties, termination or suspension of this Agreement or any cooperation under it for any reason shall not release the Parties from obligations under Articles III, VI, VII, VIII, IX and X of this Agreement in respect of nuclear material, non-nuclear material, equipment, components and technology transferred while the Agreement was in force.

Comment:

The right of return of supplied material and items is a standard Australian condition. In event of a breach of the Agreement, Australia would not want to be in the position that material already in India remains there and could be used in the same manner as led to the breach. The above proposal is drawn from the Australia-China agreement (Article XII).

While there could be practical issues in exercising the right of return, it is important for Australia to at least have the right to do so. If it were ever necessary to exercise this right, there may be options other than returning material to Australia, e.g. transfer to another country if the material had been enriched and fabricated in that country.

8. Substitution

As outlined in the Appendix to my submission to JSCOT dated Revision 2 February 2015, the IAEA-India agreement (Article 30(d)) allows India to substitute *unsafeguarded* nuclear material for safeguarded material. The agreement allows substitution based simply on element mass (weight), without taking account of isotopic composition. Safeguards are terminated on the formerly safeguarded material.

Substitution requires the IAEA's agreement, but is not clear on what basis the IAEA could or would decline a request. In the case of enriched uranium, it is understood that the IAEA has a policy requiring isotopic equivalence (i.e. similar enrichment level), but there does not appear to be any such policy for plutonium. In any case, the disposition of AONM should not depend on the discretion of the IAEA. It is essential for the Agreement or the Administrative Arrangement to clearly state that *any substitution of nuclear material subject to the Agreement shall only be by nuclear material equivalent in both quantity and quality, including* ***isotopic composition,*** *unless the designated authorities mutually determine otherwise*.

It is **recommended** that JSCOT seek ASNO's assurance that this point will be fully covered in the Administrative Arrangement. Otherwise the point should be covered in a revision of the Agreement or an exchange of letters.