

**Government Response to
Report 94
of the
Joint Standing Committee on Treaties**

**Government Response to
Report 94 of the Joint Standing Committee on Treaties:
Australia-Russia Nuclear Cooperation Agreement**

The Government thanks the Committee for its consideration of the *Agreement between the Government of Australia and the Government of the Russian Federation on Cooperation in the Use of Nuclear Energy for Peaceful Purposes, done at Sydney on 7 September 2007* (“the Nuclear Cooperation Agreement”), which was tabled on 14 May 2008, and gives the following responses to the Committee’s recommendations. The question of taking binding treaty action remains under consideration.

The Committee’s recommendations covered a range of aspects related to Russia’s nuclear fuel cycle and the operation of the Nuclear Cooperation Agreement. Most of these recommendations related broadly to the question of confidence that Australian nuclear material would be used appropriately. As such, this response will consist of a section addressing the safeguards that would be applied to Australian nuclear material, followed by specific responses to the Committee’s recommendations.

Protection of Australian Uranium – the Nuclear Cooperation Agreement in Context

Confidence that Australian Obligated Nuclear Material (AONM), i.e. Australian uranium and nuclear material derived from its use, would not be diverted for military purposes in Russia is based on a combination of factors:

- (a) Russia’s commitments under the Nuclear Cooperation Agreement are binding in international law;
- (b) Russia ceased production of fissile material for nuclear weapons many years ago;
- (c) over time Russia will become increasingly reliant on imported uranium for its expanding civil power sector, so to breach a uranium supply agreement could have significant energy and economic consequences for Russia;
- (d) all facilities using AONM must be on Russia’s Eligible Facility List with the International Atomic Energy Agency (IAEA), so to use such facilities for military purposes would also be a breach of Russia’s safeguards agreement with the IAEA;
- (e) facilities on Russia’s Eligible Facility List are, by definition, eligible for, and may be subject to, IAEA inspections so should be prepared for that possibility;
- (f) the facilities in which AONM is processed and utilised would be mutually determined through consultation with Australia;
- (g) application of international-standard nuclear material accountancy and control measures at Russian facilities handling AONM would apply; and
- (h) the Australian Safeguards and Non-Proliferation Office (ASNO) will receive detailed information on the disposition of AONM in Russia, which it will analyse for consistency with information from other sources including the IAEA and other suppliers, and ASNO’s knowledge of the processes and facilities involved.

Russia’s nuclear material security and accountancy have improved significantly in recent years. However, to ensure that Australia’s robust nuclear material accountancy and control

requirements for AONM are understood and will be consistently applied, ASNO conducted a technical workshop for a group of Russian safeguards officials in Canberra on 8-11 December 2008. These discussions highlighted that Russian officials have a thorough understanding of nuclear accountancy and control, and provided further confidence that AONM in Russia will be appropriately controlled and accounted for. Further training could be provided if required. Furthermore, the US Department of Energy's National Nuclear Security Administration (NNSA) reports that it has trained over 1,100 Russian and former Soviet Union state personnel in physical protection and accountancy and control of nuclear materials at three training facilities of the Russian Federal Atomic Energy Agency (Rosatom).

Safeguards address risk of diversion

Safeguards are legal and technical measures to provide assurance that nuclear material and nuclear items are not diverted from peaceful use to nuclear weapons. Safeguards may be applied at the multilateral level – usually by the IAEA – and at the bilateral level, through bilateral agreements.

Confidence that a state will not divert nuclear material from peaceful uses to nuclear weapons is not based solely on safeguards measures, but takes into account a number of factors. These include whether the state might have a motivation to divert, and its participation in relevant treaty regimes. Safeguards are not mechanistic. Determining the level of safeguards sufficient to provide confidence of non-diversion is a matter of judgment based on implementation experience by the IAEA and national safeguards authorities.

In the case of the five nuclear-weapon states recognised by the Nuclear Non-Proliferation Treaty (NPT), the risk they might divert nuclear material subject to safeguards from civil programs to nuclear weapons programs is remote. They would simply have no need to divert such material as all nuclear-weapon states have sufficient stocks of fissile material for their nuclear weapon programs. Furthermore, all the NPT nuclear-weapon states ceased production of fissile material for nuclear weapons in the 1980s or early 1990s.

In the case of Russia it stopped fissile material production for weapons many years ago. In 1989 the Soviet Union declared it no longer produced high enriched uranium (HEU) for weapons, and in 1994 Russia declared its cessation of plutonium production for weapons. Indeed, Russia is pursuing an active program of releasing fissile material from its military stocks for civil use. Under the “Megatons to Megawatts” program Russia has down-blended some 380 metric tonnes of HEU, equivalent to at least 15,000 nuclear warheads, to supply the United States with low enriched uranium for power generation. This program is on-going, and will ultimately see the elimination of 500 tonnes of HEU, equivalent to at least 20,000 nuclear warheads. Russia has also committed to a program of disposal of surplus weapons-grade plutonium. In the Joint Statement on Nuclear Cooperation by United States President Barack Obama and Russian President Dmitry Medvedev on 6 July 2009, the US and Russia committed to “executing the *Agreement between the Government of the United States of America and the Government of the Russian Federation Concerning the Management and Disposition of Plutonium Designated as No Longer Required for Defense Purposes and Related Cooperation* to dispose of 34 metric tons each of weapons-grade plutonium.” Under this Plutonium Disposition Agreement the plutonium will be converted into mixed oxide fuel for use in commercial nuclear power plants, thereby rendering it unsuitable for weapons use.

It is highly unlikely that Russia would, on the one hand dispose of its enormous surplus stocks of fissile material, and on the other hand seek to divert uranium from Australia or elsewhere

and subject such uranium to all the processing required in order to produce material suitable for a weapon.

As surplus fissile material stocks run down, the need to verify that more is not produced will grow. Australia is a long-standing proponent of a fissile material cut-off treaty (FMCT), prohibiting further production of fissile material for nuclear weapons, and applying verification measures to relevant facilities, including in nuclear-weapon states. Verification will also be required as further nuclear disarmament steps progress.

Legal basis for safeguards

For states that are party to the NPT, the obligation to accept IAEA safeguards – and the corresponding responsibility of the IAEA to apply safeguards – is based on the states' commitments under that Treaty.

Article III of the NPT requires non-nuclear-weapon states to accept IAEA safeguards on all their nuclear material, to verify fulfilment of obligations under the NPT not to acquire nuclear weapons. The IAEA has a corresponding responsibility to apply safeguards on all nuclear material and facilities in these states.

In the case of the five nuclear-weapon states recognised under the NPT (United States, Russia, United Kingdom, France and China) there is no obligation in the NPT for these countries to accept IAEA safeguards, and there is no obligation for the IAEA to apply safeguards. It is bilateral agreements such as Australia's Nuclear Cooperation Agreement with Russia that create an obligation for nuclear material or facilities to be eligible for safeguards. The United States and Canada have similar requirements in their bilateral nuclear cooperation agreements with Russia. However, there is no country arguing for the general application of IAEA safeguards inspections in nuclear-weapon states.

While under no obligation under the NPT, nuclear-weapon states have concluded "voluntary offer" safeguards agreements with the IAEA. Under such agreements nuclear-weapon states designate nuclear material as being subject to safeguards, and therefore eligible for IAEA inspection, by designating facilities using this material on an "Eligible Facility List".

The IAEA selects those facilities on the Eligible Facility List that it wishes to inspect. In practice the IAEA only inspects facilities where inspectors benefit through gaining experience with a particular type of facility, or where there is nuclear material being transferred to or received from a non-nuclear-weapon state. Where the IAEA chooses not to inspect particular facilities, this does not mean that inclusion of a facility on the Eligible Facility List is of no safeguards value. If a nuclear-weapon state were to use a facility on its Eligible Facility List for military purposes, this would place it in breach of its safeguards agreement with the IAEA. Furthermore, because any eligible facility *may* be selected for inspection, the facility operator should maintain nuclear accountancy records and other safeguards procedures at IAEA standards so that an inspection can be readily performed if the facility *is* selected.

Australia's safeguards policy

The Government permits supply of Australian uranium only where it is satisfied the uranium will be used exclusively for peaceful purposes. A network of bilateral nuclear safeguards agreements creates legally-binding commitments that AONM will not be diverted to any non-peaceful use. The Nuclear Cooperation Agreement with Russia meets all of Australia's long-standing safeguards policy requirements.

To confirm that undertakings in the safeguards agreements are met, Australia makes use of several measures. In addition to the international safeguards system established pursuant to the NPT, and applied by the IAEA, ASNO maintains a nuclear accounting system for all AONM, consistent with internationally accepted standards for best practice for nuclear material accountancy and control.

ASNO receives regular reports and notifications from bilateral partners and consults with them to account for how all AONM is used. ASNO draws a conclusion on whether AONM has been satisfactorily accounted for, taking into account:

- information provided by, and through consultations with, bilateral partners;
- IAEA safeguards findings, transit matching data, etc; and
- other information and analysis on nuclear activities in each country.

The details of the nuclear accounting system that Russia would apply under the Nuclear Cooperation Agreement would be outlined in a Memorandum of Understanding (MOU) between ASNO and the Russian Federal Atomic Energy Agency (Rosatom). The provisions of the MOU would be based on long-standing practice by Australia and other suppliers of nuclear material (e.g. European Union, United States, Canada). This practice is being reinforced through a document of “common understandings and practices with regard to the administration of obligation accounting and transfers pursuant to nuclear cooperation agreements” that Australia is developing with counterparts in the United States, Canada and the European Union, which will further validate Australia’s rigorous standards for obligation accounting.

Recommendation 1

The Committee recommends that the Australian Government not proceed with ratification of the Agreement between the Government of Australia and the Government of the Russian Federation on Cooperation in the Use of Nuclear Energy for Peaceful Purposes until:

(a) Russia’s reform process to clearly separate its civilian nuclear and military nuclear facilities is completed and independently verified.

The Nuclear Cooperation Agreement requires that all facilities eligible to process, use or store AONM be included on Russia’s Eligible Facility List under its safeguards agreement with the IAEA – a designation that formalises such facilities as civil. To use these facilities for military purposes would not only be a breach of Russia’s agreement with Australia, but also its safeguards agreement with the IAEA.

ASNO’s discussions with international counterparts, the nuclear industry and other reporting, as well as discussions with Russian authorities, indicate that the separation of Russia’s civil and military nuclear sectors has been completed. Russia’s civil and military nuclear programs were not closely intertwined prior to the separation. They were operated by the same organisation, but many facilities, including most if not all power reactors, have been used only for civil purposes.

Furthermore, as noted in the “Safeguards address risk of diversion” section above, Russia ceased production of fissile material for nuclear weapons many years ago. This fact further reinforces confidence that AONM will be processed, used or stored only in civil facilities.

(b) IAEA inspections are implemented for Russian facilities that will handle Australian Obligated Nuclear Materials.

The Government has no scope to implement this recommendation, as prioritisation of safeguards resources is a matter for the IAEA. The Government accepts the judgment by the IAEA Secretariat (with full support of the IAEA Board of Governors) that the priority for safeguards inspection resources is countering “horizontal proliferation” – i.e. ensuring that no further states acquire nuclear weapons. To redirect IAEA resources to increased inspections in nuclear-weapon states is not supported by a risk-based assessment of safeguards priorities.

The IAEA will be conducting some inspections in Russia where there are particular safeguards advantages in doing so. For example, during 2008 the IAEA inspected fuel assemblies in Russia prepared for supply to the Bushehr power reactor in Iran. Furthermore, Russia is committed to having IAEA inspections at the Angarsk international enrichment centre. Russia and the IAEA are discussing the modalities of the necessary arrangements, and inspections are expected to commence in 2010. Russia has asked the IAEA to perform inspections at other facilities, but to date the IAEA has not done so, for the reasons outlined in the “Legal basis for safeguards” section above. In light of this particular JSCOT recommendation, Australia has also asked the IAEA to consider some additional inspections in Russia, but again the IAEA has shown no inclination to do so.

(c) The Government is satisfied that the Russian Federation is complying with its obligations under the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) noting that this treaty is scheduled for review in 2010.

The Government is confident that Russia takes seriously its obligations under the NPT.

The Soviet Union was one of the initiators of the NPT, and it and its successor state Russia have a long record of strong support for the Treaty. There have been no findings by the IAEA or NPT Parties of non-compliance by the Soviet Union or Russia with its NPT obligations. Russia’s commitment to the NPT was re-stated on 8 July 2009 in the G8 Summit in L’Aquila, Italy. The G8 members’ statement on non-proliferation included: “We underscore that the NPT remains the cornerstone of the nuclear non-proliferation regime and the essential foundation for the pursuit of nuclear disarmament, and reiterate our full commitment to the objectives and obligations of its three pillars: non-proliferation, the peaceful uses of nuclear energy and disarmament”.

As a nuclear-weapon state under the NPT, Russia has committed to several nuclear energy, disarmament and non-proliferation obligations, in particular:

Article I: Each nuclear-weapon State Party to the Treaty undertakes not to transfer to any recipient whatsoever nuclear weapons or other nuclear explosive devices or control over such weapons or explosive devices directly, or indirectly; and not in any way to assist, encourage, or induce any non-nuclear-weapon State to manufacture or otherwise acquire nuclear weapons or other nuclear explosive devices, or control over such weapons or explosive devices.

There is no evidence that Russia is in non-compliance with its obligation not to transfer nuclear weapons or other nuclear explosive devices to any recipient country. Following the dissolution of the Soviet Union in 1991, apart from Russia, three former Soviet republics – Kazakhstan, Belarus and Ukraine – were left with Soviet nuclear weapons on their territory.

These three states agreed to the return of these weapons to Russia, and joined the NPT as non-nuclear-weapon states.

Furthermore, there is no evidence that Russia is in non-compliance with its obligation not to assist, encourage or induce any non-nuclear-weapon state to manufacture or acquire nuclear weapons.

Russia is a member of the Six Party Talks whose aim is to disarm North Korea of its nuclear weapons, and reacted strongly to North Korea's May 2009 nuclear test. Russia is also active as a permanent member of the United Nations Security Council in international efforts to halt Iran's uranium enrichment and reprocessing-related activities.

Article III (2): Each State Party to the Treaty undertakes not to provide: (a) source or special fissionable material, or (b) equipment or material especially designed or prepared for the processing, use or production of special fissionable material, to any non-nuclear-weapon State for peaceful purposes, unless the source or special fissionable material shall be subject to the safeguards required by this Article.

In accordance with NPT obligations, Russia requires the application of IAEA safeguards to nuclear material it supplies to non-nuclear-weapon states.

Article IV (2): All the Parties to the Treaty undertake to facilitate, and have the right to participate in, the fullest possible exchange of equipment, materials and scientific and technological information for the peaceful uses of nuclear energy. Parties to the Treaty in a position to do so shall also co-operate in contributing alone or together with other States or international organizations to the further development of the applications of nuclear energy for peaceful purposes, especially in the territories of non-nuclear-weapon States Party to the Treaty, with due consideration for the needs of the developing areas of the world.

Russia fulfils its obligations under this Article through its extensive civil nuclear energy industry and its peaceful nuclear cooperation with other states. A key example is its creation of the international nuclear fuel cycle centre at Angarsk, which aims to provide security of supply for states requiring nuclear fuel, thereby removing any need for them to consider developing national enrichment capabilities.

Russia is also establishing a reserve of low enriched uranium for use by IAEA member states, which is likewise aimed at providing security of supply. The IAEA Board of Governors on 27 November 2009 welcomed this initiative, and authorised the IAEA Director General to conclude an agreement with Russia to facilitate such supply.

Article VI: Each of the Parties to the Treaty undertakes to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a treaty on general and complete disarmament under strict and effective international control.

Although there is debate about the pace and scale of the nuclear-weapon states' compliance with this Article, since the NPT entered into force the Soviet Union/Russia has made reductions to its nuclear arsenal and has contributed to the effective cessation of the nuclear arms race, beginning with the Strategic Arms Limitation Talks in 1972.

Under the verifiable 1991 Strategic Arms Reduction Treaty (START) between the US and Russia, Russia is estimated to have reduced its nuclear arsenal to about 15,000 warheads (6,000 strategic and 9,000 tactical), down from a cold war peak of about 45,000. Under the 2002 Strategic Offensive Reductions Treaty (SORT or the Moscow Treaty), Russia and the United States both agreed to limit their deployed strategic nuclear warheads to between 1,700

and 2,200 each by 2012. Furthermore, on 6 July 2009 Presidents Obama and Medvedev in a statement of joint understanding outlined their goals to reduce their strategic warheads even further to between 1,500 and 1,675 under a replacement to START, which expired on 5 December 2009. In a joint statement on 4 December 2009 Presidents Obama and Medvedev expressed their commitment to work together in the spirit of the START treaty following its expiration and their firm intention that a replacement treaty enter into force at the earliest possible date.

Russia ratified the Comprehensive Nuclear-Test-Ban Treaty in 2000. It has contributed responsibly to the development of verification arrangements for that treaty, including the establishment of the International Monitoring System.

Australia has been active in promoting nuclear disarmament and adherence to Article VI of the NPT, in various fora, including the Conference on Disarmament, the NPT preparatory and review processes and with nuclear-weapons states bilaterally. Australia will continue to do so, including with Russia.

(d) The Government is satisfied that Russia will not subsequently abandon this treaty or other nuclear treaties.

It is the view of the Australian Government that Russia will not abandon the NPT or other nuclear treaties, including the Nuclear Cooperation Agreement with Australia. The NPT is regarded by most states, including Russia, as the cornerstone of the international nuclear non-proliferation and disarmament regimes. Russia's national security interests are served by the NPT. The Treaty constrains global nuclear weapons capabilities, including Russia's major strategic rivals – notably China and the United States. The NPT stems the proliferation of nuclear weapons, thus decreasing the likelihood of regional nuclear wars, including on Russia's extensive borders, thereby increasing Russia's security. In addition, the NPT helps Russia's commercial interests by establishing the conditions under which civil nuclear technology can be supplied.

The Nuclear Cooperation Agreement states that it is to remain in force for an initial period of 30 years (Article XVIII(2)). After the initial 30 year period, the Agreement shall remain in force indefinitely and shall only terminate 180 days after receipt of a notice to terminate by either Party (Article XVIII(3)). In the event of a termination of the Agreement, the peaceful-use and safeguards obligations remain in perpetuity on any nuclear material already supplied. If Russia did act in a manner inconsistent with the Nuclear Cooperation Agreement, the Agreement provides that Australia has the right to suspend its supply of uranium and require Russia to take corrective steps (Article XV).

Further nuclear disarmament is vital – this is why the Government is committed to Australia playing a strong leadership role on nuclear non-proliferation and disarmament. This commitment is reflected in Australia's establishment, with Japan, of the International Commission on Nuclear Non-proliferation and Disarmament to reinvigorate international efforts on nuclear non-proliferation and disarmament. The Commission's report "Eliminating Nuclear Threats" was launched on 15 December 2009. The goal of nuclear disarmament will be best enhanced through constructive engagement with the nuclear-weapon states, including through nuclear cooperation agreements.

(e) Further consideration is given to the potential ramifications for this agreement of recent political events affecting Russia.

The Government expressed deep concern about Russia's military action in Georgia and its subsequent recognition of the "independence" of the Georgian regions of South Ossetia and Abkhazia. The Government supports the territorial integrity of Georgia and provided A\$ 1 million in assistance to help Georgia recover from the intervention. As the Committee notes, on 1 September 2008, the Minister for Foreign Affairs, Stephen Smith MP, said that when considering the Nuclear Cooperation Agreement, the Government would take into account events in Georgia, Australia's bilateral relationship with Russia and the merits of the agreement.

Since the publication of the Committee's report, there has been progress under a European Union mediated ceasefire agreement of 12 August 2008 and an additional agreement of 8 September 2008. Russian troops have withdrawn from positions deep within Georgia to the disputed regions. Several rounds of international discussions on stability and security in the region have been held and are on-going.

The Government welcomes these developments. The Government notes also that members of the international community have moved – bilaterally and multilaterally – to re-engage Russia on issues of common interest and concern. The US Administration of President Barack Obama has sought to "reset" relations with Russia, and President Obama visited Moscow on 6-8 July 2009. Negotiations on a European Union-Russia Partnership and Cooperation Agreement have resumed and EU-Russia Leaders Summits were held in May and November of 2009. NATO began a phased re-engagement with Russia and NATO foreign ministers met for a NATO-Russia Council ministerial meeting in Corfu on 27 June 2009.

The Government continues to monitor events in Georgia. A long-term solution to this long-running dispute remains elusive. Russia and Georgia remain in dispute over some elements of the agreements of August-September 2008. The maintenance of peace and security in Georgia will require ongoing commitment to the ceasefire agreements, including access by international monitors. The Government continues to call on Russia to exercise restraint, to respect the terms of the agreements, including in relation to its military presence in Abkhazia and South Ossetia, and to engage constructively in international discussions on stability and security.

(f) Further consideration is given to Article IX of the Agreement's 'State Secrets', and the Government is confident that this article will not undermine the intent of this agreement.

The Government is satisfied that Article IX of the Nuclear Cooperation Agreement does not undermine the intent of the Agreement.

Article IX does not compromise ASNO's right to information about the use of AONM in Russia. This Article reflects the position that already applies under Russian and Australian law, namely that nationally classified information is not exchanged under nuclear cooperation agreements such as this. Russia proposed this provision to satisfy its domestic requirements for cooperation agreements to be clear on the kind of information to which they apply. Furthermore, this Article contains reciprocal rights and ensures adequate and appropriate protection of Australian information.

During the technical workshop with Russian safeguards officials on 8-11 December 2008, the application of Article IX was discussed to confirm mutual understandings of how this article would apply.

(g) Further consideration is given to the justification for secrecy of ‘Material Unaccounted For’.

The Government is of the view that no further consideration of this matter is required. The term “material unaccounted for” (MUF) relates to the difference between recorded quantities and measured quantities of nuclear material, and is a normal occurrence in the verification of nuclear accounts. It is a nuclear accounting measure that results from factors such as differences in measurement values from different measurement equipment or small traces of nuclear material held up in processing equipment (e.g. tanks, pipes, vessels). It does not necessarily equate to material missing. MUF can be negative (i.e. the measured quantity is greater than the recorded quantity) corresponding to an apparent “gain”, or positive (i.e. the measured quantity is less than the recorded quantity) corresponding to an apparent “loss”. Examples of MUF include the accumulation of small amounts of nuclear material in processing facilities, reconciliation of estimated and measured quantities, and rounding of measurements. When ASNO concludes that all AONM is satisfactorily accounted for, or when the IAEA draws the conclusion that all declared nuclear material is accounted for, this means that the explanation for any MUF is accepted as being satisfactory.

The question of publishing data on MUF in other countries is not a decision that can be made by Australia, but rather a decision for each bilateral partner. It is generally not the practice of governments or nuclear operators to publish MUF figures (though ASNO publishes Australia’s figures in its Annual Reports), and Australia’s bilateral partners do not agree to ASNO publishing MUF figures for AONM in their jurisdiction.

There can be legitimate commercial sensitivity issues with publishing MUF figures for facilities. This matter was last considered more broadly in the context of the details of administrative arrangements as part of the Government-commissioned review of Australia’s role in the nuclear fuel cycle in 1983-85 (report to the Prime Minister by the Australian Science and Technology Council (ASTEC) – known as the ASTEC Report). The importance of respecting commercial confidentiality was reflected in ASTEC recommendation 15 that “the Australian Government seek agreement with its bilateral partners to make public the texts of the Administrative Arrangements, in such a way as to avoid adverse implications for physical protection and commercial confidentiality.”

In line with this ASTEC recommendation, at various times Australian officials have sought the agreement of bilateral partners to publish the Administrative Arrangements but agreement has not been forthcoming.

(h) The Australian Government discusses with the United States, United Kingdom, European Union, Canada and Japan, whether the problems of the past in relation to Russian nuclear material being stolen, have now been addressed satisfactorily.

Australian officials have had a series of discussions with officials from the United States, United Kingdom, the European Union, Canada, Japan, and the IAEA, to ensure the Government remains informed of the status of nuclear and radiological security in Russia, and will continue such discussions in order to ensure that the information available to the

Government remains current. The information gathered to date by ASNO indicates that the security risks to AONM in Russia are not significant.

The improvement in security of nuclear materials in Russia over the last decade is important here. It is the nature of nuclear security that it remains under ongoing examination, and in that regard Russia is not alone in continuing to make improvements in nuclear security practices. Furthermore, Russia has committed itself in the Nuclear Cooperation Agreement to meet the requirements of the Convention on the Physical Protection of Nuclear Material (CPPNM) and the security guidelines set out by the IAEA in protecting AONM. Russia has also deposited its instrument of ratification with the IAEA (on 19 September 2008) for the Amended CPPNM, making Russia the eighteenth state to do so out of the approximately 90 ratifications required to bring the Amended CPPNM into force.

Many of the countries with which Australian officials have consulted are also in the process of expanding, or have expanded nuclear cooperation with Russia. The US and Russia signed a nuclear cooperation agreement in May 2008. This was subsequently withdrawn from Congressional review in September 2008, but US President Obama and Russian President Medvedev announced in a Joint Statement on 1 April 2009 that the US and Russia would work to bring the agreement into force. Japan signed a nuclear cooperation agreement with Russia on 12 May 2009, and on 3 June 2009 Canada and Russia concluded an amendment to their nuclear cooperation agreement to expand the terms under which Canadian uranium can be used in Russia.

ASNO has also made use of the IAEA's Illicit Trafficking Database (ITDB). The ITDB is an information system that lists incidents across a broad range of categories (including discoveries, unauthorised activities, unintended transfers and trafficking) related to both nuclear and radioactive material. The ITDB spans 1993 to the present.

In September 2009 the IAEA published a fact sheet on its ITDB reporting the total number of incidents world-wide for the period 1993-2008. The vast majority of incidents over this period relate to radioactive materials (e.g. radioisotopes used in nuclear medicine), not nuclear material. Moreover, in most cases, including in Russia, the quantities of material involved were small (typically in the gram to kilogram range).

Furthermore, according to the ITDB only a small number of confirmed incidences of unauthorised possession – 15 in total from 1993 to 2008 – have involved materials of significant proliferation concern, namely HEU and plutonium. Of these, the ITDB reports only two incidents having occurred in Russia – one in 1993-94 involving 2.972 kg of HEU and the other in 1995-96 involving 1.7 kg of HEU¹.

Any theft of nuclear material is a serious matter – especially in the case of HEU or plutonium that could contribute to a nuclear explosive. Nuclear material of Russian origin has been found in the black market, however, this material is believed to have come from thefts in the 1990s, and importantly, not from the facilities that would be handling AONM.

AONM in Russia would be handled in civil facilities of the following types: conversion facilities; enrichment facilities; fuel fabrication facilities; and light water reactors. The AONM would be in forms that are less sensitive for nuclear proliferation:

1. The IAEA is currently investigating the origins of 8g of HEU found in the Netherlands in late 2009 in scrap stainless steel that had been shipped from or through St Petersburg.

- natural uranium – in the form of uranium ore concentrates and natural uranium hexafluoride;
- depleted uranium – in the form of uranium hexafluoride; and
- low enriched uranium (LEU) – in the form of uranium hexafluoride, uranium oxide fuel pellets, and fuel assemblies.

Natural, depleted and low enriched uranium is of low strategic value and will be mostly in forms that would be difficult to remove illegally – 400 kg drums of yellowcake, cylinders of uranium hexafluoride weighing between two and thirteen tonnes, and fuel assemblies, weighing around one tonne. Spent fuel has a high degree of “self-protection” against theft due to high radiation levels. As Australia has not given consent to high enrichment or reprocessing of AONM by Russia, in the foreseeable future AONM in Russia will not include material of high strategic value, i.e. HEU or separated plutonium.

While the quantities of Russian origin nuclear material described in the ITDB have been relatively small from the perspective of use in a nuclear weapon, there has been a considerable international effort to address the security of nuclear material in Russia over the last decade or more. In particular, the United States, European Union, Japan and Canada established substantial assistance programs in training, equipment upgrades etc – worth over \$US10 billion – to improve the state of nuclear security in Russia.

A summary of international viewpoints on some of the nuclear and radiological security programs in Russia are outlined below. These reinforce the strong non-proliferation and security benefits that have resulted over the years through cooperative engagement with Russia.

A report commissioned by the Nuclear Threat Initiative in 2007 concluded that nuclear security in Russia had dramatically improved since the mid-1990s as a result of US and other international assistance, and Russia’s own efforts. Further, then IAEA Director-General ElBaradei stated that “the cooperation between the Agency and Russia has also been exemplary in support of efforts for the application of international standards and guidelines to enhance the safety and security of nuclear power plants, research reactors and radioactive sources.”²

In a media release issued on 23 December 2008, the then Secretary of the US Department of Energy Mr Samuel W Bodman said that “US cooperation with Russia to reach the goals of the Bratislava Nuclear Security Initiative has made the world a safer place”. Secretary Bodman went on to say that he was “proud of the work we [i.e. US and Russia] have accomplished together, which has made an enormous contribution to global security. These efforts demonstrate our recognition of the grave threat posed by a terrorist’s acquisition of nuclear weapons and our determination to prevent this from happening.”

On 15 July 2009 NNSA reported that NNSA, Rosatom and the Russian Ministry of Defence had successfully completed by the end of 2008 all nuclear security upgrades to Russian civilian and military sites under a plan crafted in 2005 by then-US President Bush and then-Russian President Putin at a summit in Bratislava, Slovakia (known as the Bratislava Nuclear Security Initiative). The US and Russia have also reached agreement on principles to sustain security upgrades over the longer term.

2. Message of then DG IAEA, Dr Mohamed ElBaradei to the 50th anniversary conference at the Diplomatic Academy, Moscow 11 December 2007.

NNSA, through its *Second Line of Defense Core Program* has been also working with the Russian Customs Service to strengthen Russia's overall capacity to detect, deter and interdict illicit trafficking of nuclear and radioactive materials at its borders. In this, NNSA is working to equip all 370 Russian border crossings with radioactive detection equipment by the end of 2011. As of July 2009, equipment had been installed at 161 sites. Additionally, NNSA has also been working with Russian authorities since 1996 to improve training, equipment and procedures for guard forces accompanying nuclear material shipments.

Russia has recently reiterated its support for measures to strengthen the non-proliferation regime and nuclear security. The Joint Statement of 6 July 2009 by United States President Barack Obama and Russian President Dmitry Medvedev on Nuclear Cooperation included the following undertakings:

"The United States of America and the Russian Federation confirm their commitment to strengthening their cooperation to prevent the proliferation of nuclear weapons and stop acts of nuclear terrorism."

"To continue to improve the level of nuclear security and to combat existing and emerging threats, our experts will continue working to further improve physical protection systems at nuclear facilities and ensure that these improvements will be sustained in the long term."

"We express our mutual desire to expand capabilities to combat illicit trafficking of nuclear materials and radioactive substances at the borders of our countries."

Russia's cooperation with NNSA has not been restricted to improving nuclear security in Russia. Since the establishment of the NNSA's Global Threat Reduction Initiative (GTRI) in 2004, the NNSA and Russia have been working closely together to repatriate Russian-origin HEU fuel to Russia. Some recent actions under the GTRI include the return from Kazakhstan of 73.7 kg of Russian-origin HEU spent fuel, and the return from Romania of 53.7 kg of Russian-origin HEU spent and fresh fuel. The NNSA reported in a press release of 30 June 2009 that with the successful completion of the HEU removal from Romania, a total of approximately 862 kilograms of Russian-origin spent and fresh HEU fuel has been returned from Bulgaria, the Czech Republic, Germany, Kazakhstan, Latvia, Libya, Poland, Romania, Serbia, Uzbekistan and Vietnam.

Recommendation 2

The Committee reiterates its earlier recommendation, made in Report 81:

The Committee recommends that the Australian Government lobbies the IAEA and the five declared nuclear weapon states under the NPT to make the safeguarding of all conversion facilities mandatory.

For the reasons set out in the response provided to the recommendation in Report 81, the Government does not intend to action this recommendation.

Uranium conversion is not a primary point of proliferation concern, even less so in respect of nuclear-weapon states. The IAEA has not made safeguarding of conversion facilities in nuclear-weapon states a priority. Safeguarding of conversion facilities in nuclear-weapon states would not be an effective use of limited international safeguards resources.

The safeguards resource requirements would be substantial since most conversion facilities do not incorporate design features to facilitate application of safeguards.

Recommendation 3***The Committee recommends that Australian efforts to strengthen the resourcing of the IAEA be continued.***

The Government accepts this recommendation.

Australia's approach to budgetary issues in the UN and other agencies such as the IAEA aims to ensure that international organisations prioritise their work and deliver their outcomes in the most efficient and effective way. Australia works closely with other members of the Board of Governors of the IAEA to ensure the Agency is adequately resourced. To this end, at a special session on 3 August 2009, the IAEA Board of Governors approved a 2.7 percent real increase to the IAEA's 2010 budget along with a 2.7 percent price adjustment. The IAEA's regular budget for 2010 is Euro 318.3 million.

In addition to our annual assessed contribution to the IAEA's regular budget, Australia makes regular voluntary contributions to the IAEA's Technical Cooperation Fund and has also contributed to the Nuclear Security Fund.