

## **NUCLEAR PROLIFERATION ASSESSMENT STATEMENT**

**Pursuant to Section 123 a. of the  
Atomic Energy Act of 1954, as Amended,  
With Respect to the  
Proposed Agreement for Cooperation Between the  
United States of America and Australia Concerning Technology  
For the Separation of Isotopes of Uranium by Laser Excitation**

### **A. Introduction**

Section 123 a. of the Atomic Energy Act of 1954, as amended by Title XII of the Foreign Affairs Reform and Restructuring Act of 1998 (P.L. 105-277) provides that a Nuclear Proliferation Assessment Statement (NPAS) be submitted by the Secretary of State to the President on each new or amended agreement for cooperation concluded pursuant to that section. Pursuant to Section 123 a. the NPAS shall analyze the consistency of the text of the proposed agreement with all the requirements of the Act, with specific attention to whether the proposed Agreement is consistent with each of the criteria set forth in this subsection, and address the adequacy of the safeguards and other control mechanisms and the peaceful use assurances contained in the agreement for cooperation to ensure that any assistance furnished thereunder will not be used to further any military or nuclear explosive purpose.

There is a bilateral agreement for cooperation currently in force between the United States and Australia that provides the framework necessary for the types of civil nuclear commerce that have been characteristic of U.S.-Australian cooperation over the years. This agreement entered into force in 1981 pursuant to the updated requirements of the 1978 Nuclear Nonproliferation Act and does not expire until 2011. However, the type of cooperation that may occur between the United States Enrichment Corporation (USEC) and the Australian firm SILEX Systems Limited (SSL) (see below) is not authorized under the 1981 agreement. (SILEX stands for separation of isotopes by laser excitation.) Specifically, the 1981 agreement does not permit the transfer of sensitive nuclear technology (SNT) or restricted data (RD) as those terms are defined in U.S. law. USEC considered it likely that enrichment technology fitting these descriptions would be transferred to Australia if the early stage of the joint investigation of the SILEX process proved successful and the

decision were made to move to the next phase of cooperation. While the base technology being examined is Australian-origin, the commingling of U.S. laser enrichment experts with scientists from the Australian firm in the next phase of cooperation is expected to result in the transfer of SNT to Australia and/or the creation of classified enrichment technology entitled to protection as RD. To meet the requirements of both governments, it was decided to negotiate a separate agreement with a scope limited to the specific laser enrichment process under investigation by USEC and SSL. This approach was considered preferable to amending the 1981 agreement. For the United States, this means a new agreement pursuant to Section 123 a. that contains the authorization and controls required by law and policy to transfer SNT or RD.

This NPAS provides additional background on the cooperation between USEC and SSL, a brief overview of Australia's nuclear program and policies, an analysis of the relevant legal requirements and key policy questions, and conclusions.

## **B. Background**

### **1. USEC - SSL Cooperation**

USEC was established by law to take over the Department of Energy's uranium enrichment enterprise. Initially created as a wholly-owned U.S. Government corporation by the Energy Policy Act of 1992, it was transformed into a publicly-traded company without USG ownership on July 28, 1998, pursuant to the USEC Privatization Act of 1996. In that capacity, USEC attempts to stay on the cutting edge of new technologies that may have promise as an economic source of producing enriched uranium. The use of lasers to separate the fissile isotope of uranium (U-235) from the more abundant U-238 has been a topic of research and experimentation for more than twenty years. Different approaches to laser enrichment have been examined -- none has yet been commercialized. According to published reports, USEC spent more than \$100 million in each of FYs 96, 97, and 98 on development costs related to the demonstration and design of an enrichment facility based on the AVLIS process. (AVLIS is atomic vapor laser isotope separation.)

The SILEX process developed by SSL represents a somewhat different approach to laser enrichment, the details of which are protected as proprietary information. USEC has an agreement with SSL to explore the commercial potential of the

process. USEC purchased the worldwide exclusive right to evaluate the process for uranium enrichment purposes and according to published sources expected to spend up to \$10 million during FYs 97 and 98 on development activities. The joint USEC-SSL investigation began formally in mid-1997 pursuant to an authorization from the U.S. Department of Energy that established formal guidelines and boundaries to protect against inadvertent transfer of SNT or RD from U.S. personnel who were participating in the evaluation on behalf of USEC. The Australian Government has been supportive of SSL and has allowed the research at a facility within the protected confines of the Australian Nuclear Science and Technology Organization. The sole purpose of the joint investigation is to determine the commercial feasibility of establishing an enrichment plant in the United States using this technology.

## **2. U.S.- Australian Agreement for Cooperation on SILEX Technology**

As noted above, at some point in the USEC-SSL cooperation it is possible that technologies transferred to Australia would encompass SNT or RD. In light of that possibility and to be in a position to continue the cooperation with as little delay as possible, the Australian Government formally approached the United States in late 1996 about the possibility of negotiating either a separate agreement for cooperation or an amendment to the 1981 agreement. Not only was such an agreement necessary for the United States if there was to be cooperation in SNT or RD, but Australia also had to have in place a bilateral arrangement that ensured that peaceful use guarantees and Australian consent rights would apply to any commercial enrichment plant built in the United States using Australian technology.

Negotiation of this complicated agreement began in early 1997 and was conducted through diplomatic channels. Ad ref agreement was reached in early February 1999. The agreement contains all the conditions required by U.S. law including peaceful use assurances, IAEA safeguards, and no retransfer without U.S. consent. The provisions are described in more detail in Part C below, but among the more important features from the perspective of nonproliferation are the scope of the agreement and the provisions designed to protect against unauthorized disclosure of any SNT or RD.

Specifically, cooperation within Australia under the agreement shall be limited to research on and development of SILEX technology and not for the purpose of constructing a uranium enrichment facility in Australia. This scope is consistent with the intent of USEC-SSL cooperation. The negotiating history makes clear that the limitation in the agreement precludes even the construction of a pilot demonstration facility in Australia using technology controlled under the agreement.

The agreement also obliges the Australian government to impose any restrictions deemed necessary by the United States on access by Australian personnel to any SNT or RD. Annex A is an integral part of the agreement and provides considerable detail on the procedures and practices that must apply to determining who has access to such information in Australia and on the physical protection and control measures applicable to the information and relevant storage areas. The United States will have the right to visit and view firsthand the procedures to determine their comparability to those applied in the United States.

### **3. Australia's Nuclear Program and Nonproliferation Policies**

Australia's sizable uranium production is exported for use as reactor fuel in South Korea, Japan, Canada, Europe and the United States. The bulk of Australia's electricity is produced through coal and the economics are so favorable that nuclear power is not considered an option for 20-30 years. There is a major nuclear science and research establishment at Lucas Heights (south of Sydney) which includes Australia's only operational reactor -- the forty year old, ten megawatt HIFAR reactor which, *inter alia*, produces isotopes for research, agriculture, medicine and industry. This reactor uses high enriched uranium (HEU) fuel imported from the United States and United Kingdom. The United States has supplied no such HEU fuel for many years; the HIFAR is capable of being converted to the use of low enriched uranium (LEU) fuel but Australia has declined to exercise that option. Australian authorities have announced plans to build a new multipurpose reactor fueled with LEU by 2005 and to shut down HIFAR shortly thereafter. On the basis of that decision, the United States has agreed to take back spent U.S.-origin HEU fuel from Lucas Heights; the first such elements were transported to the United States in 1998.

Australia became a party to the Nuclear Non-Proliferation Treaty (NPT) in 1974 and all its nuclear activities are under safeguards administered by the International Atomic Energy Agency (IAEA). Australia strongly supported the successful U.S. effort to extend the NPT indefinitely in 1995. Australia reinforced its disavowal of nuclear weapons through sponsorship of the South Pacific Nuclear Free Zone Treaty to which it adhered in December 1986. Australian officials consulted closely with the United States through the negotiation of that treaty and its protocols to ensure that the outcome would be compatible with U.S.-Australia regional security cooperation. Australia has been a strong proponent of a Comprehensive Nuclear Test Ban Treaty for many years and played a critical role in the negotiation and approval of the CTBT by the United Nations in 1996. Australia ratified the CTBT in July 1998.

As a major supplier of natural uranium, Australia was one of the first nuclear exporting countries to strengthen its policies in the 1970s by restricting exports only to parties to the NPT. Australia has taken a similar approach in its bilateral nuclear supply arrangements to that of the United States by requiring its trading partners to accept comprehensive controls, including Australian consent rights over reprocessing, enrichment, and fall-back safeguards in the event that the IAEA is not applying or cannot apply safeguards for any reason. Australia is an active participant in the Nuclear Suppliers Group and Zangger Committee, the two multilateral groups establishing common rules for nuclear exports.

Another measure of Australia's commitment to nuclear nonproliferation is its sponsorship of an international panel which released in August 1996 the Canberra Commission Report on the Elimination of Nuclear Weapons. The Australian Government submitted the Report to the United Nations General Assembly that fall. The panel was chaired by Australian Ambassador Richard Butler, who later became the Executive Director of UNSCOM -- the U.N. commission responsible for eliminating Iraq's missiles and weapons of mass destruction. The United States did not agree with all the conclusions of the Report, and indeed on nuclear disarmament issues the United States and Australia occasionally differ. However, the Report did reinforce the continued importance of the NPT in preventing the spread of nuclear weapons if there is to be continued progress by the existing nuclear weapon states toward elimination of these weapons. The Report also endorsed

the practical realities that nuclear disarmament can only occur in stages and only through verification measures that can reassure states at each stage that further reductions can be made safely and securely.

### **C. Legal Analysis**

The proposed agreement meets all the applicable requirements of the Atomic Energy Act (hereinafter the Act) and the Nuclear Non-Proliferation Act of 1978 (hereinafter the NNPA). Section 123 a. of the Act requires new or amended agreements for cooperation to include the terms, conditions, duration and scope of the cooperation.

Article 2(1) of the proposed agreement states in general terms that the United States and Australia (the parties) shall cooperate in research, development and utilization of SILEX technology for peaceful purposes. Article 3(1) states that SNT and RD related to SILEX technology may be transferred. Article 4 states that sensitive nuclear facilities and major critical components for SILEX technology may be transferred for applications consistent with the agreement. Thus, the agreement allows cooperation only in research, development, and utilization of SILEX technology (which is defined as the process of laser enrichment invented by SSL and co-developed by USEC and SSL). Moreover, Article 2(3) makes clear that only research and development activity on SILEX technology is allowed in Australia, which is consistent with the intent of the cooperation which is to determine the feasibility of pursuing a commercial enrichment enterprise in the United States using SILEX.

Article 16 (2) states that the duration of the proposed agreement is thirty years from the date of its entry into force, extendable for additional periods by agreement of the parties and may be terminated by either party on one year's written notice to the other party.

Section 123 a. of the Act sets forth specific requirements that must be included in an agreement for cooperation. The most important requirement for purposes of this agreement is Section 123 a. (9), which covers agreements authorizing transfers of SNT. In such cases, any special nuclear material (e.g., enriched uranium) or sensitive nuclear facilities (e.g., an enrichment facility) produced or constructed on the basis of the transferred SNT must be subject to all the

requirements of Section 123 a. (i.e., safeguards, peaceful use assurances, physical protection, consent rights, right of return). Thus, while certain provisions in the agreement apply specifically to transferred SILEX technology whether SNT or RD, the guarantees and consent rights (Articles 5 -10) also apply to sensitive nuclear facilities and major critical components subject to the Agreement that are defined either as facilities and components directly transferred under the agreement or constructed on the basis of transferred SNT or RD. Thus, any SILEX enrichment facility or major critical component of a SILEX enrichment facility transferred under the agreement would be subject to these Articles, as would be any such facility or component built through the transfer of SILEX technology. Further, Articles 5-10 also apply to nuclear material used in or produced through the use of such facilities or components (the precise formulation differs depending on the provision). The following paragraphs briefly summarize the provisions of the proposed Agreement that are required by Section 123 a.

#### **1. Safeguards, Peaceful Use Assurances, Physical Protection**

Article 9 (1) stipulates that transfers to Australia under the agreement require the application of IAEA safeguards on all nuclear activities in Australia. Article 9(2) requires the application of safeguards to nuclear material used in or produced through the use of a sensitive nuclear facility or major critical component subject to the agreement. Article 16 (3) guarantees that this provision will remain in effect notwithstanding the termination or expiration of the agreement. (Article 16 (3) also applies to the other guarantees and consent rights set forth below.)

Article 8 prohibits the use for any nuclear explosive device or military purpose (i) of SNT or RD transferred under the agreement, (ii) of a sensitive nuclear facility or major critical component subject to the agreement, or (iii) of material used in or produced through the use of such a facility or component.

Article 7 requires each party to maintain adequate physical protection with respect to any special nuclear material used in or produced through the use of a sensitive nuclear facility or major critical component subject to the agreement. The measures to be applied are to be in accordance with IAEA recommendations.

## 2. Consent Rights/ Right of Return

Article 5(1) requires the parties to agree on any storage facility (i) that may contain high enriched uranium produced through a sensitive nuclear facility or major critical component subject to the agreement, or (ii) that may contain plutonium, uranium 233 or high enriched uranium recovered from uranium or enriched uranium used in or produced through the use of a sensitive nuclear facility or major critical component subject to the agreement. Any alteration in form or content of this high enriched uranium, plutonium, or uranium 233 is also subject to agreement of the parties according to Article 6(2).

Article 5(2) requires that the parties agree to any retransfer beyond the territorial jurisdiction of either party (i) of SNT or RD, (ii) of a sensitive nuclear facility or major critical component subject to the agreement, or (iii) of special nuclear material produced through the use of any such facility or component.

Article 6(1) requires agreement of the parties before reprocessing of any material used in or produced through the use of a sensitive nuclear facility or major critical component subject to the agreement. Article 6(2) also stipulates that such material may not be altered in form or content without agreement of the parties.

Article 6(3) requires that uranium used in or produced through the use of a sensitive nuclear facility or major critical component subject to the agreement may not be enriched to twenty percent or greater in the isotope 235 without agreement of the parties.

Finally, Article 10 grants either party the right to require the return (i) of SNT or RD transferred under the agreement, (ii) of a sensitive nuclear facility or major critical component subject to the agreement, or (iii) of special nuclear material produced through the use of such a facility or component, if either party terminates, abrogates or violates an IAEA safeguards agreement. The United States has the same rights if Australia detonates a nuclear explosive device following entry into force of the agreement.

### **3. Other Statutory Provisions**

Section 402 (b) of the NNPA stipulates that a major critical component of an enrichment, reprocessing, or heavy water production facility may not be transferred under an agreement for cooperation unless authorized in such an agreement. It is possible, although highly unlikely, that cooperation under this agreement could involved the transfer of a major critical component of a SILEX enrichment facility from the United States to Australia (e.g. for testing or repair or maintenance work). Article 4 states that major critical components for SILEX technology may be transferred under the agreement. Of course, any such transfer is more likely to be from Australia to the United States since the agreement could result in the construction of a SILEX enrichment facility in the United States.

#### **D. Policy Issues**

##### **1. Enrichment Technology Cooperation**

Enrichment and reprocessing are technologies with legitimate uses in a peaceful nuclear program, but also have a direct application in a nuclear weapons program. Any decision to authorize cooperation in such technologies should take into account the impact on nuclear nonproliferation goals.

Laser-based enrichment processes have always been of concern from the perspective of nuclear proliferation because of the dual-use nature of much of the equipment required and of the likelihood that the laser process would be easier and less costly than using other technologies (e.g. gaseous diffusion or centrifuge). Thus, a laser enrichment facility might be easier to build without detection and could be a more efficient producer of high enriched uranium for a nuclear weapons program. However, a number of factors mitigate any potential nuclear proliferation risk associated with the proposed agreement and support U.S. participation in investigating this technology.

The proposed agreement provides a framework for cooperation; it does not require that either Australia or the United States transfer SILEX technology and precludes the transfer of any Restricted Data or Sensitive Nuclear Technology not related to SILEX. The risk that transferred technology would be misused

is negligible under current circumstances -- given Australia's strong commitment to the NPT and other elements of the nuclear nonproliferation regime, including effective nuclear export controls. Moreover, the agreement does not permit the use of SILEX technology for the purpose of constructing an enrichment facility in Australia. The only enrichment facility that could be built pursuant to the agreement would be in the United States. The Australian government and SSL also have a strong proprietary and financial incentive to accord protection to the technology. Substantial economic benefits could accrue to the government and firm if USEC decides to commercialize the technology.

To help reduce the chance of diversion or theft in Australia or the United States, the agreement contains stringent provisions that both sides must honor with regard to the protection of any SNT/RD. In addition to the standard assurances regarding peaceful use and no retransfer without consent, Annex A of the agreement sets forth detailed protective measures and gives each country the right to visit the other to review the security system in place. This arrangement affords adequate opportunity for the United States to ensure the implementation of an effective program for protecting SNT/RD in Australia. Moreover, the Department of Energy is capable of ensuring adequate protective measures in the United States to guard against the inadvertent release or theft of SNT/RD controlled under the agreement.

Any change in circumstances over the thirty-year duration of the agreement that might affect the judgment of proliferation risk would be taken into account in connection with any future requests for transfers. Moreover, under U.S. law any material violation of the agreement for cooperation, including a failure to accord sufficient protection to transferred SNT or RD, would provide grounds for a cessation of cooperation with regard to transfers already approved.

The question might be raised whether, if SILEX leads to a breakthrough in low-cost enrichment, others might pursue this process with an accompanying nuclear proliferation risk. It seems likely that success with SILEX would renew interest in laser enrichment by nations with benign intent as well as by proliferants with an interest in finding an easier route to acquiring fissile material for nuclear weapons. However, any potential risk is offset by a number of factors. In the first instance, laser enrichment is a difficult process to master. Twenty-five years after the beginning of experimentation with

laser enrichment, there has yet to be a breakthrough that would translate the proven theory of separating uranium 235 isotopes using laser excitation into a viable commercial process. Moreover, even advanced nuclear nations have experienced considerable difficulty in solving the complex technical challenges associated with both the laser technology and the materials handling problems of laser enrichment techniques. While solving these problems would not necessarily exceed the capabilities of all proliferant nations, there are more proven and more widely available routes to acquiring sufficient fissile material for a nuclear weapon.

If, against odds, SILEX proves to be an easier and more cost effective approach to laser enrichment, it will be to the advantage of U.S. nuclear nonproliferation policy that USEC holds the sole right to commercialize the technology. The joint development of SILEX by USEC and SSL will ensure that the technology could not spread legally beyond Australia or the United States without the consent of the U.S. government. If the United States decided not to allow USEC and SSL to cooperate on SNT/RD, it is likely that the Australian firm would turn to other nations with experience in laser enrichment. Australia is a responsible nuclear exporter and collaboration with another nation on SILEX would likely be carried out with adequate attention to nonproliferation issues. However, the United States would lose any ability to exercise control over the technology and would be denied the opportunity to gain valuable information about the process, including its potential for commercialization.

Maintaining the United States' position as a major provider of enrichment services to other countries' nuclear programs promotes U.S. nuclear nonproliferation goals. It allows the United States to play an international leadership role in setting common nuclear export guidelines and provides important leverage over the nuclear program and policies of recipients of U.S.-enriched nuclear fuel. From that perspective, it is important that USEC continue to explore enrichment technologies with potential for commercialization to ensure that the United States remains at the forefront of leading suppliers of enrichment services.

The proposed agreement ensures that nonproliferation factors relevant to the development of SILEX are given adequate consideration. Article 13(1) calls for consultations at the request of either party on the design of effective IAEA

safeguards on a sensitive nuclear facility or major critical component subject to the agreement. Such consultations may also review the adequacy of national and multilateral export controls on any such facilities or components as well as on SNT/RD as defined in the agreement. It should be noted that the United States and Australia are members of the Nuclear Suppliers Group and as such have already undertaken a commitment to apply export controls on equipment, material and technology relevant to laser-based enrichment processes.

The United States has exercised great restraint over the last twenty-five years in cooperation with other nations in sensitive nuclear fuel cycle technologies such as enrichment or reprocessing. Given the proliferation sensitivity of these fuel cycle operations, it is in the interest of the United States to limit such operations to as few sites as possible and not to encourage the establishment of such facilities in countries not currently possessing them. There have never been any approved transfers of RD for civilian applications, nor have there been any transfers of SNT since that category of information was created by law in 1978. The proposed agreement is historic in that it would authorize cooperation in both RD and SNT. (The 1980 U.S.-Canadian civil nuclear agreement is the only other such agreement that addresses either of these technologies and it authorizes cooperation only in SNT.) Given the proliferation significance of these technologies, the United States should enter into such agreements only in rare circumstances and only with cooperating partners with exemplary nonproliferation credentials. Given all the circumstances of this case, the Department of State believes that the proposed agreement is compatible with U.S. nuclear nonproliferation policies and objectives.

## **2. Other Policy Issues**

Article IV of the NPT obliges its parties to engage in peaceful nuclear cooperation with other NPT parties so long as such cooperation is consistent with the basic principles of nuclear nonproliferation contained in Articles I and II of that Treaty. The United States and Australia have long benefited from bilateral civil nuclear cooperation and will continue to do so under the current agreement for cooperation, which does not expire until 2011. This new agreement on SILEX enrichment technology opens up a new area of civil nuclear cooperation with significant potential benefits for both parties. This cooperation is compatible with the goals of the

NPT and helps further to strengthen the foundation on which Australia and the United States can continue their close cooperation on nuclear nonproliferation.

Among the areas in which the United States and Australia are cooperating closely is the international response to India's and Pakistan's nuclear testing in May 1998. Australia promptly condemned these actions, imposed punitive measures on both countries, and joined the United States and many other nations in stressing the continued importance of the NPT and other key elements of the nuclear nonproliferation regime. Australia has also participated in the multilateral South Asia task force that has met periodically to address this matter. Australia has strongly supported U.S. strategy, which is to ensure India and Pakistan gain no positive international recognition or prestige for these actions and to keep pressure on both countries to meet the benchmarks established by the international community in U.N. Security Council Resolution 1172 (June 8, 1998).

Australia has been a strong supporter of IAEA safeguards and its cooperation with the IAEA in the application of safeguards in Australia has been exemplary. The IAEA is negotiating protocols to NPT safeguards agreements, which will significantly improve the safeguards system, particularly with respect to its ability to detect clandestine nuclear activities. Australia was one of the first countries to complete this process: its protocol was approved by the IAEA Board of Governors in September 1997 and ratified by Australia in December of that year. Exports to Australia under the new agreement for cooperation are likely to be limited to SNT/RD related to the SILEX enrichment process. The subsequent R and D activity in Australia utilizing this SNT/RD would yield at most only small quantities of enriched uranium. On the basis of its close familiarity with the IAEA safeguards system and its confidence in Australia's commitment to nuclear nonproliferation, the Department of State is confident that the IAEA safeguards to be applied to any nuclear material in Australia that may become subject to the new agreement for cooperation can provide reasonable assurance of its continued, peaceful non-explosive use.

Another policy factor in support of the proposed agreement is the long record of cooperation between the United States and Australia on nuclear export control matters. Both countries are members of the Nuclear Suppliers Group and the Zangger Committee and have worked to ensure their continued

effectiveness. Australia adopted full-scope safe guards as a condition of nuclear supply in 1977, the United States in 1978; and both have continued to support strict application of that supply principle. It is Australian policy to engage in nuclear cooperation only with parties to the NPT.

When assessing nuclear nonproliferation factors in connection with a civil nuclear cooperation agreement, it is appropriate to consider the credibility of a country's commitment to the NPT and what the future might hold. It is difficult to predict with absolute certainty what Australia's position will be on nuclear nonproliferation over the thirty year period of the agreement. However, there is no reason to expect Australia to reconsider its commitment to the NPT. Australia has a long and proud tradition of leadership in the international community in opposition to nuclear weapons, including support for their elimination. Australia is a stable democracy and there is no prospect of the kind of political change in Australia that would result in a fundamental reversal of its strong nuclear nonproliferation policy. Since the end of the cold war, nuclear weapons are playing a smaller role than ever before in international affairs. All of Australia's immediate neighbors in the South Pacific and Southeast Asia are parties to the NPT and none is suspected of seeking nuclear weapons. In contrast, nuclear weapons are found in other regions of Asia, e.g., China, Russia, India, and Pakistan. However, these states are thousands of miles from Australia and none presents the kind of security threat that would have the effect of altering Australia's long-held position of not seeking nuclear weapons. Further, Australia enjoys the security commitment contained in the 1951 ANZUS Treaty among the United States, Australia, and New Zealand.

## **E. Conclusion**

The Department of State supports the proposed agreement and cites the following reasons:

1. The agreement (a) meets all the requirements of U.S. law and policy; (b) includes special provisions to allow adequate protection of SNT/RD whether in Australia or the United States; (c) does not permit the establishment of an enrichment facility in Australia utilizing technology transferred under the agreement; and (d) allows for consultations on safeguards

and export control issues relevant to the development of SILEX.

2. Australia has an exemplary commitment to nuclear nonproliferation and can be expected to cooperate closely with the United States in protecting any SNT/RD transferred under the agreement.

3. The agreement supports U.S. nuclear nonproliferation goals by ensuring U.S. controls over SILEX technology should it prove commercially viable and by helping to preserve the U.S. share of the global enrichment market. Failure to conclude this agreement would likely result in the Australian firm turning to other nations with experience in laser enrichment with a resultant loss of U.S. ability to gain valuable information about and control over the technology.

4. While a successful U.S.-Australian collaboration on SILEX may lead to renewed interest in laser enrichment by proliferants, this risk is mitigated by a number of factors including the complexity of the technical challenge and the availability of more proven and more widely available routes to the acquisition of weapons-grade fissile material.

5. The agreement is compatible with the goals of the NPT, including Article IV which encourages peaceful nuclear cooperation among NPT parties, and helps further to strengthen U.S.-Australian cooperation on a wide range of nuclear nonproliferation issues.

6. The unique nature of the cooperation and the circumstances of this particular case justifies an exception to the United States' long-term policy of restraint in the transfer of SNT/RD.

On the basis of the analysis in this assessment statement and all pertinent information of which it is aware, the United States Department of State has arrived at the following assessment, conclusions, views and recommendations with regard to the proposed U.S.-Australian agreement for cooperation on SILEX technology:

1. The safeguards and other control mechanisms and the peaceful use assurances in the proposed agreement are adequate to ensure that any assistance furnished thereunder will not be used to further any military or nuclear explosive purpose.

2. The proposed agreement meets all the legal requirements of the Atomic Energy Act and the NNPA.

3. Execution of the proposed agreement would be compatible with the nonproliferation program, policy, and objectives of the United States.

4. It is recommended that the President determine that the performance of the proposed agreement will promote, and will not constitute an unreasonable risk to, the common defense and security; and that the President approve and authorize the execution of the proposed agreement.