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**AUSTRALIA-CHINA NUCLEAR AGREEMENTS:
JSCOT HEARING 25 OCTOBER 2006**

**RESPONSE TO QUESTIONS FROM FRIENDS OF THE EARTH
RAISED IN A SUBMISSION TO THE INQUIRY**

10 November 2006

Q1. Can ASNO comment on the accuracy of the 13/3/06 Australian Financial Review report which states that inspections of Chinese nuclear facilities were "very, very unlikely" with the quote apparently attributed to Australian negotiators involved in discussions with the Chinese regime over uranium exports. (Stephen Wyatt, All clear for uranium sale to Chinese, AFR, 13/3/06, p.1.)

We are not aware of any officials involved in the negotiations having made such comments, which are incorrect. As previously explained, in the case of nuclear-weapon states (NWS) the IAEA selects the facilities it wishes to inspect from a list of facilities designated by the state as being eligible for inspection. ASNO understands that in 2006 the IAEA is undertaking inspections at three facilities in China.

Q2.1 What are the minimum and maximum inspection options open to the IAEA. As a minimum, need the IAEA carry out any inspections whatsoever? As a maximum, does the IAEA have the right to maintain a permanent office in China or permanent on-site monitoring of particular nuclear facilities?

Q3.1 Can ASNO confirm that Chinese nuclear facilities which are theoretically subject to safeguards inspections are not necessarily inspected depending on whether the IAEA selects them?

Q3.2 On what basis does the IAEA make such selections?

These issues were discussed at JSCOT's Hearing of 25 October 2006 (see Hansard pages TR 33-35 and 37-40). In brief, it is for the IAEA to decide which facilities it will select for inspection from the eligible facility list under a NWS safeguards agreement. It is possible, but unusual, that the IAEA might not perform any inspections in a particular NWS in a particular year. The IAEA could decide to inspect every eligible facility, but that has never been done. A number of factors are taken into account in the IAEA's selection, including whether IAEA inspectors would gain valuable experience with particular facility types or processes, and the level of international interest in particular facilities (including by facility and nuclear material suppliers).

The importance of a NWS listing facilities as being eligible for safeguards inspection is that the state will not know if the facility will be inspected, so will have to operate on the assumption it will be selected.

Q2.2 Is China one of the small number of countries which has allowed video monitoring of its safeguarded nuclear facilities? Are any, some, or all of China's safeguarded facilities subject to video monitoring.

As discussed at the JSCOT Hearing of 25 October 2006 (see Hansard page TR40), video surveillance is a routine safeguards technique, applied in facilities in a large number of countries. ASNO has not asked Chinese authorities whether video surveillance is employed in China, but we expect this would be done at the safeguarded enrichment plants, and possibly other facilities.

Q2.3 Has the Chinese regime permitted environmental sampling and if so, have samples actually been taken?

Yes – ASNO is aware that environmental sampling is used by the IAEA at the Russian-supplied enrichment facility in China.

Q4.1 In the event of a suspected safeguards breach in China, what formal channels would the IAEA be required to pursue to redress the situation?

The procedures to be followed by the IAEA in dealing with a safeguards breach would depend on the severity of the breach, how it is discovered and the response to any request for clarification/correction. The IAEA has a detailed set of internal procedures that are automatically invoked in the event of the discovery of any serious problem with the application of safeguards at any facility.

In the event of a serious safeguards issue that cannot be resolved via normal procedures a report will be made to the IAEA Board of Governors (BOG) – if the BOG determines that the safeguards issue represents non-compliance with the safeguards agreement it reports this non-compliance to the United Nations Security Council.

Q4.2 ASNO's John Carlson states that "we would expect to be advised informally if any issues had arisen in the course of an inspection" in China. If no such informal advice was forthcoming, at what stage would Australia become aware of a suspected breach of safeguards agreements and would ASNO have any capacity to determine if AONM was involved?

The situation would depend completely on the circumstances and nature of any alleged breach or issue. Under Article X.4 of the Nuclear Material Transfer Agreement, conclusions that the IAEA has drawn from its verification activities that relate to nuclear material subject to the Agreement must be provided by China upon Australia's request.

The Administrative Arrangement under the Nuclear Material Transfer Agreement will require China to maintain a system of accounting for and control of nuclear material that will make it possible at all times to identify nuclear material subject to the Agreement.

Q5. Can ASNO provide a full list of facilities in China subject to IAEA safeguards and explain why these are not listed in the IAEA's 2005 Annual Report?

As discussed in the ASNO/DFAT responses to ACF questions raised on notice by Mr Kim Wilkie MP during the JSCOT hearing of 4 September 2006 (question 2), ASNO understands that the facilities that China has offered for the application of IAEA safeguards include French/UK, Canadian and indigenous power reactors, a research reactor and the Russian-supplied enrichment facilities. It is not the IAEA's practice to publish a list of eligible facilities in NWS, only those actually inspected in the year in question.

Q6.1 Why does the agreement allow for such a lengthy negotiation process — 12 months — in the event of a dispute?

Q6.2 Is an equally lengthy negotiation process set out in agreements with other countries receiving Australian uranium?

Both Agreements include a provision allowing the Parties to consult regularly on matters arising from the Agreements. If a solution to a dispute is not settled by negotiation, the Parties have recourse to a formalised dispute settlement mechanism. A twelve month time period to reach settlement is a reflection of both Parties' commitment to solve disputes amicably. It also ensures that all diplomatic channels have been exhausted prior to formal dispute settlement action.

It should be noted that under the Nuclear Material Transfer Agreement a supplier party has the right to suspend or cancel further transfer of nuclear material and to require the recipient party to take corrective steps if the recipient party does not comply with the Agreement or with IAEA safeguards.

The agreement with China is the only bilateral safeguards agreement with Australia that restricts the time allowed for dispute negotiations – in this case one year.

Q7.1 Can ASNO supply a list of all cases when Australia has refused third party transfers?

There have been cases where requests for transfer of AONM to third countries have been refused on the basis that the proposed recipient countries have not had safeguards agreements in place with Australia. A list cannot be provided as this is confidential between ASNO and the countries in question.

Q7.2 Can ASNO confirm that Australia has never once refused permission for plutonium separation (reprocessing) or high enrichment?

No requests for high enrichment have been received. There have been cases when ASNO was consulted about proposals to enrich to close to 20% for use in research reactors. ASNO advised the parties concerned that the 20% threshold should not be exceeded.

Australia has received requests for reprocessing consent, on a programmatic basis, in the case of five agreements: Euratom, France, Japan, Sweden and Switzerland. Reprocessing consent has not been sought under Australia's other agreements.

In the case of the five agreements referred to, Australia was prepared to give consent to reprocessing on a programmatic basis under conditions in which case-by-case consent would have been given for individual requests.

Q8.1 What possible reason could a uranium customer country have for being unwilling to have the details of Administrative Arrangements made public?

Q8.2 Why has DFAT/ASNO (or why have successive governments) bowed to the request of some countries to keep AA details secret?

Q8.3 Is China willing to have details of its AA with Australia published in full when it is completed?

These matters were discussed at the JSCOT Hearings of 4 September and 25 October 2006 (see Hansard of 4 September pages TR 22-24, and Hansard of 25 October pages TR 35-36).

Administrative Arrangements (AAs) are working level documents, of less-than-treaty status, setting out implementation procedures which support the operation of safeguards agreements. Some bilateral partners consider that the publication of AAs could result in the release of commercially confidential information. It is international practice to respect concerns of treaty partners regarding confidentiality of working level documents. As far as ASNO is aware, no US or Canadian AAs have been made public. ASNO has published a detailed description of the content of the AAs, and provided this to JSCOT.

Because ASNO's hands are tied by the position of other counterparts, we have not asked China if it is willing to make the Australia/China AA public.

Q9 Who must approve changes to Administrative Arrangements?

Administrative Arrangements (AAs) are between ASNO and ASNO's bilateral counterpart (in China's case this is the China Atomic Energy Authority), hence ASNO approves AAs consistent with Government policy and the bilateral agreement. Changes are by mutual decision of ASNO and its counterpart.

Q10.1 Can ASNO confirm that all of Australia's uranium exports to China could be used in nuclear weapons without even breaching the terms of the agreement — so long as an equivalent amount of nuclear material is transferred into safeguards.

The suggestion that China might divert Australian uranium to nuclear weapons as soon as it arrives in China is totally without substance. There is no reason for China to do this, not least

because, as mentioned elsewhere (see Q14.1), open source information indicates that China ceased production of fissile material for nuclear weapons some years ago.

The situation with Australian uranium received in China is the same as under any of Australia's other safeguards agreements, that is, as soon as the uranium enters the conversion stage it will be mixed with uranium from other sources and will lose its "national" identity. Once Australian uranium is received in China, it becomes "nuclear material subject to the Agreement". The Agreement sets out the principles for identifying "nuclear material subject to the Agreement". The arrangement under the Agreement whereby uranium receipts are substituted for by an equivalent quantity of converted natural uranium at an enrichment facility is fully in accordance with longstanding international practices of applying the principles of equivalence and proportionality, and is in accordance with the China/IAEA safeguards agreement.

Australia's policy is to ensure there is no net benefit to any military purpose from the supply of Australian uranium to the civil nuclear industry. The provisions of the Nuclear Material Transfer Agreement achieve this objective.

Q10.2 In relation to the transfer of an equivalent quantity of converted uranium in the form of uranium hexafluoride to the inventory of an enrichment facility that is under IAEA safeguards, can ASNO confirm that the IAEA may or may not actually verify that this has occurred depending on its process of selectively safeguarding facilities in Nuclear Weapons States?

After the conversion stage, Australian obligated nuclear material is limited to facilities that are eligible for IAEA inspection (and are on a list agreed by Australia). Accordingly, uranium hexafluoride will be placed on the inventory of a Russian-supplied centrifuge enrichment plant. Regular safeguards inspections are performed in accordance with the agreement between Russia, China and the IAEA.

Q11.1 Why has the IAEA not sought to revise its policy in relation to conversion facilities in Nuclear Weapons States?

As explained at the JSCOT Hearing of 25 October 2006 (Hansard page TR 37), the IAEA's new policy on conversion facilities is to counter the risk of undeclared enrichment in NNWS.

Q11.2 Has the IAEA's policy in relation to conversion facilities in Non-Nuclear Weapons States resulted in all such facilities being brought under safeguards?

None of the conversion facilities currently in operation was designed for the application of safeguards in-process. Determining the specific starting point for safeguards procedures depends on the process and design features of each facility. Developing safeguards approaches for these facilities is proving to be a time-consuming activity that involves extensive negotiation between the IAEA and the state involved. The IAEA has started these negotiations in each of the affected states, but it may take some time for these to be resolved satisfactorily.

Q11.3 Has DFAT/ASNO asked the Chinese regime if it would accept IAEA safeguards on conversion facilities?

Details of what was discussed during negotiations are confidential between the parties. However, the IAEA has not proposed to apply safeguards procedures in conversion facilities in NWS.

Q11.4 Has the Australian government considered making it a condition of sale that China's conversion plant/s be brought under IAEA safeguards?

The Australian Government is satisfied that the agreements apply all necessary safeguards conditions.

Q12. Why does ASNO believe China refuses to ratify the Comprehensive Test Ban Treaty?

China has not refused to ratify the CTBT. China has signed the CTBT and has submitted the Treaty to the National People's Congress (NPC) for review and approval. As yet the NPC has not completed the ratification process. Australia continues to encourage China to complete its CTBT ratification as quickly as possible. China supports UN General Assembly resolutions on the CTBT, including the 2006 resolution.

Q13.1 Does ASNO acknowledge uncertainty as to its assessment that China has "ample material" to produce more nuclear weapons?

Q13.2 Approximately how much fissile material does ASNO believe China has stockpiled?

The assessment of "ample material" is based strongly on demonstrable facts, such as the quantities of materials required for a weapons program, see page TR 29 of Hansard for JSCOT's Hearing of 4 September 2006.

ASNO is not able to discuss information in this area other than "open source" information. Estimates from well-regarded sources suggest that China has about 400 nuclear warheads, and has produced some 2-6 tonnes of weapons-grade plutonium plus 15-25 tonnes of weapons-grade uranium¹.

1. Joseph Cirincione et al. *Deadly Arsenals*. Carnegie Endowment for International Peace. Washington DC, 2002, page 145; David Albright and Corey Hinderstein, *Chinese Military Plutonium and Highly Enriched Uranium Inventories*, ISIS, 30 June 2005.

Q14.1 Has the Chinese regime "confirmed" that it has a moratorium on fissile material production for weapons?

China has not publicly confirmed whether it has a moratorium on fissile material production for nuclear weapons. As previously noted, open source information indicates China ceased production of fissile material for nuclear weapons some years ago.²

China supports negotiation of a multilateral Fissile Material Cut-off Treaty which would ban the production of fissile material for nuclear weapons.

Q14.2 Will the Australian government permit uranium sales to China in the absence of Chinese "confirmation" of a moratorium on fissile material production for weapons?

Q14.3 Will the Australian government suspend uranium sales if the Chinese regime resumes producing fissile material for weapons?

The Australian Government would permit sales to China on the basis of Australian Government policy, and the treaty-level commitments contained in the Nuclear Material Transfer Agreement. There is no Government policy that a moratorium is a pre-condition for supply of uranium.

Q15 Can ASNO advise as to the separation of military and civil fuel cycles in China?

As a NWS, China has some military nuclear facilities and some civil nuclear facilities. Facilities that have been placed under China's safeguards agreement with the IAEA are clearly civil. Only the latter facilities are eligible for use of AONM.

Q16.1 Is ASNO opposed to the stockpiling of plutonium?

Q16.2 Would ASNO recommend that permission for plutonium separation in China be revoked in the event of China's separated plutonium stockpile consistently increasing?

The Nuclear Material Transfer Agreement sets out conditions under which consent to reprocessing would be given in the future. Since a civil reprocessing program in China is some years away, China has not yet requested Australia's consent.

Australia's position is that states using plutonium for civil purposes should ensure it is stored and used under IAEA safeguards for exclusively peaceful purposes, and is subject to measures to reduce the risk of nuclear proliferation. China has accepted these principles through its adherence to the "Guidelines for the Management of Plutonium" coordinated by the IAEA.³

2. E.g. *Proliferation: Threat and Response*, US Department of Defense, January 2001, page 14.

3. IAEA document INFCIRC/549 of 16 March 1998.

Q17.1 Is ASNO aware of US government sanctions recently imposed by the US government against four Chinese firms for WMD-related exports?

Q17.2 Is ASNO aware that the same four companies were subject to sanctions in 2004 under the Iran Non-proliferation Act?

Yes. The United States applied sanctions to these companies for having supplied Iran with missile related and dual-use components. China is not a member of the Missile Technology Control Regime but has stated it is committed to controlling missile proliferation. These cases demonstrated the need for increased vigilance to ensure effective enforcement of China's controls on missile-related exports.

Q17.3 How does ASNO/DFAT justify the claim that "China has strengthened its domestic controls on the export of WMD-related items and further developed its enforcement procedures"? [Question 18 in ASNO/DFAT responses to ACF questions raised on notice by Mr Kim Wilkie MP during JSCOT hearing, 4 September 2006.]

This statement was based on action taken by China to bring its WMD-related export controls into line with international standards and the dialogue between Australia and China on export control issues – including in our capacity as chair of the Australia Group. In particular, we are aware that China is increasing its investment in export control enforcement capabilities and undertaking outreach to industry to raise awareness of proliferation risks.

The need for vigilance to ensure firms and individuals do not act in ways inconsistent with non-proliferation objectives is an issue for all countries. The nature of the problem was underscored by uncovering in 2004 of the AQ Khan nuclear procurement network which is believed to have sourced nuclear components from up to 30 companies in 12 countries, including in Europe and South-East Asia.

Q18.1 Does ASNO believe that AONM can be adequately safeguarded in the event of major, protracted social and political upheaval in China?

Q18.2 Is ASNO confident that the IAEA's inspection rights would be undiminished in the event of major, protracted social and political upheaval in China?

Q18.3 Are there examples in other countries of IAEA inspections continuing without being adversely effected by major social and political upheaval?

China accords the highest priority to the issue of social and political stability. China is working to ensure the long-term stability and prosperity of the country

Historically, even during periods of major disruption, China has devoted substantial internal security resources to ensure the protection of strategic assets and infrastructure. We would expect that China would take its responsibilities in regard to safeguarding all nuclear-related assets very seriously.

The UN has a detailed procedure for determining whether its staff would be exposed to unacceptable risk if activities were conducted in particular states. Some safeguards inspections were postponed during the collapse of Yugoslavia and others have been cancelled because of the security situations in particular African states. However, in each case that ASNO is aware of, the IAEA inspections went ahead at later dates after the security situation was resolved.