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Current Issues in Non-Proliferation Regimes Policy

Prepared for the Joint Economic Committee

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South Africa	(20)	R-440 Crocote	Landmobile SAM	1988		
	78	G-6 155mm	SPH	1990	1991	(25)
UK	12	Hawk-100	Jet trainer	1989		
USA	20	AH-64 Apache	Helicopter	1991		
	620	AGM-114A	ASM	1991		

For Abu Dhabi; part of deal worth \$340 m
Deal worth \$680 m incl Hellfire missiles
Arming AH-64 Apache helicopter

Conventions

The following conventions are used in the register

..	Data not available or not applicable
—	Negligible figure (<0.5) or none
()	Uncertain data or SIPRI estimate

Abbreviations and acronyms

AEW	Airborne early-warning (system)
AIFV	Armoured infantry fighting vehicles
APC	Armoured personnel carrier
ARM	Anti-radar missile
ARV	Armoured recovery vehicle
ASM	Air-to-surface missile
ATBM	Anti-tactical ballistic missile
MRCAs	Multi-role combat aircraft
MRL	Multiple rocket launcher
MSC	Minesweeper, coastal
SAM	Surface-to-air missile
ShAM	Ship-to-air missile
ShShM	Ship-to-ship missile
SPH	Self-propelled howitzer
SSM	Surface-to-surface missile
3-D	Three-dimensional

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INTRODUCTION

This report responds to a request for information on the current status of the international regimes that were established to control the proliferation of nuclear, chemical, and biological weapons, and missiles. Concern about the threats posed by the spread of weapons of mass destruction intensified with the end of the Cold War. Congress and the Executive branch began to focus more attention on proliferation issues. Many consider 1991 to have been a watershed year for non-proliferation policy. Events in Iraq, North Korea, Pakistan, Russia, and elsewhere suggest that proliferation is not likely to subside in the post-Cold War era. These events also highlighted some of the weaknesses of the non-proliferation regimes. This report reviews significant recent developments affecting U.S. non-proliferation policy for nuclear, chemical and biological weapons, and missiles.

U.S. leadership was essential in establishing and maintaining each of the non-proliferation regimes.

THE NUCLEAR NON-PROLIFERATION REGIME¹

The international consensus against the spread of nuclear weapons remains strong. The nuclear regime was strengthened when South Africa and France signed the Nuclear Non-Proliferation Treaty in 1991, and China indicated its intention to sign it. Also in 1991, Argentina and Brazil signed an inspection agreement that moved them closer to signing the Treaty of Tlatelolco. North Korea signed a safeguard agreement that is required for membership in the NPT, but has delayed ratification. The members of the NPT will decide in 1995 whether or not to extend the treaty. The NPT remains central to the nuclear regime, and distinguishes it from the chemical, biological, and missile regimes.

Other events during the past year have raised questions about the effectiveness of the nuclear regime in preventing nations such as Iraq, not part of the consensus against the spread of weapons of mass destruction, from acquiring nuclear weapons. A number of proposals have been presented and steps taken that seek to strengthen key components of the regime.

Supplier Controls

While no control system is leakproof, export controls seem an essential element of a regime which can limit access to critical materials and technology that could be used in an illicit nuclear weapons program. U.S. nuclear exports made only minor contributions to Iraq's nuclear program. Under the Atomic Energy Act of 1954 and the Nuclear Non-Proliferation Act of 1978, nuclear exports must be authorized by a bilateral agreement for nuclear cooperation, which the U.S. does not have with Iraq. Other countries, namely Germany, were mainly responsible for supplying Iraq with nuclear technology. However, U.S. firms exported a wide range of dual-use items to Iraq that were not controlled

¹Prepared by Zachary S. Davis, Environment and Natural Resources Policy Division

for nuclear uses. Some U.S. origin dual-use items were used by Iraq in its nuclear program. The acquisition and use of dual-use technology in indigenous covert nuclear weapons programs is a trend that has the potential to overtake traditional concerns about the diversion of civilian nuclear materials to military purposes.

Press reports also indicate that top Reagan and Bush Administration officials intervened with U.S. agencies to expedite loans and credits to Iraq despite objections that Iraq was a poor credit risk and despite strong evidence that Iraq was aggressively seeking to develop nuclear weapons.² U.S. assistance to Iraq -- like U.S. assistance to Pakistan after the Soviet invasion of Afghanistan -- illustrates the tension that exists between non-proliferation policy and other foreign policy objectives.

Steps have been taken at the national and international levels to prevent nations such as Iraq and Pakistan, who established aggressive international procurement networks, from gaining easy access to dual-use nuclear items. In the 102nd Congress, numerous hearings have focused on the Administration's non-proliferation policy and ways to improve it. In the House, H.R. 2755 would expand controls on dual-use nuclear exports. The Department of Commerce updated its Nuclear Referral List, but was criticized by Members of Congress for altering a list of exports to Iraq that it supplied to Congress.³ The Department of Energy was also criticized for allowing three specialists from an Iraqi nuclear research facility to attend a symposium on exotic detonation technology.⁴ The Central Intelligence Agency established a new center to focus exclusively on proliferation issues, and other agencies are reported to be allocating additional resources to proliferation. Authority for controlling nuclear exports and implementing non-proliferation policy remains dispersed among the Departments of State, Commerce, Energy, and Defense, the Nuclear Regulatory Commission, and the intelligence community.

On the diplomatic front, the U.S. has led an effort to expand the list of dual-use items controlled voluntarily by the multilateral Nuclear Suppliers Group (NSG), and to harmonize the NSG list with the NPT-related Zangger list. The major European nuclear suppliers followed the lead of Germany by adopting full-scope safeguards as a condition of supply. However, these positive

² Douglas Frantz and Murray Waas, "US Probes Records of Sales to Iraq," *The Los Angeles Times*, February 14, 1992; "Secret Effort by Bush Helped Hussein Build Military Might," *ibid*, February 23, 1992; "Secret Effort in 89 Helped Hussein Build Iraq's War Machine," *ibid*, February 24, 1992; "US Loans Indirectly Financed Iraq Military," *ibid*, February 25, 1992; "House Banking Committee to Probe Reports on Aid to Iraq," *ibid*.

³ R. Jeffrey Smith, "Subpoenaed Commerce Material Reported Altered," *The Washington Post*, Friday, July 12, 1991

⁴ John Fialka, "Congressional Probe Seeks to Determine if U.S. Assisted Iraq Nuclear Research," *The Wall Street Journal*, June 28, 1991, A5B.

developments may be undermined by alternative suppliers of nuclear technology such as China, and perhaps by a failure of the European Community to implement an effective common export control policy.

Sanctions

Several bills introduced in the 102nd Congress would impose sanctions on violators of U.S. nuclear non-proliferation laws. (S.1128, Glenn; S.309, McCain; H.R.2755, Markey; H.R.830, Stark) The President has resisted using sanctions to achieve non-proliferation objectives, and has in the past vetoed non-proliferation bills that in his judgement did not contain sufficient waiver authority to ensure Presidential prerogatives in foreign policy. President Bush recently vetoed a bill that would have linked the provision of MFN trade status to China with that country's non-proliferation credentials.

Military and economic aid to Pakistan remains cut off since 1990 because the President did not certify [as required by the Pressler amendment, section 620E of the Foreign Assistance Act of 1961] that Pakistan does not possess a nuclear explosive device. However, the State Department recently stated that it does not interpret the Pressler amendment to include commercial transfers. Consequently, U.S. firms continue to sell military equipment to Pakistan, including spare parts for Pakistan's F-16 aircraft.⁶ These aircraft reportedly comprise Pakistan's nuclear delivery system.⁶

The sanctions imposed on Iraq by the United Nations are still in place, but their effectiveness has been questioned. Iraq continues to resist inspections of its weapons of mass destruction by the U.N. Special Commission, and to evade the U.N. sanctions.⁷ Iraqi officials have complained bitterly about the sanctions and continue their efforts to have them lifted.

International Atomic Energy Agency Reforms

The IAEA is a unique aspect of the nuclear non-proliferation regime. The U.N.-affiliated agency performs in a dual capacity as the primary mechanism for verifying compliance with the NPT and as a provider of nuclear expertise to all of its 140 member states. Access to peaceful nuclear technology is an incentive for non-nuclear weapons states to join the NPT. Many interpreted IAEA's failure to detect Iraq's nuclear adventures before Operation Desert Storm as a failure of its safeguard system, despite the fact that the agency did not possess authority to conduct intrusive inspections of Iraq's covert nuclear weapons

⁵ Steven Greenhouse, "Senators Seek Full Cutoff of Arms to Pakistan," *The New York Times*, March 8, 1992, A12.

⁶ Robert Gates, Director of Central Intelligence, before the Senate Governmental Affairs Committee, Jan. 15, 1992.

⁷ John Goshko, "UN Charges Iraq with Violations," *The Washington Post*, March 12, 1992, A1.

program. If IAEA is to be relied upon, the Iraq experience highlighted the need to strengthen IAEA authority to conduct more intrusive inspections of a broader range of facilities. The Director General of the IAEA, Hans Blix, strongly supports such reforms and has asked member states to provide the agency with political support needed to expand IAEA authority, both directly and through the U.N. Security Council.

The agency is currently unable to expand its activities because it does not have sufficient funds. As demands on the agency continue to grow, its budget remains frozen by its members. Thus, new responsibilities including the denuclearization of Iraq, inspections of Argentina's and Brazil's nuclear facilities under a new safeguards agreement, inspections of South Africa's nuclear program since it signed the NPT in 1991, coping with environmental and safety hazards throughout Eastern Europe and the former Soviet Union, a possible role in safeguarding fissile materials from dismantled U.S. and Russian nuclear warheads, all come at a time when agency members including Russia and Ukraine have indicated that they are unable to pay their annual dues.

IAEA, which is often viewed as a front line defense against nuclear proliferation, operates on an annual budget of approximately \$200 million. The U.S. assessment is approximately \$27 million. The proposed reforms would require substantial additional resources, as well as political backing.

Conclusion: The Nuclear Regime

Many analysts view 1992 as a particularly important year for the nuclear non-proliferation regime. The U.S. can continue its leadership in sustaining the nuclear regime by improving the performance of its own non-proliferation policy, including its export control system. Critics charge that inconsistent implementation of U.S. non-proliferation policy can detract from its credibility. U.S. leadership may be essential to encourage the continued evolution of international norms of nuclear commerce and to solidify the consensus against nuclear proliferation. Emerging nuclear suppliers such as China may undermine those efforts.

Where supplier controls and other preventative measures fail, new policies need to be considered to discourage nations from exporting nuclear technology that may be used for military purposes without appropriate safeguards. Other policies may be needed to address nuclear proliferation where vital U.S. interests are threatened and where all other options have been exhausted. At present, the nuclear non-proliferation regime, the centerpiece of which is the NPT, is generally thought vital to U.S. and global security.

CHEMICAL WEAPONS NONPROLIFERATION⁸

It has been a decade since Iran's accusations of Iraqi nerve agent and mustard gas attacks first brought the issue of chemical weapons (CW) proliferation to international attention. The decade has demonstrated that stemming CW proliferation presents a unique and complex arms control challenge. International non-proliferation efforts have followed two tracks: (1) negotiating a global ban on chemical weapons, and; (2) informal cooperation among the members of the so-called Australia Group to strengthen export controls of CW-related technology and materials.⁹

Only the United States, the former Soviet Union, and Iraq have admitted having chemical weapons. Given the clandestine nature of most nations' attempts to develop these weapons, open source information on the extent of proliferation is very sketchy. In May 1991, U.S. officials testified before the House Armed Services Committee that the following 14 non-NATO/Warsaw Pact nations *probably* have chemical weapons: Burma (Myanmar), China, Egypt, India, Iran, Iraq, Israel, Libya, North Korea, Pakistan, South Korea, Syria, Taiwan, and Vietnam. They further identified the following countries that *may* possess chemical weapons: Indonesia, Saudi Arabia, South Africa, and Thailand. Soviet forces in the former East Germany, Poland, and Hungary stockpiled chemical weapons, but these countries report that all CW stocks were removed as Soviet forces withdrew from Eastern Europe.

Chemical Weapons Convention Negotiations

Since 1968, the Conference on Disarmament (CD) in Geneva has carried on negotiations to ban chemical weapons. The length of the negotiations testifies to both the complexity of the issues and, until recently, the unwillingness of major participants to compromise. Though some observers have been optimistic about successfully concluding negotiations in 1992, most believe a chemical weapons convention (CWC) cannot be realistically expected before 1993. Although the negotiations have received generally wide support, there are those who strongly believe that a CWC could be adequately verified or enforced, and consequently can only lead to a false sense of security.

The CWC would ban all development, production, stockpiling, and use of chemical weapons by its signatories. It would create an international technical secretariat to verify treaty compliance and to monitor technological developments that could threaten the treaty's integrity.

⁸ Prepared by Steve Bowman, Analyst in National Defense, Foreign Affairs and National Defense Division, 707-7613.

⁹ The Australia Group is a suppliers' group comprising 20 member states: the 12 members of the European Community, plus Australia, Austria, Canada, Japan, New Zealand, Norway, Switzerland, and the United States.

The primary stumbling blocks in the CWC negotiations remain verification and enforcement. Two facts present particular difficulty for verification: (1) the chemical production facilities are myriad and scattered throughout the world; (2) the technology and many of the materials which can be used to produce chemical weapons have legitimate, non-military uses.

Negotiators are currently trying to balance a number of concerns in their search for a verification regime. Among them, (1) every country must have the right to protect national security facilities unrelated to CW production; (2) the right of private chemical firms to protect proprietary information ("trade secrets") must be respected; (3) the verification regime cannot be so onerous as to restrict legitimate trade or generate insupportable costs, yet must be stringent enough to assure nations that their potential enemies cannot covertly produce chemical weapons. It is generally agreed that absolute verification is not possible. Consequently, the emphasis has been on being able to detect production or stockpiling of "militarily significant" amounts of chemical weapons.

The most recent U.S. proposal on "challenge" on-site inspections has created a good deal of controversy in Geneva. Until July 1991, the U.S. position would have permitted challenge inspections "anywhere, anytime" within 24 hours, and without the right of refusal. The Bush Administration abruptly altered this position last summer, tabling a detailed challenge inspection procedure which would allow the inspected country to delay access to the perimeter of a suspected site for up to a week, and even deny direct access to the site. The new position reflects the Administration's concern that sensitive facilities unrelated to chemical weapons (e.g. intelligence satellite facilities, aircraft research centers) could be targeted for challenge inspections. Co-sponsored by the United Kingdom, Australia, and Japan, the proposal has received strong criticism. Its opponents believe that delay in reaching a suspected site and the lack of direct access would preclude inspectors from detecting illegal activities. They stress the need for a verification regime that will assure nations that covert CW production is unlikely to escape detection. The experience of United Nations inspectors in Iraq has highlighted this issue. With virtually unlimited time, and no self-imposed constraints, U.N. inspectors have still not felt confident they have located all of Iraq's CW munitions and equipment.

Chemical Weapons Convention Issues

- How can an inspection regime be sufficiently intrusive to ensure detection of significant clandestine CW production or stockpiling, yet not jeopardize legitimate national security facilities or industrial trade secrets unrelated to CW?
- What sanctions should be applied to those nations who refuse to join the Convention, or who violate it after signature?

- What international assurances/assistance should be given to signatory nations who are threatened with possible CW attack by non-signatories?
- What will the costs be for a comprehensive and reliable verification regime and how shall these be apportioned?

Current Chemical/Biological Weapons Non-Proliferation Regimes

U.S. CW Non-proliferation Controls

In March 1991, President Bush, after pocket-vetoing a congressional non-proliferation initiative, tightened export controls over CW technology through Executive Order 12735. The order established three new export regulations which operate on the principle of "presumption of license denial." They establish requirements for export licenses, which the Department of Commerce will, as a matter of policy, deny. The first regulation calls for maintaining a list of "dual use" equipment whose export will require licenses if destined for certain proscribed countries.¹⁰ Export licenses can also be denied for any other country "whose actions have CBW-related implications." Secondly, the 50 chemicals on the Australia Group's proscribed list now require export licenses for any country not an Australia Group member. And finally, government licenses are required for technical assistance or construction related to facilities manufacturing any of the 50 chemicals.

These executive branch initiatives have been augmented by Public Law 102-182, the result of a lengthy congressional effort to strengthen export controls and establish a sanction regime against those individuals and countries who use CBW or aid proliferation.¹¹ The Bush Administration vetoed similar legislation in 1990, maintaining that mandating specific sanctions in statute infringed on the executive's foreign policy prerogative. By establishing the export control regime outlined above in early 1991, President Bush hoped to allay

¹⁰ These countries currently are: Afghanistan, Bahrain, Cambodia, Cuba, Egypt, India, Iran, Israel, Jordan, Kuwait, Lebanon, Libya, Myanmar (Burma), North Korea, Oman, Pakistan, Qatar, Romania, Saudi Arabia, South Africa, the former Soviet Union, Syria, Taiwan, United Arab Emirates, Vietnam, and Yemen

¹¹ If the President determines a person has aided CBW proliferation, the U.S. will neither procure or permit importation of goods and services from that person. If the President determines a country has used CBW, he must terminate foreign assistance, arms sales, foreign military financing, credit or financial assistance, and export of any items controlled for national security purposes. If, after three months, the country has not stopped using and pledged not to use CBW and has not allowed on-site inspections, the President must impose 3 out of 6 additional sanctions affecting multilateral bank assistance, U.S. bank loans, further import/export restrictions, diplomatic relations, and commercial aviation.

congressional concerns. Congress, however, promptly reintroduced non-proliferation legislation. Extensive consultations throughout 1991 resulted in the Administration accepting the more stringent measures embodied in P.L. 102-182.

P.L. 102-182, by statute rather than by regulation, requires export licenses for CBW-related goods and technology to: (1) countries that have no arrangement with the United States to control these items, and (2) to other countries designated by the Secretary of State.¹² In addition, the President is required to report annually to Congress on CBW proliferation and U.S. efforts to stem it.

International Non-Proliferation Controls

International CBW nonproliferation controls today are based on the efforts of the Australia Group. Until recently, the Group has focused almost exclusively upon chemical weapons, but is beginning to explore what efforts could be made to slow biological weapons development. The Group is an informal organization whose members have established a list of 50 CW-related chemicals and agreed to establish export controls on them. The United States is leading an effort to have each member also place controls on dual-use equipment. The imposition of export controls is entirely voluntary on the part of each nation, and their stringency and breadth of enforcement varies. The United States is working to have each member nation establish controls at least as stringent as its own. In some cases, this has been slow to occur because national governments have not had the same breadth of legal authority over international commerce enjoyed by the U.S. government. Australia Group members have also agreed to share information, including intelligence, on possible CBW-related transfers.

Biological weapons - their production, use, and stockpiling - were banned by the 1972 Biological and Toxin Weapon Convention, signed by most members of the United Nations. The Convention, however, has no provisions for verification or enforcement. There is increasing discussion about re-opening the Convention for amendment to address these deficiencies. Both the Reagan and the Bush Administrations have had doubts that the Convention could ever be adequately verified, and consequently have not pushed for its amendment.

CBW Nonproliferation Regime Issues

- Critics of the Bush Administration's export controls maintain that the Department of Commerce is too likely to grant export licenses in the interest of trade, and believe that the Departments of Defense and State should have the power to veto licenses.

¹² The Secretary of Commerce is to establish and maintain a list of relevant materials and technology.

- Export licenses are not now required for goods sent to members of the Australia Group. No notification to the U.S. government is required for such exports. Some consider this a major loophole, because goods could be shipped to a Group member nation, and then trans-shipped to a proscribed destination. In fact, many of the CBW-related materials for Libya and Iraq were transhipped through third countries.
- Some U.S. industrial representatives fear that delays caused by increased licensing requirements and potential license denials will hurt their international competitiveness. The Commerce Department's attempts to allay these fears with assurances of speedy license processing, encounters critics who assert that applications should be closely and thoroughly studied.
- With CBW proliferation continuing, despite the efforts of the Australia Group, some maintain that export controls can never really be effective internationally; that only a total verifiable and enforced ban on CBW has any hope of ending the threat. Others believe that, with chemical weapons particularly, the technology is so old (nerve agents were first developed in the 1930's) it will always be virtually impossible to prevent a dedicated nation from developing a chemical weapons capability.

MISSILES¹³

Ballistic missiles and cruise missiles are considered destabilizing weapon systems because of their inherent capability to strike with little warning and their possible use in a preemptive or preventive attack. Their long range, compared to artillery and some aircraft, and their high speed enable them to penetrate standard air defense systems and strike targets deep within an enemy's rear area. Missiles are especially significant as delivery systems for nuclear, chemical, or biological weapons. Third World missiles are not accurate, but they do not need to be if they are used to deliver warheads that cause death and destruction over a large area.

The United States recognized the dangers of missile proliferation in the late 1970s and stopped transferring weapons such as the Lance missile. In the mid-1980s, the United States began negotiating with other Western countries to adopt missile export controls.

The Missile Technology Control Regime

On April 16, 1987, after four years of discussions, the United States, Canada, France, the Federal Republic of Germany, Italy, Japan, and the United Kingdom established the Missile Technology Control Regime (MTCR). Eleven

¹³Prepared by Robert Shuey, Specialist in U.S. Foreign Policy

additional countries have joined the regime in subsequent years.¹⁴ These countries affirm they will restrict transfers of missile equipment and technology according to agreed guidelines.

The MTCR is a single, important element in a hierarchy of security, foreign, and economic policies of the partner countries. The United States and other MTCR Member governments use a variety of policy instruments, in addition to the MTCR, to fight missile proliferation. They also use means other than the MTCR in trying to achieve broader strategic objectives -- sometimes complementing MTCR goals and sometimes competing with them. Similarly, many factors in addition to the MTCR impinge on the decisions by other countries to acquire missiles or to abstain. Because so many factors and policy elements affect missile nonproliferation goals, success or failure cannot be fully credited to or blamed on the MTCR.

Many countries do not agree with a strong emphasis on nonproliferation export controls. Some developing countries see the Regime as discriminatory. They argue they should not be denied the resources necessary to deter aggression, defend themselves, or develop space programs and think it is their sovereign right to do so unopposed. Indeed, several nations have chosen to acquire nuclear, chemical, or biological weapons and missile delivery systems to provide deterrence or counterstrike capability.

Even Western industrial countries vary in their enthusiasm for the Regime. Some apparently believe it is an infringement on their sovereignty and see export control decisions as foreign policy or political matters rather than mutual security concerns. Countries that depend heavily on imports and exports for their economic or military strength are particularly reluctant to place restraints on trade.

The track record of countries that have tried to acquire missiles since 1987 indicates the MTCR has generally helped make the acquisition of missiles expensive, time consuming, and politically disadvantageous. In some cases, these measures have coalesced with other developments to block the transfer of missiles or key technologies. In other cases, the MTCR had no discernible effect, and new countries have acquired missiles or the capability to produce missiles.

One example often cited for the MTCR's effectiveness was the May 1990 announcement by the Argentine government that it had suspended the Condor II project because it increased instability in other regions, hurt Argentina's prestige, harmed its economy, and eroded foreign political support. Argentina had worked in cooperation with Egypt, and Iraq, on the development of the Condor II, and reportedly was assisted by some German, French, Italian, and British engineers and used American, French, and German technology. If Argentina had succeeded and had sold Condor II missiles or the production

¹⁴ In addition to the original seven, the following countries have become partners: Australia, Austria, Belgium, Denmark, Finland, Luxembourg, Netherlands, New Zealand, Norway, Spain, and Sweden.

technology to Iraq, casualties suffered from missiles in Saudi Arabia, Kuwait, and Israel in early 1991 would probably have been much higher than they were. The termination of the Condor program is considered a victory for the MTCR, but there were several other political and economic factors involved.

By the time the MTCR was set forth, Iran and Iraq were well on the path of missile proliferation. Both had acquired missiles from other countries and had programs to develop or modify missiles. Iran has been able to produce short-range missiles and free rockets with help from China and North Korea. Iraq's missile production facilities kept growing through the late 1980s and early 1990s. With the help of engineers from several advanced countries and the purchase of dual use equipment and materials from Western nations, Iraq doubled the range of its SCUD-B missiles. The modifications enabled Iraq to hit cities in Israel and Saudi Arabia. It is important that Iraq was unable to develop and mass produce the Condor II, but Iraq's ability to buy and improve missiles and produce chemical weapons contributed to regional instability.

North Korea is one of the most dangerous cases of missile proliferation. It has produced SCUD-type missiles, extended their range, and exported them to countries in the Middle East. North Korea is reportedly close to producing a nuclear weapon and is said to possess chemical weapons. The MTCR and other Western based regimes have been powerless to stop these developments.

China helped Pakistan build short-range missiles which Pakistan test fired in 1988. Pakistani officials have confirmed that Pakistan is able to produce nuclear weapons. The confrontation on the sub-continent is tense and some think South Asia is the most likely site for a nuclear war. The ability of the MTCR to impede the flow of Western missile technology may have delayed Pakistan from obtaining sophisticated, long-range, and accurate missiles but has not prevented it from acquiring missile technology from China.

While building this mixed record, the Regime has facilitated cooperation among Member countries in monitoring potential transfers of missile technology and sharing information on the nature of missile technology. Together, the Members worked to slow missile proliferation. Without such cooperation, the competition generated by economic self interests would have been stronger and might have lead to more proliferation. Several of the countries that have not yet been able to acquire missiles may have acquired them if the MTCR had not been formed, and programs to develop more accurate and longer-range missiles would probably have been more successful.

Issues

Many aspects of the MTCR probably do not match the characteristics of an ideal missile nonproliferation regime. Although it may be difficult or impossible to negotiate additional restrictions and enforcement mechanisms, several options are outlined below.

MTCR Members have recognized ambiguities and omissions in the guidelines and list of technologies and corrected many of them in a new annex in late 1991. From an absolutist point of view, the annex should include every item that could be of any benefit in the building of missiles, but many government officials and businessmen say such a list would be too cumbersome to enforce and too controversial to be acceptable to many national governments.

The guidelines of the MTCR call for restraint on transfers of missiles that could reach the United States or Europe from most developing countries (300 kilometer-range missiles), but do not limit shorter range systems. The guidelines limit transfers of missiles capable of delivering *large* warheads (500 kilograms) but not the compact nuclear or chemical warheads produced by the industrial powers. Reduced range and payload thresholds could improve the stability and security of Third World regions as well as the industrialized world. However, lower thresholds could also curtail transfers of defensive ballistic missile systems.

Ideally, the Regime might include a broader array of delivery systems, perhaps including air-launched standoff weapons, smart bombs, or precision guided munitions. Manned aircraft could be restricted in the same way that missiles are. Political reality would probably impose tradeoffs: the more items that were subject to controls, the fewer countries would be willing to participate, and the more difficult it would be to enforce such a regime.

The MTCR partners are trying to expand the Regime to include more nations. They believe it is important to win the compliance of the republics of the former Soviet Union, as well as China, and North Korea. The MTCR needs the cooperation of other potential suppliers, such as Argentina, Brazil, Egypt, India, and Pakistan.

Means to enforce the Regime would probably add to its effectiveness. If a company exports restricted goods, will it be punished? If a country defies the restrictions and allows missiles or related technology to be wrongfully exported, will it be held accountable? Some analysts suggest the MTCR be converted into a treaty, or that the Intermediate Nuclear Force Treaty be extended to all regions of the world. Treaties have force under international law while control regimes do not.

The MTCR may need an organization, staff, and standard practices for reviewing proposed exports and analyzing controversial cases. End user certificates could be employed and verified by partner nations to determine the ultimate destination of goods being exported. The MTCR might even have its own export licensing, verification, and enforcement systems. Most countries are not yet willing to sacrifice their national sovereignty in these areas. CoCom, the coordinating committee for multilateral export controls, is one organizational model that has been discussed. Others have suggested that the MTCR be adopted by the United Nations and transformed into one of its international agencies.

Additional positive incentives could be created to induce cooperation with the MTCR. More countries might participate if they received tangible economic or military benefits for doing so. It has been suggested that space cooperation, foreign aid, trade, and investments might be tied to cooperation with missile controls. Cooperation might also be induced if a country's security were enhanced through additional security assistance, missile defense systems, cooperative security agreements, arms control measures, or confidence building measures.

The nuclear, chemical, biological, and missile regimes should be carefully coordinated. Some say they should be merged into a single regime, but others believe the regimes are too distinct and that some may lose their ability to control proliferation if they were dissolved into one.

American critics of the MTCR suggest it should have more partners, more items controlled, more specific restrictions, and better enforcement. Supporters agree that more partners should be included, but contend the Regime has made important accomplishments, provides export restraints on a sufficient range of key technologies, and is necessarily flexible to allow national implementation of case-by-case analysis.

SENATOR BINGAMAN. The second panel is composed of spokesmen for three of our government agencies:

Richard Clarke is Assistant Secretary of State for Military-Political Affairs; James LeMunyon is Acting Assistant Secretary for the Bureau of Export Administration in the Department of Commerce; and Henry Sokolski is the Deputy for Nonproliferation Policy in the Office of the Assistant Secretary in the Department of Defense.

We're very pleased that you're here. If you would each summarize your statement, we'll include the full statement in the record.

Why don't we start with Mr. Clarke and just go across the table. We'll go as far as we can before this vote occurs, and then we'll probably wait for the second bell on this vote before we interrupt things.

Mr. Clarke, why don't you go ahead, and then I'll have questions after all of you have testified.

**STATEMENT OF RICHARD A. CLARKE, ASSISTANT
SECRETARY FOR POLITICAL-MILITARY AFFAIRS,
U.S. DEPARTMENT OF STATE**

MR. CLARKE. Thank you, Mr. Chairman. It's a pleasure to be back here and to review for you what we have done and what has happened in the last year since we were up here.

Let me try to summarize rather than read the statement, in terms of pluses and minuses in the last year, in the categories of missile proliferation, nuclear proliferation, CBW proliferation and general activities.

In missiles, on the plus side, we have expanded the membership of the MTCR. I chaired the meeting here in Washington in November. That also expanded both the guidelines and the annex of the MTCR.

What that really means is that the organization is now controlling more things than it did in the past, and there are more countries that are a member of it.

Also on the plus side, we have, in bilateral arrangements with a number of countries outside of the MTCR, achieved agreement that they will adhere to the MTCR guidelines, even though they're not members.

For example, Israel, in a bilateral agreement with the United States, agreed to adopt the MTCR export guidelines. China has also agreed bilaterally with the United States to adopt the MTCR guidelines. Russia says it's observing the MTCR guidelines. South Africa is in negotiations with us and has said it wants at the end of those negotiations to adopt the MTCR guidelines.

Argentina has told and given us on-site inspection assurances, and has told us that it has canceled its military missile program.

This means, Mr. Chairman, that in terms of countries producing missiles and exporting them around the world, because of the assurances we have now achieved in the last year from several potential exporters, there is only one country left in the world that is exporting missiles, and that's North Korea.

So, on the minus side of the last year, in missiles, we have a very real and new problem, and that is North Korea. If I could, Mr. Chairman, I'd like to show you a little bit of what the emerging North Korean missile problem is.

If you can see that from where you are, there are, in essence, three North Korean missiles on the market. There's the original Scud, which they have sold to the Middle East. There's the extended-range Scud C, which they are now selling to the Middle East. But most troublesome, there is the No Dong 1 missile, which has a range in excess of a thousand kilometers, and they are now attempting to sell this missile in the Middle East.

Even in Northeast Asia, this missile is a threat to stability.

On this chart, you can see the range from North Korea of this new missile. It covers virtually all of Japan and South Korea.

If North Korea goes ahead with this development, as we think it will, it will be in a position to deliver a missile attack throughout Northeast Asia, covering all of South Korea, covering virtually all of Japan.

That's a new and dangerous introduction in that area. If, as we suspect, they will also try to sell this new missile in the Middle East, it will also pose a threat to stability there.

That, I think, in terms of the last year's worth of developments, is the number one minus on the missile front.

SENATOR BINGAMAN. You say, if they go ahead with this development.

What is the status of it at this point? This is something that's being developed, but has not yet been developed, or it's not in production, or what?

MR. CLARKE. It is a missile that is very far along in its research and development. We expect it to be flight-tested early this year. And we expect that it could be sold to the Middle East early next year.

SENATOR BINGAMAN. Tell me the name of it again.

MR. CLARKE. We have named it after the facility where they test these things, which is—and my Korean pronunciation might not be right—but it's spelled N-o

D-o-n-g. And we anticipate, based on what we now know, that its range will be in excess of one thousand kilometers.

SENATOR BINGAMAN. Okay.

MR. CLARKE. If I can move quickly, then, to the nuclear front, and again, look at the pluses of the last year.

Beginning with Iraq, the special commission and the IAEA made major penetrations of the Iraqi program, discovered a lot that we did not know before, and I think they have successfully, at least for now, disrupted that program and put it on halt.

There's a lot that has to be done, including the destruction of the facilities, such as the enormous Ela Thier plant near Baghdad. The United States believes that the IAEA and special commission should totally destroy that plant.

That's being discussed now in the United Nations.

But we have stopped the Iraqi nuclear program for now, and they were very close to having achieved a nuclear weapon.

In terms of adherence to the nuclear proliferation treaty, the last year has been a very good year. A number of the countries that for a long time we wanted to get to sign up have done so. And that includes South Africa. It includes China, France and North Korea.

Another thing we've been pushing for a very long time, we achieved in the last year, and that is the agreement of major supplier states to condition their export on full-scope safeguards for all facilities in the recipient country.

That's been our policy for a long time. But a number of the major suppliers hadn't agreed until now. And in the last year, we've achieved agreement on that policy from the United Kingdom and France. Russia has told us it will put that policy in effect later this year.

That's major progress.

In the IAEA, we've achieved, I think, more progress than at any time in recent years by the director general proposing special inspections.

As you know, Mr. Chairman, in the past, the IAEA only inspected that which countries declared and allowed to be inspected. Now, under Director General Blix's new policy, the IAEA will be able to inspect other facilities that were not declared to be nuclear on a challenge-suspect site basis.

That's a major breakthrough. And it would have allowed us, had we had that authority before, to have known more about the Iraqi program than we did.

There have also been major bilateral agreements in the last year. Argentina and Brazil have made a bilateral agreement on nuclear weapons, and the two Koreas have made a bilateral agreement on nuclear weapons.

The nuclear suppliers group and the Zangger Committee have expanded their list of the dual-use exports that they control.

On the minus side, I would point to three things.

One, bilateral agreement between the Koreas has not been implemented. And North Korea has stalled both its implementation and the implementation of IAEA inspections.

Two, there is every reason to believe that Iran is now serious about a nuclear option. Based on its procurement patterns, we have good reason to doubt that it intends to adhere fully to the NPT.

And three, the subcontinent. The United States has proposed a five-power conference between India, Pakistan, China, Russia and the United States that would focus on arms control in the subcontinent.

Unfortunately, India has not yet agreed to participate.

In the area of CBW over the last year, on the plus side, the treaty to ban all chemical weapons has moved substantially along. The President has given us a goal of concluding that treaty this year, and I am optimistic that that might be done.

Also, in the last year, we had the biological weapons treaty review conference. For the first time really, that conference looked at the issue of monitoring and inspection and transparency. And it agreed to form a group which will meet later this year to look into that issue.

The Australia Group, which controls chemical weapons precursor exports, expanded its scope to cover both dual-use equipment and biological weapons.

On the minus side, in the area of CBW, Libya, Iran, Pakistan, Syria and other countries continue to pursue a policy of acquiring CBW weapons.

Finally, in the overall area of proliferation, rather than looking at one aspect of it, we have had progress in the creation by the five permanent

members of the Security Council of a five-power group on proliferation. That group has made substantial progress. It has agreed on guidelines for the export of conventional arms. It is well along in agreement, which, I hope, will come later this spring on the guidelines for the export of items related to proliferation of weapons of mass destruction.

In the former Soviet Union, we have achieved agreement in principle with all of the republics that they will work to stop proliferation. We are working with them to teach them how to do that because, as you know, Mr. Chairman, the way you stop proliferation is by having good intelligence, good enforcement, good export controls.

All of the republics have asked us to work with them to develop those things. We are sending teams out to do that with them. Our European allies, our Japanese and Australian allies, are participating in that effort.

With the creation of the science and technology center, we are also beginning to address the possibility of brain drain from the former Soviet Union. And despite numbers of reports in the press of possible leakage from the Soviet Union, we have no evidence yet of a major leak of a weapon of mass destruction from the former Soviet Union.

Overall, Mr. Chairman, I think if you look at those pluses and minuses as I've laid them out, we are very much on the plus side. We've made a lot of progress in the last year all across the board, but there's a lot more work to be done.

[The prepared statement of Mr. Clarke follows:]

PREPARED STATEMENT OF RICHARD A. CLARKE

Mr. Chairman:

Thank you for the opportunity to testify before this Committee on the subject of proliferation and arms trade.

In the field of proliferation, 1990 was the year of living dangerously--the dangers of proliferation were brought home to the international community by the Iraqi invasion of Kuwait. 1991 was the year of working feverishly--the international community took the lessons of Iraq and mobilized itself to build higher barriers to proliferation in all areas. Momentum in 1992 remains high. I am confident that many of the positive steps initiated in 1991 will be completed this year, and some new ones will be taken.

The record of the last year has been one of substantial achievement:

- U.S. chemical and biological weapons material controls introduced unilaterally last year as part of the Enhanced Proliferation Controls Initiative have been adopted or are on their way to adoption by at least 26 other countries;

- We are bearing down toward the finish line for the Chemical Weapons Convention negotiations.

- The 3rd Review Conference of the Biological Weapons

Convention last September adopted additional confidence-building and compliance measures.

- France has announced its intention to join the Nuclear Non-Proliferation Treaty. China deposited its instrument of ratification in London on March 9. The Baltic States, South Africa, and a number of other African states also have joined the NPT. Argentina and Brazil have concluded a full-scope safeguards agreement with the IAEA and have announced their intention to move toward adherence to the Treaty of Tlatelolco.

- Substantial progress has been made on encouraging additional suppliers to require full-scope IAEA safeguards as a condition for any significant new nuclear supply commitment.

- The twenty-seven members of the Nuclear Suppliers' Group have developed controls for nuclear dual-use items.

- The NPT-Zangger Committee expanded controls on equipment related to the production of heavy water.

- Regarding missiles, we have strengthened both multilateral and unilateral controls:

- * The Missile Technology Control Regime has acquired two new member states, Sweden and Finland, for a total of 18. Others have decided to observe its guidelines.

- * The MTCR agreed on the desirability of extending the scope of the Regime to missiles capable of delivering all types of weapons of mass destruction.

- * As a result of our Enhanced Proliferation Controls Initiative, licenses will soon be required for any exports to missile projects in the Middle East and in certain other countries of proliferation concern.

- During the year we have devoted increasing attention to the potential proliferation risk from Eastern Europe and the former Soviet Union. The Eastern Europeans, already committed to the international nuclear non-proliferation regime, now appear poised to meet Western standards on chemical, biological weapons and missile proliferation, and we are working with the FSU states to deal with the "brain gain" problem.

- The President's Arms Control in the Middle East (ACME) initiative is a major first in that it has secured the cooperation of the five major arms suppliers to the Middle East in a regime of conventional arms constraint. The process will not be easy, but we are making progress. As we envision it, we will be able to influence potentially destabilizing arms transfers before they happen--to act instead of react.

Chemical And Biological Weapons

In 1991, the Administration introduced regulations under the Enhanced Proliferation Controls Initiative (EPCI) which expanded U.S. export controls on chemical weapons precursors and added controls on dual-use chemical and biological weapons-related equipment, including whole chemical plants that make CW precursors. In addition, under EPCI, a license is required when a

U.S. exporter knows or is informed by the U.S. government that any export is destined to a chemical or biological weapons or missile project. Other assistance by a U.S. "person"—including citizens and companies—to such a project also requires a license. The Government now has the power to proscribe such assistance and sanction those who fail to seek a license.

Multilateral Efforts

A year ago EPCI was a lonely U.S. initiative. Today it is an international reality. We spent much of the past year securing multilateral support for EPCI-like controls.

* I reported to you last year that 11 of 20 Australia Group members had adopted controls on all 50 Australia Group precursors.

* Sweden and Finland have now joined the Australia Group and Australia Group members now control 50 chemical weapons precursors. The score now is 22 out of 22.

* A year ago the U.S. and a few other countries had adopted controls on dual-use chemical equipment. We are now in the process of nailing down agreement on equipment controls to which almost all Australia Group members have subscribed.

* A year ago, the Australia Group had just scratched the surface regarding biological controls. We now have a list organisms, toxins, and equipment recommended by Australia Group experts for control. We hope that this BW control list will be approved at the June 1992 Australia Group plenary.

The extension of CBW export controls outside the Australia Group in the past twelve months has been encouraging. Poland, Hungary, Czechoslovakia, Romania, and Bulgaria are in the process of applying controls comparable to those of the Australia Group. Israel has adopted controls on all 50 CW precursors. China has also adopted some precursor controls, as, to a lesser extent, has India.

Our Australia Group agenda includes expanding Group membership, completing work on control lists, and harmonizing implementation of controls.

Chemical Weapons Convention

The long-term solution to the problem of chemical weapons is a global, verifiable CW ban. Last May President Bush called for accelerating the pace of the Chemical Weapons Convention (CWC) negotiations in the Geneva Conference on Disarmament (CD) and achieving an agreement at the earliest possible date. At the same time, the U.S. made substantial concessions on major issues which had been sticking points in the talks. Subsequently, the Conference on Disarmament set a 1992 target date for completion of the Convention and has redoubled work on the convention. The United States is working vigorously to solve the relatively few major outstanding issues, notably on verification, with the aim of getting a treaty finished as soon as possible this year.

Biological Weapons Convention Review Conference

The Biological Weapons Convention has become an increasingly strong international standard against biological weapons. In the last year, the Administration made a strong push for all countries to join the Convention. Since last year, 10 additional countries have done so.

The Third Biological Weapons Convention Review Conference, which met September 9-27 in Geneva, also produced notable positive results, in large part reflecting U.S. proposals for strengthening the implementation of the Convention. The Revcon adopted eight new or revised confidence-building measures designed to enhance openness about biological research activities. Perhaps the most interesting CBMs are those requiring the declaration of past offensive biological weapons programs and of past and present biological defense research programs.

The review conference also agreed to a governmental experts' meeting, which will begin on March 30, 1992, to identify and examine potential Biological Weapons Convention verification measures from a technical and scientific standpoint. Although the U.S. has not been able to identify any verification measures we believe would be effective, we think the verification issue deserves a fair and open-minded technical review.

The RevCon also agreed on measures designed to improve adherence and compliance and endorsed the principle of biological export controls to help prevent proliferation. It also urged all parties to adopt penal legislation against illegal BW activities, to apply to a country's citizens

wherever they might be. The Revcon elaborated the procedures for raising compliance concerns and obligated a party to provide a specific and timely response to concerns raised.

Nuclear

Several important steps to further nuclear non-proliferation were taken in the past year.

China has acceded to the NPT and France is expected to do so soon. South Africa, Tanzania, Zambia, Zimbabwe, Estonia, Latvia, and Lithuania have also adhered to the Nuclear Non-Proliferation Treaty (NPT) since the beginning of 1991. Russia has assumed the obligations of the former Soviet Union under the NPT, and prospects are favorable for the other newly-independent states of the former Soviet Union to join the NPT as non-nuclear weapons states.

Other important nuclear-related agreements have been completed.

Argentina and Brazil entered into a trilateral agreement with the IAEA establishing full-scope nuclear safeguards at their facilities. South Africa promptly completed its NPT safeguards agreement. Algeria has placed its Chinese-origin research reactor under safeguards, and Syria has recently completed an NPT full-scope safeguards agreement with the IAEA.

While North Korea has signed its IAEA safeguards agreement, it has still failed to fulfill its NPT obligations and we are greatly concerned about its continued stalling. Prompt and full implementation remains crucial. North and South Korea have agreed to a joint declaration to establish a non-nuclear Korean peninsula, with a mutual inspection regime. Here again the key will be effective implementation.

There has been significant progress over the past couple of years on a key nuclear export policy long supported by the U.S., i.e. requiring full-scope IAEA safeguards in non-nuclear-weapons states as a condition for any significant, new nuclear supply commitment. Among the several major nuclear suppliers which have now adopted that policy are Japan, Germany, France, and the UK. Russia and China have not yet accepted this position, but Russia has stated it is considering the issue.

We expect the Nuclear Suppliers Group will soon upgrade its trigger list and agree upon a list of dual-use nuclear related equipment and technology for common controls. This will be a major step forward in impeding access by proliferant countries to technology potentially relevant to nuclear weapons.

The NPT Exporters or Zangger Committee recently clarified its controls on heavy water production plants by itemizing equipment and components of such a facility which should not be exported in the absence of a commitment to apply IAEA safeguards.

The IAEA Board of Governors, spurred by the example of Iraq's clandestine nuclear program, confirmed the Agency's authority to carry out "special inspections", whereby it can inspect nuclear activities at any place in a country, not just at declared nuclear facilities.

Missiles

In the last year, the Missile Technology Control Regime has added two more members—Finland and Sweden, bringing membership to 18. This is a dramatic increase from the original seven partners in 1987. Other countries have expressed interest in joining.

Various non-member countries have recently taken steps to bring their practices into conformity with the Guidelines and the Annex, which lists sensitive missile-related equipment and technology. In 1991, Argentina announced the termination of its ballistic missile program and an intention to adopt the Guidelines, and Israel announced and took steps to implement its adherence to the Guidelines. In keeping with an agreement reached during Secretary Baker's November visit to Beijing, China on February 22 announced that it would observe the MTCR guidelines and parameters in return for the lifting of U.S. missile sanctions imposed on China in June 1991.

At the MTCR's fifth Plenary meeting, held in Washington last November, the Partners approved a revised Equipment and Technology Annex of controlled items and agreed on the desirability of extending the scope of the MTCR Guidelines to missiles capable of delivering any weapons of mass destruction, including chemical and biological as well as nuclear warheads. Technical experts from the Partner nations will meet in April to work out how to implement this extension of the Guidelines. Several other Partner countries, including the UK, Germany, and Switzerland, have tightened their controls on exports of sensitive missile technology.

Regulations pursuant to the Enhanced Proliferation Controls Initiative (EPCI), published in August 1991, requires licenses for all exports that a U.S. exporter "knows or is informed" are destined for MTCR-covered missile projects in the Middle East and certain other countries. A list to implement this part of the regulation will be published soon.

Sanctions can be unwieldy, and difficult, even painful, to apply. Still, used judiciously, they have proved a useful way of securing cooperation on non-proliferation. After the Congress passed missile and chemical/biological sanctions legislation, the U.S. provided detailed information on the new laws to a wide range of foreign countries. This in itself caused some countries to review their export control systems. The actual application of sanctions got the undivided attention of the affected countries and in some cases spurred them to get their exports under effective control.

Soviet Union And Eastern Europe

Eastern Europe and the former Soviet Union have been the subject of intensified non-proliferation efforts because of the collapse of central controls and the temptations inherent in difficult economic circumstances. A major objective has been to sensitize these countries to the importance of non-proliferation and to get them to adopt appropriate export control and enforcement mechanisms.

We and partner countries have been engaged in a long series of contacts. In July 1990, the U.S. conducted a special visit to Eastern Europe focused on the need to establish responsible and effective non-proliferation and defense trade controls. A follow-up visit to the region was made in October 1991. In December 1990 and again in December 1991, the Australia Group held seminars on CBW for Eastern Europe and the Soviet Union. A multilateral group of MTCR partners visited Moscow in October 1991 to discuss missile proliferation. Just last month, an inter-agency team visited Latvia, Lithuania, and Estonia to discuss the need for effective export controls and to stress the importance of participating in the non-proliferation regimes. The MTCR will host a seminar for Eastern European, Baltic, and former Soviet Union states on March 30, and a third Australia Group seminar will be conducted in Budapest in December.

The results in Eastern Europe have been highly encouraging. Poland, Hungary, Czechoslovakia, Romania, and Bulgaria have already adopted or are in the process of adopting controls comparable to those of the Australia Group and MTCR.

With the dissolution of the Soviet Union, we launched a fresh series of initiatives to meet the changed situation there. In January 1992, Under Secretary of State Reginald Bartholomew conducted a visit to four states—Russia, Byelarus, Ukraine, and Kazakhstan—and brought along a special team to brief on non-proliferation and defense trade controls and to encourage the new states to impose effective control systems. Although these states' degree of organization varies greatly, all have been receptive to the U.S. approach. Russia, which benefits from the expertise and resources of the former Soviet Union, is the farthest along in having an effective control system.

We will be following up in various ways. The President has named a Senior Coordinator with responsibility for coordinating cooperation with the states of the former Soviet Union on non-proliferation matters. In the near future, teams will be visiting the former Soviet Union to help the newly-independent states to establish effective non-proliferation regimes. We expect several of our Allies to participate in these teams. The seminars planned by MTCR and Australia Group members will invite the newly-independent states of the former Soviet Union.

The U.S., Russia, and Germany have agreed on the creation of an international science and technology center to support scientists from the former Soviet Union. The center will function as a clearinghouse for developing, selecting, funding and monitoring projects that would be carried out mainly at institutions and facilities located in Russia and other CIS states. The intention is to help scientists and engineers to redirect their talents to non-military endeavors and thus minimize the temptation to use these skills in proliferation projects. We will also be providing concrete assistance to Russia to help disable and dismantle nuclear weapons. We have also offered assistance to Russia to help it begin the process of destroying its chemical weapons.

Other Problem Areas

Our proliferation concerns have diminished substantially in some areas, such as Argentina and Brazil and Eastern Europe. Other problem areas persist: North Korea remains a top concern

for nuclear and missile proliferation. We are using all available channels to exert pressure on North Korea to halt its proliferation efforts. We have held direct discussions with North Korea. Other countries have engaged the North Koreans as well.

In the context of international pressures, we hope that the North-South dialogue, and in particular the declaration on establishing a non-nuclear Korea, will yield results. It will be essential to have a credible and effective mutual nuclear inspection regime. North Korea must also ratify and fully and promptly implement its IAEA safeguards agreement. Ultimately, however, the question remains North Korean intentions. Does it want to be a member of the world community enjoying normal, productive relations with other countries? Or does it intend to pursue its ambition through nuclear proliferation?

Aside from our nuclear concerns, North Korea's irresponsible proliferation behavior is most egregious in the case of missiles. In fact, North Korea is now the only country selling complete missile systems that exceed MTCR parameters to the Third World—a dubious distinction that threatens international security and that we are working to reverse.

North Korea has learned to produce indigenously Scud missiles, and to extend the range of its Scuds. It sells these missiles to countries in volatile regions—such as Syria and Iran.

This behavior is irresponsible enough. But, unfortunately, North Korea may be going further in at least two respects.

— First, the North appears willing to sell not only complete missile systems, but also the equipment and technology to permit other countries to build their own missiles. Providing a production capability makes it more difficult for the world community to stop missile programs in the recipient countries, and can in effect "clone" still more irresponsible suppliers hungry for hard currency to keep their indigenous missile efforts going.

— Second, North Korea is working on a still-longer deplorable track record, it is highly likely that this system—and the technology to produce it will be available on the international market. In anyone's hands, such a system will inevitably be so inaccurate that its only use will be as a terror weapon against cities—and most effective when tipped with nuclear, chemical, or biological weapons of mass destruction.

These ongoing actions of North Korea—both its own possession of MTCR-class missiles and its irresponsible sales of such missiles and technology to others—represent a threat to the security of Northeast Asia, the Middle East and the Persian Gulf, and anywhere else such missiles are procured. Thus, international security itself is put at greater risk. We are working with other countries to try to deal with the problem, and you can be assured that our efforts in this regard will be intensified.

Certain Middle East countries remain worrisome in all proliferation areas. Although Iraq's capabilities have been substantially reduced by the Gulf War and ensuing embargo and inspection regime, it remains poised to resume these activities if the world were to permit. Further, Iran is energetically seeking to develop its non-conventional weapons capabilities.

South Asia is a concern primarily for nuclear proliferation reasons, but there is a risk that India and Pakistan will also compete in missile, chemical, and biological weapons as well. We have proposed a five-nation conference as a way to reduce tensions and deal with regional proliferation problems, among other subjects. All states but India have accepted the idea. India continues to have the idea under consideration. Meanwhile, our bilateral efforts with the individual countries continue. We are pleased with the ongoing Foreign Secretary level talks between India and Pakistan. These have already resulted in useful confidence-building measures and we expect will result in more.

Strengthening Non-Proliferation Efforts: To Do And Not To Do

As noted earlier, the U.S. and its non-proliferation partners have various initiatives underway to strengthen the barriers to proliferation. Our priority is to follow through with these ongoing efforts, particularly improving the existing regimes and national implementation.

Among the top priorities are:

- * Completing a Chemical Weapons Convention as soon as possible this year.
- * Strengthening CBW export controls by obtaining all AG members' agreement on chemical equipment and biological weapons-related controls.

- * Promoting and strengthening the NPT and working toward its indefinite extension in 1995.
- * Continuing the expansion and clarification of the NPT and Nuclear Suppliers' Group fuel cycle control lists.
- * Completing and implementing the Nuclear Suppliers' Group dual-use control list and guidelines.
- * Strengthening the IAEA safeguards system, in particular by exercising the Agency's authority to conduct special inspections.
- * Obtaining maximum harmonization and uniformity of controls, including licensing and enforcement, within each of the multilateral proliferation groups.
- * Expanding, as appropriate, membership in the multilateral groups; where membership is not practical or desired, other supplier countries should be encouraged to observe comparable standards.

— For example, the MTCR is currently working to enlist as members Portugal, Greece, Ireland, Switzerland, Iceland, and Turkey, so as to include all of the EC, NATO, and West European neutral states. The MTCR is also beginning a dialogue with East Europe, the former Soviet republics, Argentina, and Brazil. The U.S. is discussing with South Africa its adherence to the Guidelines. If these efforts succeed, North Korea will be the only exporter of complete missiles beyond MTCR parameters.

— Efforts with emerging nuclear suppliers continue, with a major focus on China, Argentina, and South Africa.

- * Monitoring activities by countries that have adhered to the multilateral control standards to determine whether their announced adherence is actually being carried out and working to interdict worldwide transactions involving items of proliferation concern.

ARMS CONTROL IN THE MIDDLE EAST

The administration has been pursuing a formal program of arms restraint among suppliers and recipients since the President announced his post-Gulf war Middle East arms control initiative in May. The administration has sent the Congress a report on the progress we have made in this initiative, but let me review for a moment before I discuss where we are headed.

President's Initiative

The President launched the Middle East arms control initiative on May 29, 1991. The initiative included proposals:

- to establish supplier guidelines for restraint on destabilizing transfers of conventional arms and weapons of mass destruction and associated technology;
- to freeze and eventually eliminate holdings of surface-to-surface missiles in the region;
- to implement a verifiable ban on the production of nuclear weapons-usable material in the region and call on the states of the region to accede to the Non-Proliferation Treaty and place all nuclear facilities under IAEA safeguards;
- calling for states in the region to become original parties to the Chemical Weapons Convention and implement CWC confidence-building measures; and
- calling for strengthening of the 1972 Biological Weapons Convention and urging regional states to adopt biological weapons confidence-building measures.

The President's initiative called for the five major suppliers of conventional arms to the Middle East to meet to discuss guidelines for restraining destabilizing transfers of conventional arms and weapons of mass destruction and WMD-related equipment and technology.

Five Power Meetings

Following the President's announcement, senior representatives of the United States, Soviet Union, China, France and United Kingdom met in Paris on July 8-9. At this Paris Plenary, the five countries issued a communiqué supporting the President's proposal and agreed to meet again to develop their work further.

On September 26-27, the five governments sent experts to London to draft guidelines on the responsible transfer of conventional arms, a mechanism for exchanging information on arms transfers, and harmonization of weapons of mass destruction (WMD) export controls—including

the development of common guidelines governing transfers of WMD-related equipment and technology. The work of these experts paved the way for a second Plenary meeting in London, on October 16-17.

At the October meeting, the five governments adopted common guidelines for the export of conventional arms—these guidelines are a matter of public record. The five countries agreed to inform each other about transfers to the region of the Middle East for seven types of weapons, including tanks, armored combat vehicles, artillery, military aircraft and helicopters, naval vessels, and certain missile systems. They agreed to make arrangements to permit meaningful consultation about such transfers.

Getting this far has not been easy, but we are moving ahead and making steady progress. One encouraging sign of our efforts was the resounding adoption, on December 9, of a UN Transparency in Armaments Resolution in the UNGA—the U.S. co-sponsored this resolution and has worked through the Middle East arms control process and at the UN to build support for its adoption.

Another good example is the progress made at the last meeting of the five, with Russia sitting in the place of the Soviet Union. To bring you up to date, let me just report that on February 20-21, I chaired the fourth meeting of the Five on arms transfer restraint. The meeting prepared the way for a Plenary meeting in Washington at the Under Secretary level. The timing for this meeting has not been finalized.

As a result of the efforts made at the February meeting, the Plenary will address concrete proposals for exchanging information on arms transfers, and guidelines for transfers of weapons of mass destruction-related equipment and technology.

Discussion of specific proposals for sharing information on arms transfers is a first for this process and for these five countries. The arrangements for consultation we envision will give us the opportunity to influence arms transfers which we find destabilizing, before they occur—to act instead of react.

Middle East Arms Control--Ppac

In Moscow last January, the U.S. and the Russian Federation hosted the organizational meeting for the multilateral phase of the Middle East peace process, which included establishment of an arms control and security working group. The process will not be easy; from our own history we know that arms control is always hardest when the threat of armed conflict looms large. But we have made an important start.

The regional participants in the Moscow arms control working group meeting demonstrated an earnest interest in getting down to business. The first substantive meeting of the groups is scheduled for Washington in late April or early May, and we look forward to continued support from the regional players.

Conclusion

It is true we have made substantial progress over the last year in all areas. We and our non-proliferation partners have done more than we could have expected. The last year or so have been models of cooperative effort.

But it is also true that the proliferation problem remains large and menacing.

Hence this is a time for intensified effort, not for complacency. We need to do more nationally and internationally. The collapse of the Soviet Union has given us a chance to redirect some of our energies to other problems. The proliferation problem needs to be among the highest priorities.

There is no single magic bullet that will stop proliferation. Rather, there are actions we need to take along a broad front—for example, intelligence-gathering and analysis, license review, enforcement, and multilateral and bilateral cooperation.

Many of these things we need to do are mundane and even boring. But only with concentrated effort will we be able to get the results we actually want—a world in which everyone can breathe easier, without fear of a nuclear, biological, chemical or missile attack. We hope to work closely and cooperatively with Congress in this important endeavor.

SENATOR BINGAMAN. Thank you very much.

I gather they haven't called this vote. Why don't we go ahead with you, Mr. LeMunyon, and see if we can get your testimony in before they do.

**STATEMENT OF JAMES M. LEMUNYON, ACTING ASSISTANT
SECRETARY, BUREAU OF EXPORT ADMINISTRATION,
U.S. DEPARTMENT OF COMMERCE**

MR. LEMUNYON. Thank you, Mr. Chairman, for the opportunity to appear again before the Subcommittee.

Much of my prepared statement provides an update on the initiatives and issues that we discussed at your April 1991 hearing.

As Assistant Secretary Clarke has already indicated, significant progress has been made in many fronts on nonproliferation policy over the last year, and in particular, in implementing effective U.S. and international export controls on dual-use items.

My testimony focuses on the dual-use items' question.

Details are outlined in my prepared statement. I want to highlight a few of those in my opening comments.

As Administration witnesses indicated at your hearing in April, the United States has been leading our allies in establishing new emphasis and priorities to prevent acquisition of critical technologies by countries that seek to acquire weapons of mass destruction.

This includes simultaneously establishing or renegotiating five separate export control regimes on dual-use items which affect East-West trade, chemical and biological weapons proliferation, missile proliferation, nuclear proliferation and supercomputer exports.

New or strengthened international export control regimes are already in place, or will be formally established in the near future in each one of these areas.

These export control regimes address the security and proliferation concerns of the 1990s, while minimizing the impact of controls on legitimate commercial transactions.

I'd like to provide just a few examples and try not to repeat some of the items that Assistant Secretary Clarke has mentioned.

Since the last hearing, the Australia Group has grown to 22 members. The Australia Group has confirmed that all partners are controlling a common list of 50 chemical precursors. The Australia Group has expanded its scope to include equipment related to the development of chemical precursors, and I might add that the list that most Australia Group members have adopted looks very much like the list implemented by the Commerce Department in March of 1991.

At the most recent meeting of the Australia Group in December, biological items were agreed to be controlled, as well as related equipment. The Commerce Department contribution to the U.S. delegation at that meeting included chairing an international working group of experts that met to decide exactly which types of organisms and equipment should be considered for control.

In the missile technology control regime, it's expanded now to include 18 countries. The revised Annex that Assistant Secretary Clarke has mentioned more precisely describes those items that are of missile technology concern. This is important because it fosters common interpretations of missile technology controls between the United States and our allies, and is easier for enforcement officials and our exporters to comply with.

In some categories, the Annex was expanded. Again, in this instance, many of the recommendations to revise and make the Annex more precise were developed by engineers at Commerce and other agencies. Also included in the effort was input from U.S. industry representatives who worked with the old Annex, understood its strengths and its weaknesses, and worked with us to improve it.

In the area of supercomputers, last June, the United States and Japan reached understandings on common safeguards that would be applied to exports of supercomputers to certain destinations. And since that time, our two countries have entered into negotiations with European suppliers to expand our bilateral arrangement into a multilateral arrangement.

We're optimistic that the negotiations with the Europeans will be completed this spring.

In my view, the most significant achievement, though, in the dual-use area is related to nuclear dual-use items.

In this area, the United States and 26 other nations have been working at the technical level for over a year to come up with a common list of dual-use items to which controls would apply.

We expect this effort to culminate at a plenary meeting scheduled later this month that will formally establish the Nuclear Suppliers' Group dual-use regime.

Again, the list that appears to be ready to be adopted looks a lot like the list of items that have been controlled by the Commerce Department for more than a decade. I think, of the 65 or so categories of dual-use nuclear items on the Commerce's list, the Nuclear Suppliers' Group has adopted some type of control in 60 of those categories.

While the U.S. and like-minded countries continue to make important strides in cooperating on dual-use export controls, improvements must still be made, particularly in the area of coordination of licensing decisions and elements of standards of enforcement and implementation.

Improvements in these areas have been and will continue to be important priorities for the United States at upcoming meetings of the different regimes.

Related to this issue, your letter of invitation discusses the possible consolidation of international export control efforts. This issue deserves serious consideration. Several COCOM member allies have also made suggestions in this regard, and I believe there was a discussion of this issue at your April 1991 hearing.

We should consider this issue, however, not simply for the sake of developing improved international export control structures, but from the standpoint of what practical improvements in controls a different structure might provide.

New consolidated structures might be desirable if they would lead to addressing existing weaknesses in international export controls, such as improved coordination of individual licensing decisions and enforcement actions.

To date, the urgency of stemming the proliferation of certain weapons has made organizational issues a secondary concern. As a result, the international effort is problem-specific; that is, each regime addresses a particular proliferation problem.

Closer coordination among the regimes would need to be carefully managed to ensure that any new structure improves the effectiveness of international export controls. We would have to recognize the transitional problems associated with achieving closer coordination, and that this could temporarily divert attention from ongoing proliferation threats.

Finally, with respect to implementation of U.S. export controls, I just want to make a couple of comments.

In addition to implementing the new authority that we discussed at your last hearing called the Enhanced Proliferation Control Initiative, we have worked not only with enforcement and intelligence experts within the government, but with our business community as well to make sure that they are fully informed and are trained to deal with these new controls.

We've had comprehensive training programs related to proliferation issues for our enforcement agents and intelligence analysts, and reviews and intelligence briefings on various issues related to diversion techniques, and how proliferators act to seek and acquire dual-use technology.

With the business community, we are conducting an ongoing series of seminars related to developing internal company compliance programs, educating company employees on how to be suspicious when certain orders come in, and to inquire with the Commerce Department should they have any doubts in any circumstance.

In fact, the number of inquiries we've received from the business community in the last six to nine months has substantially increased as a result of this outreach and our suggestions that they work with us if they have any doubts.

I think this new emphasis is already paying off. For instance, in the last month, Commerce Department agents initiated arrests and criminal prosecutions of individuals shipping electronic instruments which could be used in the development of nuclear weapons in Iran.

Since our Enhanced Proliferation Control Initiative authority took effect in August, the Commerce Department has acted to intervene on certain transactions based on certain intelligence information. In these instances, we were concerned that items would be going to CW and missile facilities.

And I might add that this intervention was made possible by the EPCI authority. Prior to August 1991, some of those transactions may have been permissible and, in fact, may have been permitted without the knowledge of the U.S. Government.

So, in conclusion, Mr. Chairman, the Administration has made efforts to stem proliferation of weapons of mass destruction a top priority. Our controls have changed as a reflection of the changing world situation. New emphasis

and direction of the Commerce Department and international nonproliferation controls underscore this commitment.

Thank you, and I'd be glad to answer your questions.

[The prepared statement of Mr. LeMunyon follows:]

PREPARED STATEMENT OF JAMES M. LeMUNYON

Introduction

Mr. Chairman, thank you for the opportunity to appear again before the Joint Economic Committee Subcommittee on Technology and National Security to discuss various aspects of U.S. policy on export controls. In response to your letter of invitation, I will discuss aspects of U.S. export controls aimed at stemming the proliferation missiles, and nuclear, chemical, and biological weapons, as well as on-going efforts to achieve increased multilateral cooperation on export controls.

The Commerce Department licenses exports of dual-use items—those items which have both commercial and military applications. Those items that are clearly military in nature are licensed by the State Department. During the course of my remarks, I will be discussing only dual-use items under the purview of the Commerce Department.

Of course, the Commerce Department and the Departments of Defense, State, Energy, Arms Control and Disarmament Agency, and the intelligence community share in the decision making process of approving and denying export license applications. Since late 1990, interagency review of license applications and related export control policy making has occurred according to strict procedures set by the President through a National Security Directive. These procedures cause significant policy issues to be raised to senior officials in each of the respective agencies for timely decisions, and help ensure that exporters receive timely and accurate licensing responses.

The Commerce Department believes—as do all agencies with export control responsibilities—that the proliferation of weapons of mass destruction is of grave concern. The Desert Storm experience is evidence that conflicts among countries with such weapons can include direct danger to U.S. civilians and military personnel. U.S. nonproliferation export controls remain essential to stemming the proliferation of such weapons, and to ensuring that the U.S. does not contribute to such efforts.

At the April 1991 hearing, Administration witnesses discussed new export controls and domestic and international initiatives taken to address proliferation concerns. As I indicated in my prepared statement at that time, in addition to redirecting U.S. export controls toward nonproliferation concerns, the United States has been leading our allies in establishing new emphasis and new priorities to prevent acquisition of critical technology by those countries who seek to acquire or enhance missile capabilities, and nuclear, chemical, and biological weapons. This includes simultaneously establishing or renegotiating five separate export control regimes which address (1) East-West (COCOM), (2) chemical-biological weapon proliferation, (3) missile proliferation, (4) nuclear-proliferation, and (5) supercomputer exports/

New or strengthened international export control regimes are already in place or will be formally established in the near future in each of these areas. These export control regimes will address the security and proliferation concerns of the 1990s while minimizing the impact of controls on legitimate commercial transactions.

The United States has approached each one of these regimes within a framework containing four elements which are essential to a system of effective international export controls: (1) the establishment of a list of items commonly controlled by all who are participating countries; (2) the participation by all major supplier countries; (3) coordination of licensing decisions among participating countries; and (4) the adoption of common standards of national administration and enforcement of export controls.

The following comments provide a brief summary of recent action in the four export control regimes that are designated to address proliferation concerns.

Chemical And Biological Export Controls

The United States works with 22 other partners in the Australia Group (AG) to harmonize export controls related to the proliferation of chemical and biological weapons.

All Australia Group members have confirmed that they are implementing controls on 50 dual-use chemicals which are controlled in the United States by the Commerce Department. With a few exceptions among the partners, the AG also agreed within the last year to control a common list of equipment related to the manufacture of chemical weapons precursors. The

Commerce Department will soon issue a regulation that revises the U.S. equipment list to correspond to this multilateral list.

At the most recent December 1991 AG meeting, partners agreed to control the export of a common list of certain biological organisms and equipment. The list of organisms considered for possible adoption by the AG is nearly identical to the draft proposed by the U.S., which was developed by the Commerce Department with experts from other U.S. agencies and the private sector. A technical meeting of AG members is scheduled for next month to review the organism list and examine specific proposals to control equipment related to biological organisms.

Missile Technology Export Controls

The Missile Technology Control Regime (MTCR), which was established in 1987 by the United States and six other countries, is dedicated to halting missile proliferation by controlling exports of certain rocket and unmanned air vehicle systems and related dual-use equipment and technology through a common control list called the MTCR Annex. Since its inception, the MTCR has expanded to include 18 countries.

Within the last year, the MTCR Annex has been revised to more precisely describe the controlled goods and technology. This revision is helping to foster common interpretations of the Annex among partner countries, and further improve compliance by exporters and licensing and enforcement officials. In some categories, the scope of items was expanded. The Regime partners have also agreed in principle to include within the scope of the MTCR missiles that can deliver all weapons of mass destruction, not just nuclear weapons, which were originally designated as the focus of the Regime.

Nuclear Export Controls

Representatives of the United States and 26 other nations have been working for the past year to establish a control list of "dual-use" items with nuclear applications and related licensing guidelines. The effort is expected to culminate at the plenary meeting later this month of the Nuclear Suppliers Group (NSG), which will formally establish a multilateral regime to control nuclear-related dual-use commodities. With a few exceptions, the NSG dual-use control list is substantially like the dual-use list of nuclear items already controlled by the Commerce Department for over a decade.

The establishment of this Regime represents an important achievement in international export control cooperation. The need to stem the proliferation of nuclear weapons is urgent, and the problem of the contribution of nuclear-related dual-use items is now being addressed on a multilateral basis. For over a decade, these items were controlled only by the United States. Moreover, the NSG is unique in that it includes Poland, Hungary, Czechoslovakia, and Russia. These destinations were original export control targets in COCOM.

By establishing this multilateral regime, security is enhanced through stemming the possible contribution of dual-use items to nuclear proliferation. In addition, U.S. exporters, which have long been subjected to U.S. unilateral controls, are provided a "level playing field" when competing for commercial sales against foreign suppliers.

Supercomputers

To address both strategic and proliferation concerns posed by supercomputers this past year, the United States and Japan agreed to apply similar export control safeguards on supercomputer exports to various country groups for both national security and proliferation reasons. Additionally, the U.S. and Japan entered into negotiations with other European suppliers to expand the bilateral regime into a multilateral arrangement. Those negotiations should be successfully completed later this spring.

Improved International Coordination Of Export Controls

While the U.S. and like-minded countries continue to make important strides in cooperating on dual-use export controls, improvements must still be made. The strength of each regime lies primarily in elements (1) and (2) mentioned in my introduction: membership and common lists. With the exception of supercomputer controls, improvements must be made in element (3) coordination of licensing decisions, and element (4) standards of implementation before the other regimes can be considered fully effective.

Unlike the COCOM model of international export controls, licensing decisions by partners in the nonproliferation regimes are made on a national discretion basis, although according to certain common guidelines. Generally, exchange of licensing information occurs on a post-shipment basis, and licensing approvals are not exchanged as a matter of routine. Improvements in these areas have been and will continue to be important priority for the U.S. at upcoming meeting of the different regimes.

The increasingly improved situation in Eastern Europe and the former Soviet Union, as well as other parts of the world, makes new cooperation possible. The U.S. has worked since early 1990 with Poland, Hungary and Czechoslovakia regarding the establishment of export controls in those countries. More recent initiatives include a variety of U.S. and other partner contract with the Baltic States and the Commonwealth of Independent States (CIS) Republics. As a part of this effort, the Commerce Department is developing a manual for use by CIS Republics to assist in establishing an export control system. This plan is modeled after our successful efforts in Eastern Europe.

Although pleased with their participation in the NSG, the U.S. and partner countries are engaged in an on-going dialogue with Eastern Europe and CIS Republics regarding cooperation in the chemical, and biological weapons and missile-related controls. A prime example of our efforts is a conference scheduled in Warsaw by the MTCR members later implementation of missile technology controls.

International Organization Of Export Controls

Finally, your letter of invitation discusses the possible consolidation of international export control efforts. This issue deserves serious consideration. Several COCOM member allies have also made suggests in this regard.

Although there are important differences, the commonality of membership and certain items on the controls lists among export control regimes suggests that greater coordination might be possible. However, we should consider this issue not simply for the sake of developing and improving the international export control structure, but also from the standpoint of what practical improvements in controls a different structure might provide.

New consolidated structures might be desirable if they would lead to addressing existing weaknesses in international export controls, such as improving coordination of individual licensing decisions and enforcement actions. For example, some partners have adopted controls similar to U.S. controls prohibiting "knowing" participation of any exporter or citizen in entities engaged in the proliferation of weapons of mass destruction - including the export of items not found on the control list. However, such procedures are not officially part of any multilateral agreement and implementation of such controls remains uneven among partners.

To date, the urgency of stemming the proliferation of certain weapons has made organizational issues a secondary concern. As a result, the international effort is "problem specific" (i.e., each regime organization addresses a particular proliferation problem). Closer coordination among the regimes would need to be carefully managed to ensure that it improves the effectiveness of international export control efforts. We would have to recognize transitional problems associated with achieving closer coordination. This could temporarily divert attention from on-going proliferation threats.

These are some of the considerations being taken into account by the Administration.

Enforcement

As Commerce has emphasized in the past, export control laws are only as good as the U.S. government's ability to enforce them. Toward this end, Commerce maintains a highly-skilled force of federal agents devoted exclusively to preventing illegal diversion of U.S. technologies.

New comprehensive nonproliferation training programs have been conducted within the past year for Export Enforcement agents and intelligence analysts. This included a review of technical requirements for proliferation activities, reviews and intelligence briefings on various diversion routes and techniques about how items are diverted to proliferators. Eleven other U.S. agencies participated in this training.

The emphasis on nonproliferation enforcement has already borne fruit. For instance, in the last month Commerce agents initiated arrests and criminal prosecution of individual shipping electronic instruments which could be used in the development of nuclear weapons in Iran.

Conclusion

The Administration has made efforts to stem the proliferation of weapons of mass destruction a top priority. The new emphasis and direction of Commerce and international nonproliferation controls underscore this commitment. Commerce controls have changed as a reflection of the changing world security situation.

This concludes my prepared remarks. I thank the Committee for the opportunity to testify.

SENATOR BINGAMAN. Thank you very much.
Mr. Sokolski, why don't you go ahead with your testimony.

**STATEMENT OF HENRY D. SOKOLSKI, DEPUTY FOR
NON-PROLIFERATION POLICY, OFFICE OF ASSISTANT SECRETARY
OF DEFENSE, INTERNATIONAL SECURITY AFFAIRS,
U.S. DEPARTMENT OF DEFENSE**

MR. SOKOLSKI. Thank you, sir.

I want to thank you for giving me an opportunity to appear here. I guess our last visit was July 10. What we've been able to do since the last visit is reflected much more on what happened in Desert Storm.

I know you are particularly interested in having me testify on what the military implications of proliferation are or might be.

I'd ask that my testimony be placed in the record, and I will not burden you with reading from that.

I think you've already heard what we've been doing to restrain proliferation diplomatically and through trade controls. A good deal of what my office does is assist in those efforts. But in addition, I work as the chairman of the Proliferation Counter-Measures Working Group, and have to make sure that OSD is abreast of what the long-term trends might be for proliferation threats that will challenge our military.

I suppose the key thing that I need to convey today is that the threat in the Middle East is going to be, at least, as daunting as what we faced in Desert Storm with regard to proliferation.

I think we found out that with regard to conventional arms threats, we were able to manage, if you will, with a great deal of effort. Some of the problems we face with regard to missiles, nuclear, CBW and, I would add, submersibles or subs will become a problem that we need to address with renewed effort to cope with in a military fashion, if need be.

What I'd like to do briefly, then, is go down the list quickly for each of the categories and discuss briefly what I think is notable from what we learned, or at least observed, in Desert Storm, and perhaps can glean with regard to what we might be faced with in the future.

First, we should start with the nuclear.

I think the most disturbing thing that we gleaned is, frankly, how little we knew about Iraq's parallel covert program. And I think the lesson that that conveys is somewhat disturbing.

The IAEA regularly visited Tuwaitha, and we learned after the war that Tuwaitha was the administrative headquarters for the covert program. There were well in excess of 15,000 people involved in this effort, arguably one of the largest covert nuclear weapons efforts in the world. One of them.

We did not know very much about that covert program until after the war, and we are still learning about the covert program with one of the most intrusive, absolutely total inspection procedures going on now.

I think we need to be very, very careful, as we now are becoming, about countries that might well argue, as certainly Iran does and certainly Iraq does, or did, up until very recently, that, well, they were signatories of the NPT and they allow IAEA inspections.

Right now, we rightly do not allow certain exports to Iraq or to Iran, whether they're safeguarded by the IAEA or not. I think that lesson needs to be considered fully.

With regard to missiles, I'd like to cite an interesting set of examples, one which I suspect we're all unfortunately all too familiar with, and another which it was new to me, but which the Proliferation Counter-Measures Working Group has been looking at in detail.

Roughly speaking, I call these two examples the Lucky and Unlucky Scuds.

The unlucky Scud was the one which, unfortunately, hit the barracks at Tehran and killed 28 of our military. This loss alone was more costly than any other engagement during the war.

What is unlucky about that Scud is the extent to which, first, it was a horri-fying attack and, second, it was a terribly unlikely event on two counts.

First of all, our Patriot batteries, which had been running at great, great lengths, were not fully operational at that particular location at that moment.

Second of all, given the enormous inaccuracies of the Scuds, the probability of this particular Scud hitting that particular barrack was literally off the scale. But this is to highlight that Scuds clearly matter, even with their inaccuracies.

The second example was, I suppose you could argue, the lucky Scud.

On February 16, at Jubail, which is a major port in Saudi Arabia, where a large portion of all the key provisions for Desert Storm were being off-loaded, a Scud missile struck just 300 or so meters from a pier at which eight ships were berthed. Two of these ships contained virtually all the provisions for the U.S. Marine Air Force. These ships were not harmed.

Also untouched were the USS Tarawa and several ammunition ships berthed at the pier along with a Polish hospital ship.

And, fortunately, none of the 5000 tons of 155-millimeter ammo stacked at the pier were hit!

Not far from this pier, I understand as well, there was a truck park—a picture of which I've shared with you—that literally was several football fields large, that had trucks that had one-quarter of a tank filled with petrol, literally parked next to one another. None of those important provisions were harmed.

Needless to say, had any of them been harmed, a great deal of damage would have been done to the operation.

Now, I think we have to be concerned, and in the military, we're paying a lot more attention to off-loading these large amounts of goods, because had more Scuds come in, the unlucky Scud—or I should say the lucky Scud—it could have become unlucky for us and hit something.

Moreover, there are reasons to believe that the very things that made that Scud miss, the lack of accuracy in the missile, the inability to know what was at that port, the inability to really aim and target that Scud, are not likely to prevail in the future.

One of the things that we telegraphed worldwide, literally over television, was the importance of things like global positioning system satellites that tell you exactly where you are with a hand receiver.

We telegraphed the importance of things like cruise missiles that would employ such systems and other guidance. And we basically telegraphed also the utility of overhead satellites for judging where things were.

Now, what is going to happen probably over the next five to ten years is you're going to find GPS being made available commercially, as it is now, and available to all of these countries. That won't be highly precise, but it will be fairly precise—100 meters.

You will find also that commercial satellites and the services associated with them will become available, such as the French Sport Service.

You'll find that guidance technology that previously was tightly held will become more available. And so, you'll find things like cruise missiles, or unmanned air vehicles, which we did not face in large numbers this time, probably becoming more popular and troublesome.

One of the things we'll be doing at Defense is focusing more on that air threat.

In CBW, clearly, what we learned, if anything, is that we need to be prepared for the awful possibility that these things might be used.

I'll be candid, we need to do more, and we're attempting to do more to detect use and to defend against it.

Clearly, everything that's being done to prevent the stockpiling production has to continue.

Finally, a comment on submarines. I think you probably all have read about Iran acquiring three kilo submarines. They have not yet been delivered, and they are gaining training in the former Soviet Union.

Submarines in shallow waters are hard to find. They are very hard to find. Part of the problem is that modern submarines in places like the Mediterranean and the Gulf are not difficult to find, but can lay mines and shoot torpedoes. There also will be missiles available that will be able to come out of submarine tubes.

We will have a difficult time, if we ever get hit with any of these submarine-launched munitions, in knowing who perpetrated the act.

This is, if you will, a version of Lebanon at sea that we need to be able to cope with.

For all these reasons, the Defense Department eagerly supports and has tried to give as much assistance as it can to all the other government efforts that have been described previous to my testimony.

And with this, I conclude my presentation.

[The prepared statement of Mr. Sokolski follows:]

PREPARED STATEMENT OF HENRY D. SOKOLSKI

Introduction

Mr. Chairman I want to thank you for inviting me to testify here today on a matter that is of growing significance to the Defense Department, the proliferation of strategic weapons related technologies in the Middle East. As requested by your staff, I will focus my written comments on assessing the military implications of the further spread of these technologies and weapons systems in this region.

My general view is that we got away relatively lightly in our war against Iraq and that future conflicts in the region are not likely to be so lopsided in our favor or that of our friends. This is so not just because massively destructive weapons will continue to be developed in the region, but because a host of non-apocalyptic, but nonetheless strategically significant technologies, are almost certain to spread.

This potentially more dangerous future should not come as a surprise. It is more than suggested both by what did and what did not happen in Desert Storm.

What Iraq Suggests

As I have already noted, considering we were pitted in a major war, we got off relatively easy in Desert Storm. There were casualties and we should not belittle them, but our losses could have been so much higher. Thank God, they were not.

For one thing, Saddam did not have any nuclear weapons. What is frightening and now very clear, however, is just how close he was to acquiring them and, indeed, just how much he had managed to acquire in the way of nuclear know-how and hardware from others. He had a weapons design and he was very much in the process of acquiring the special nuclear material for a bomb.

Unfortunately, before the war we had only scant information on this even though Saddam's clandestine nuclear program was centered at Tuwaitha where the IAEA conducted regular safeguards inspections and his program involved no fewer than some 20,000 people. Despite this we did not know precisely how far along he was. Nor did we know where all of his facilities were located. In fact, even after the war, after his total defeat, and after implementing the most intrusive nuclear inspection ever devised, the U.N. is still looking.

One thing is clear, however, if Saddam had nuclear weapons, the war would have been very different. Without an Iraq threatening to use a nuclear bomb, we had time and persuasive power after his invasion of Kuwait to assemble an impressive coalition against him. And it was this coalition as much as American force that defeated Iraq. Whether or not we would be able to assemble such a coalition under the shadow of a credible Iraqi nuclear threat is unclear.

Also, for some reason, Saddam chose not to use the chemically armed SCUDs that he had at his disposal either against Coalition forces or Israel. Whether or not he would show such restraint if he knew he could stare us down with nuclear weapons of his own, is another matter. Finally, there is the very real prospect that he or leaders like him in the future might be foolish enough actually to use such weapons in war. We and our friends might have an answer to such attacks but we do not have defenses against them and the effects of such strikes would be catastrophic.

Luckily, Saddam did not choose to use what chemical weapons he had. There are several theories as to why he did not. For one thing, the Coalition managed to destroy most of his artillery and seriously disrupted his tactical and strategic command and control system. The Coalition also seriously damaged Saddam's chemical production capabilities. Without these systems intact, Saddam literally could not launch significant short range chemical strikes on the front line of battle.

As for delivering chemical agents with SCUDs, Saddam could have done this but chose not to. Partly, this may have been because he felt insecure about what might happen to him if he did use such chemical weapons, lacking nuclear weapons as he did. There also is the operational point that General Schwartzkopf made in after action briefs. The General said he was not worried about chemically armed SCUDs shattering his Hail Mary operation since he knew that Saddam's SCUDs were so inaccurate it would take hundreds of SCUD firings just to establish a single chemical fire line.

Certainly, Saddam could have tried to deliver biological warheads but again, perhaps for some of the reasons noted above, he chose not to. The mere threat that he might, however, caused us the gravest concern. As noted in our interim report on the Lessons Learned from Desert Storm, we simply were not as prepared as we should have been for this contingency in regard to having initially all the inoculations on hand that we wanted to cope with the threats we believed we faced.

Fortunately, we were basically prepared for the conventional missiles Saddam fired. This was no accident. For one thing, our diplomatic and export control efforts seriously disrupted and delayed Saddam's acquisition of the Condor missile production capability that he had planned to have on line by 1989. Instead, all he got were some solid rocket motors and an incomplete production line. He had no Condor missiles. If he had, we would have been in big trouble if for no other reason than that these missiles would have been too small and too fast for our Pac II Patriot batteries to defend against. We also took special care to keep other high technology away from Saddam that might have significantly improved his existing missiles.

In any case, Saddam did not get or use what he needed to defeat our missile defenses. Instead he was stuck with SCUDs and SCUD derivatives all of which were relatively slow, large, and inaccurate. That's not to say, however, that these SCUDs were not a concern. They were. First, we had no way of knowing that he would not use chemical or biological warheads against us or our friends in the region.

Second, this threat alone caused us to have to dedicate ourselves to finding and destroying as many of his SCUD launchers as we could. This proved to be one of our most frustrating undertakings. No sooner would he fire than Saddam would hide his missile launchers. Although it is unclear how many of his launchers we destroyed, our round the clock air hunt did manage to intimidate him into firing his missiles only at night and to keep his firing rates down to levels that our defenses could cope with.

When our defense were working, Saddam's missile strikes were largely ineffectual. A chilling exception was when our defenses were not fully engaged and a SCUD hit a barracks at Dhahran, killing 28, more than any other engagement of the war. Tragically, given the SCUDs' inaccuracy, the odds of this particular SCUD 'hitting the barracks as an intended target were infinitesimal. But this time the odds were not with us.

Elsewhere our luck was better. On 16 February, at Jubail, a key Saudi port at which a large portion of all key provisions for Desert Storm were off loaded, SCUD missile struck just 300 or so meters from a pier at which eight ships were berthed. Two of these ships contained virtually all the provisions for the U.S. Marine Air Forces. These ships were not harmed. Also, untouched were USS Tarawa and several ammunition ships berthed at the pier along with a Polish hospital ship. And, fortunately, none of the 5,000 tons of 155 mm shells stacked on the pier that day were hit.

Of course, our luck was not simply accidental; there were reasons for it. As I have already noted, Saddam's SCUDs were notoriously inaccurate and he chose not to fire very many of them at any one time. Finally, he lacked basic targeting and navigational aids. We had satellite information and imagery and a robust command, control and communications system; he did not. We enjoyed access to our Global Positioning System or GPS; he did not. As such, we could locate targets and hit them with timeliness and precision. Saddam could not. In the future, none of these conditions is as likely to prevail in our favor.

Indeed, as I will explain, in regard to navigation, crude imagery and accuracy, Middle Eastern nations like Iraq will enjoy much of what we employed in Desert Storm against them.

High tech, however, is not always needed to produce strategic advantages. Indeed, in at least one case, Saddam produced strategic results using fairly low tech sea mines. Although Saddam had no submarines, he understood the value of mining particularly to protect his coastal flank. And it worked.

What The Future Holds

If this past is prologue, we have our hands full.

Certainly, one of the unfortunate lessons nations in the region gleaned from Saddam's foolhardy venture is that he invaded too early. Had he waited until he had nuclear weapons, he would have been much better off. They also must have found it most intriguing that despite regular

IAEA visits, Saddam was able to keep the full extent one of the world's largest nuclear weapons efforts from being discovered until after the war and that even now the U.N. is still trying to piece together what effort entailed.

Had Saddam acquired sufficient weapons-usable material, we know he would have had his weapon. Thus, our concern was that no weapons-usable materials be produced in the Middle East or diverted there from civilian traffic in separated plutonium or from the former Soviet Union.

Given the very real worries that chemical and biological weapons raised during the war for the Coalition, the value of having such weapons was hardly lost on the Middle Eastern nations in and outside of the Coalition that could have been targeted. This international and regional education only highlights further why we need to do all we can to prevent the production and stockpiling of such weapons and why more needs to be done to be able to detect and respond to possible use.

As for missiles, our successes and failures and those of Saddam were similarly telegraphed world-wide. As I have already noted, even inaccurate missiles can sometimes hit important targets. Saddam tried to break-up the Coalition by striking Tel Aviv and getting Israel into the war. He ultimately failed but his missiles nearly succeeded. This point could hardly be lost on the majority of Middle Eastern nations that have SCUDs in their own arsenals. For these purposes, these nations all now know that you do not need very elaborate command and control or even much in the way of targeting information.

They also know by our own successes that to do more than this—to be able to strike at an opponent's military operational capabilities—requires a great deal more. In specific, they know that our highly precise Tomahawk cruise missiles had the benefit of mission planning that used first-class imagery and highly accurate military-code GPS guidance and navigation. With the imagery we were able to find the military targets and to see if we hit them; with military-code GPS, we were able to launch our missiles with exact information on where we were launching from and with equally exact information as to where our missiles needed to fly to strike their targets.

Not surprisingly, demand in the Middle East and elsewhere for commercial-code GPS services and commercial imagery such as SPOT and Russian imagery services is on the rise. To be sure, commercial-code GPS only gives accuracies of about 100 meters and SPOT imagery only affords resolutions of about 10 meters and is not very timely.

The problem is that what nations in the Middle East can get in the way of GPS and imagery commercially may be good enough. Consider what could be hit with systems having 100-meter accuracies. Certainly, the Pier I mentioned earlier could have been targeted as well as the large truck parks and ammo dumps located at the ports. In addition, the rows of C-5s and C-141s lined up at the major Saudi airfields could have been hit as well as major command centers.

Airfields, ports and key command centers, moreover, do not move. They can be pre-targeted during peacetime using commercial imagery and using civilian-code GPS. Assuming one has a spotter at these locations, strikes could even be timed to coincide with the arrival or presence of a large number of planes, ships or stocks. The results of such time sensitive strikes could be catastrophic—i.e., they could significantly delay or disrupt a Coalition effort and possibly cause us to sue for lesser terms.

Keep in mind, this more precise strike threat applies even if existing SCUDs are used. It is more pertinent, of course, if M-family or Condor-like advanced ballistic missiles employed. But in both cases GPS is a help. The reason why is counter intuitive. Under the Missile Technology Control Regime (MTCR), GPS or Glonass (the Russian equivalent) receivers that are fast enough and can operate at high enough altitudes to guide a ballistic missile are controlled. However, just knowing where you are launching from and where you are trying to aim makes a big difference even if the missile being launched does not itself have a GPS guidance system on board.

More important, GPS guidance and navigation is making highly accurate long-range unmanned air vehicles (UAVs) or cruise missiles much easier to develop. Before GPS there were only two ways to guide such missiles. You could use radio controls but these could be jammed or disrupted. Or you could use an inertial guidance system. The problem with inertial guidance systems, however, is that they are only as good as their gyroscopes and even the very best of these drift over time introducing significant inaccuracies to a missile's flight path. GPS, which is accurate at all times, eliminates the drift problem.

This new guidance advance, which solves a number of technical military problems, is almost certain to create proliferation headaches. We are now worried as we should be, about ballistic missile proliferation. Now, because of GPS, we also need to get focused on UAV technology proliferation as well.

This will be a much tougher threat to track. As I noted last year, there are literally scores of indigenous UAV programs now underway in the Third World. It is tough to determine precisely what each of these program's missions are, what their flight paths will be or how visible they are likely to be to different radars.

Such uncertainty will not make them any less threatening. In fact, these platforms can use commercial-code GPS and upgrade the signal to allow for 5-meter accuracies or less using an additional ground based, surveyed transmitter in conjunction with the satellites. Assuming a Middle Eastern nation knows where to point within a region of hundreds of kilometers around the transmitter, these missiles will be able to get there. Anything that can be targeted will be vulnerable.

Again, such an accurate missile threat may not be apocalyptic like nuclear or biological weapons but just like them, they could, if properly employed, produce strategic results against us or our friends in the region. Clearly, greater attention to defending against such future threats will be required.

Finally, we need to worry more about sea mines and related submersible technologies. You all probably have heard about Russia's recent sale of three advanced diesel electric Kilo-class submarines to Iran. If these submarines become operational, they will add to the already substantial concern about mines. In relatively shallow waters, we have great difficulty detecting submarine operations.

In addition, if a ship were sunk either by a submarine placed mine, torpedo, or torpedo-tube-launched anti-ship missile, we and our friends would have the greatest difficulty knowing who perpetrated the act. Our key concern here is that if we need again to provide safe naval escorts as we did for Kuwaiti shipping in 1986 or rely on ship transports as we did in Desert Storm and in our 1986 raid against Libya, we can hardly afford to suffer terrorist attacks of the sort inflicted upon us on land in Lebanon in 1984. We want no Lebanons at sea or the threat of such.

In the Middle East in the 1990s, this may prove more difficult to avoid. In the Mediterranean, Egypt, Israel, Syria, Algeria and Libya all currently have submarines and are in the process of modernizing their fleets. In the Gulf, Iran and others have either ordered or are considering orders of submarines. Iraq, before the war was also in the market. How these boats will be equipped and employed and how best to operate in waters where these boat and mines may be present will clearly will be matters of increased interest to our Navy and to the security forces of our friends both in and outside of the region.

What's To Be Done?

First, we need to recognize that there is no single approach diplomatic, export or arms control, or military measure—that makes sense by itself to address some of the problems noted above. All of these problems are symptoms of insecurity and animosity in the Middle East. Ultimately, only if the counsels of moderation and restraint are heeded both within and outside the region is there much chance for producing lasting peace.

All of the export and arms control efforts noted by Secretary Clarke are critical. Defense has participated in these efforts and backs them. In addition, Defense has been most supportive of efforts to stem the possible flow of weapons-usable materials from the former Soviet Union and has backed the recent announcement in which both North and South Korea forswore nuclear weapons as well as separated plutonium production and uranium enrichment.

As I have noted before, anything that buys us time on the proliferation of strategic weapons-related systems or technologies, buys us a chance to persuade countries to reconsider their course in developing such systems and, short of this, at least to better prepare ourselves for the security implications of such proliferation if we fail.

One thing we all need to be careful about and that I think the Administration has been careful to avoid, is devising control efforts that might inadvertently make matters worse. Most people forget that programs such as, Atoms for Peace and Space for Peace, were American efforts originally devised as nonproliferation control proposals.

The thing we need to avoid and that the package of efforts Secretary Clarke has presented carefully stays clear of, is the notion that we must give away some of the very technology we ought to control in order to get nations to agree to some sort of "arrangement" or treaty. The benefits of nonproliferation, after all, are increased security for all nations. It is a shared good that is worth promoting on its own terms.

I would be misleading you, however, if I left you with the impression that Defense is expecting all of these efforts to succeed 100 percent. Wish though we may, we cannot expect this to happen right away.

Indeed, until peace comes, we and our friends both in and outside of the region will have to contend with proliferation and its military implications. This will require developing defenses, maintaining our security ties in and near the region and keeping abreast of what the emerging proliferation threats will be.

SENATOR BINGAMAN. Thank you very much.

Why don't we recess for about eight or ten minutes while I go vote, and then I would ask if I could ask a few questions at that point.

[Recess.]

SENATOR BINGAMAN. Okay. Why don't we start again? Let me just ask a few questions. We'll try to conclude by 12:00 here. I know we've taken a lot of everybody's time, but there are some questions that I wanted to get into a little bit.

One of the issues that the previous panel raised was the question of whether we were providing the funds that we have committed to, or should be providing to these international organizations—the IAEA. Specifically, there have been lots of reports about their lack of resources to do what we're calling upon them to do, and what, on the one hand, we seem to be praising them for—their accomplishments—and, on the other hand, the real question of whether we're living up to our obligation to support them.

Mr. Clarke, do you have a statement on that, as to what we are doing, what we should be doing, what the Administration has asked the Congress to do?

MR. CLARKE. Mr. Chairman, we had a policy—in the past tense—that we used on all international organizations. That was a policy of zero real growth. We thought that most international organizations—U.N.-associated organizations—were somewhat bloated and that we were spending too much money on them.

We have recently reversed that policy with regard to the IAEA. We know that if the IAEA is going to do all of the new inspections required of it, since we've had this success of getting the Koreans and South Africa and other nations to join up—Argentina, Algeria, Syria, all will now have IAEA inspections—to do that right, we need to spend more money.

So we have abandoned and are reversing our policy on zero real growth, only for the IAEA, and only for inspections. And we're working with the board of governors to determine what those cost figures should be, and we'll be making proposals to the Congress, perhaps, for reprogramming as soon as we have a better idea of how much money is needed.

With regard to the U.N. special commission, which is doing the work in Iraq, the United States has been by far and away the largest contributor of both funds and in-kind services to the U.N. special commission.

We need more, a lot more, if we're going to destroy the things in Iraq that the inspections so far have uncovered. And we will be making proposals in the forthcoming weeks about how to enhance the funding of the special commission.

But we very much understand the need for funds for both IAEA and the special commission, and the Administration supports the necessary funding for both organizations.

SENATOR BINGAMAN. Let me ask about this effort to assist the Soviet republics in some of their destruction of chemical weapons, control of nuclear weapons, that thing.

Your description of what we were doing, Mr. Clarke, it was very general, but it was a little more optimistic or positive than what I encountered when I

was there with Senator Nunn and Senator Warner and Senator Lugar just three days ago.

For example, in Ukraine, I could see no evidence that we had done anything of substance to work with them in this area. In fact, I think our entire policy seemed to still be locked into a dealing with some kind of ... the CIS was viewed as the successor to the Soviet Union and, therefore, the need to deal with individual republics was not sufficiently recognized.

That seemed to be the underlying, unspoken reality of our policy.

Could you elaborate a little on what you know is concrete that we are doing to assist those republics?

MR. CLARKE. Secretary Baker has been to most of the republics at this point. Separately, Undersecretary Bartholemnew has led teams to those republics. We've had, therefore, several meetings in the Ukraine.

Ukraine has agreed to sign up to the NPT. It's agreed to sign up to the MTCR export guidelines. It's supportive of the CWC.

Ukraine has asked us to work with them to establish an export control regime; to tell them, how do you take the Australia Group guidelines—the nuclear suppliers group guidelines—the MTCR guidelines and turn them into domestic law and regulation. They've asked for our help. We are providing them that help. We're providing them the documentation. We're sending teams over to work with their authorities on how to make those regulations and laws.

Then, having the laws in effect, we're going to work with them on the development of enforcement and intelligence regimes to make sure that they live up to, that they can implement their decisions and live up to that system.

We have a team lead by the United States, but with many of our allies on it, going to Kiev next month to further that progress.

As a result of meetings with Secretary Baker and in their own bilateral conversations, the Ukraine and the other republics have agreed that all tactical nuclear weapons should be withdrawn to Russia for their destruction.

And, in fact——

SENATOR BINGAMAN. They've reversed that now.

MR. CLARKE. Yesterday, President Krafchuk said that he was halting that movement of tactical nuclear weapons back to Russia until he received assurances that they would, in fact, be destroyed there.

Our ambassador in Kiev and our charge in Moscow are having discussions today on that issue.

SENATOR BINGAMAN. We don't have an ambassador in Kiev.

MR. CLARKE. That's right. We don't have an ambassador yet, but we do have diplomatic representation. And we are discussing——

SENATOR BINGAMAN. We have six people there, two of whom are interns. And they don't have a Fax machine, as far as I can tell.

So that's the level of our——

MR. CLARKE. Senator, we've had the Secretary of State there. We've had the Undersecretary of State there. We have a very responsible senior officer there, the charge. He is delivering a message at a very high level today, and I'm sure they'll get the message.

We have had good progress on the removal of tactical nuclear weapons from the other republics. And in fact, with the exception of two republics, all tactical nuclear weapons have been withdrawn to Russia.

We are working with Russia. We have three working groups set up on the destruction of their nuclear weapons and chemical weapons. We have offered assistance.

We have received many differing proposals from different organizations in Russia about how to spend that money.

SENATOR BINGAMAN. Are you aware of this letter that was sent to President Bush on February 20, asking for some kind of immediate help with their destruction of chemical weapons in Russia?

Do we have a response for that?

MR. CLARKE. Yes, sir. The United States responded that we were very much willing to help. A team arrives in Moscow next week, a team led by the State Department and the Defense Department, the Arms Control Agency, to work with them on specifically what they want.

We've told them that we will provide them our technology. We will do a technology transfer, make available to them everything we know about how to destroy chemical weapons.

And if the Russian government makes a decision with us that it wants financial assistance on that, we're prepared to consider that as part of the \$400 million authorization for destruction of nuclear and chemical weapons.

SENATOR BINGAMAN. Let me ask about an issue that's been in the news just in the last couple of days, and ask if any of you can give me any information on this news report that Israel has transferred Patriot missile technology to China, or other missile technology to China.

Are we aware of that type of action having occurred?

MR. CLARKE. Senator, I'll say exactly what Secretary Baker said yesterday, which is that we're not commenting on that in public. That does not mean to lead you in one direction or another. But we are not commenting on that issue in public at this time.

SENATOR BINGAMAN. The morning paper has an article identifying serious criticisms within the State Department by the Inspector General, in a report that's to be issued later this month.

Can anything be said about that at this stage?

MR. CLARKE. I think a few things can be said about that.

One is that that was an egregious leak of information from a draft report. The Inspector General has not concluded his routine audit. He has therefore not made any findings. And to have that information leaked in a slanted and pejorative way, I think is a significant breach of the inspection process.

I know Sherman Funk, the Inspector General, shares my concern with this breach of the confidentiality of the inspection process.

The report is not final. When it is, the State Department will have a statement about it.

SENATOR BINGAMAN. We heard from the previous panel about a recommendation that Ms. Nolan made, that we should support the establishment of an international secretariat that would have something of a function of trying to

integrate the activities of these various control regimes internationally. It might be established under the United Nations. Is that something that our government supports? Is that something that we have a position on?

MR. CLARKE. It's something, Senator, that we have looked at in the past; we discussed with our allies. We are looking at it again.

Let me refer to a chart that may help answer the question. If you look at the chart we're putting up here, it shows what countries are members of the three control regimes. You may not be able to see it from there. We'll provide you a copy.

The point is that most of the countries who are significant producers of either nuclear, chemical, biological or missile dual-use elements are members of these regimes now, or adhere to them.

The reaction we have had from those members, friends and allies, has been, they don't know that there is a problem that needs fixing by creation of a super-regime. There is some interest, as Mr. LeMunyon said, in harmonizing the procedures among the groups. But we are very happy with the way in which these three groups, one on nuclear, one on chemical, and one on missile, how these three groups have evolved.

They have made a lot of progress. And as, again, Mr. LeMunyon said that it might divert us from the good work of those three groups if we started to fiddle with the system, and for the sake of neatness or consistency, created some new organization.

Basically, I think we go, and our allies tend to go, by the philosophy of, if it ain't broke, don't fix it. Right now, those three groups have made a lot of progress. They are working fairly well.

We're not entirely sure we know what problem we're trying to solve by a creation of a new organization or a new secretariat. We are, however, continuing to look at it, and we are seriously interested in continuing the process, which is already underway, of harmonizing among the three groups their procedures and practices.

SENATOR BINGAMAN. Some of the testimony we just had would, I think, take exception to your conclusion that it's not broke.

One of the witnesses, Kathleen Bailey, said that since the MTCR was adopted in 1987, the following nations have acquired missiles—Saudi Arabia, Iraq, North Korea, India, Israel, South Africa, Iran, Syria, and goes into the specifics and indicates that, in her view, this effort at control of missile technology has been less than successful.

So —

MR. CLARKE. Well, let me take exception to that.

SENATOR BINGAMAN. Yes. Go ahead.

MR. CLARKE. In 1987, when the MTCR began, there were a lot of countries that were out there exporting missiles. Now, there's only one—North Korea.

Because of the efforts of the United States, because of the efforts of its partners in the MTCR, we have stopped every other nation in the world from exporting missiles.

They don't do it any more. They have taken that policy because of the existence of the MTCR. They have signed up to its guidelines and parameters.

I say, Mr. Chairman, when you can get down to only one country left in the world that's exporting missiles, something has worked.

SENATOR BINGAMAN. Let me ask one fairly specific question of the Commerce Department, and then we'll conclude the hearing.

As part of this enhanced proliferation control initiative that you announced this last year, you talked about establishing a no-knowledge standard in the regulations pertaining to missile technology.

Could you explain what that standard is and whether or not, in fact, you've been able to implement any kind of significant control as a result of that?

MR. LEMUNYON. The regulations that you're referring to are published in the hearing record of the previous hearings, in the Appendix.

There are two elements of the part of the regulation that was published in August. One is related to the knowing participation of U.S. citizens or exporters knowing sales. If they're related to the design, development, production of missiles or chemical weapons, they are something for which a Commerce Department validated license is needed. My instinct is, as I indicated in my opening remarks, that these rules are one reason why we are seeing a lot more inquiries from exporters.

Frankly, this occurs not because exporters know a whole lot about proliferation activities, but because they don't know a whole lot about certain customers, and they're coming to us to ask. They want to be told if there is a problem. The knowledge standard has raised questions in the business community, has made them cautious and has caused them to come in and ask us for advice.

SENATOR BINGAMAN. There is some suggestion that this knowledge standard was included in proposed regulations, but was dropped out of final regulations. Is there any truth to that?

MR. LEMUNYON. The knowledge standard, I believe, was made legally effective for CW items on August 15, as published in this notice. For missiles, a list of regions and countries that we call Supplement 6 in that regulation has not yet been published.

SENATOR BINGAMAN. What is holding that up? Why has that not yet been published?

MR. LEMUNYON. The list of entities, regions and countries has been under consideration, although I believe the list has been transferred to the Commerce Department from our friends at State just this past week, and we expect it to appear in the Federal Register in the very near future.

SENATOR BINGAMAN. You've been generous with your time. I won't further delay you. We will continue to try to communicate with you on this and see what we can do in the Congress to help get a better handle on these problems.

Thank you all very much.

[Whereupon, at 12:10 p.m., the Subcommittee adjourned, subject to the call of the Chair.]

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