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Mr. Chairman, Senator Cochran, and Members of the Committee:

It is my privilege to testify before you on behalf of the State Department on the important subject of the proliferation implications of cruise missiles and unmanned air vehicles (UAVs). These systems provide important capabilities to the U.S. and its friends and allies, and in the hands of our adversaries can pose substantial threats. I will discuss briefly the threat potential from the proliferation of cruise missiles and UAVs, and then describe the steps that the U.S. and our nonproliferation partners have been taking to impede that threat.

What are UAVs? "Unmanned air vehicles" is the term used in the Missile Technology Control Regime (MTCR) to refer to unmanned systems that fly within the atmosphere and are not rocket-propelled. Different terms may be used other contexts, but for MTCR purposes this term includes cruise missiles, as well as target drones, reconnaissance drones, and other forms of UAVs, be they military or civilian, armed or unarmed. UAVs can be as large as a jetliner or as small as a model airplane, can be jet or propeller driven; there are even concepts for guided, unmanned blimps that would be UAVs.

Uses of UAVs. UAVs have been in military service since at least the use of the V-1 cruise missile and target drones in World War II. Since then, their use has grown dramatically in land-attack (in ground-, sea-, and air-launched modes), reconnaissance, as targets, and even in some civilian applications such as pipeline inspection and crop-dusting. The U.S. military is at the cutting edge, with nuclear-armed cruise missiles in the inventory for over 20 years, and extensive use of conventionally armed cruise missiles and of reconnaissance UAVs in the Gulf War and most of our subsequent military engagements. As UAVs become more capable (as in the recent use of armed UAVs in Afghanistan), they are taking on more missions that have been exclusively the province of manned aircraft; this is expected to grow in the future, with the further development of so called Unmanned Combat Air Vehicles (UCAVs).

The UAV proliferation threat. These same attributes of UAVs that are so useful for the U.S. military -- for example, the ability to strike targets with precision and substantial protection from interception and to collect real-time intelligence -- makes UAVs in the hands of our adversaries a threat to us and to our friends and allies. Moreover, UAV's are potential delivery systems for weapons of mass destruction (WMD), and indeed are ideally suited for the delivery of chemical and biological weapons (CBW) given UAVs' ability to disseminate aerosols in the right places at the right altitudes. And while, thus far, the primary concern for adversary use of WMD-armed UAVs has been with nation-states -- such as Iraq, which has been converting L-29 trainer aircraft to UAVs for probable CBW use -- there is a potential for terrorist groups to produce or acquire small UAVs and use them for CBW delivery.

Dealing with the UAV proliferation threat. U.S. efforts to impede threats stemming from the proliferation of UAVs and their technology encompass a broad spectrum of measures. As in other nonproliferation areas, the U.S. attempts to use aggressively all of these tools to affect various aspects of the UAV proliferation threat.

-- Norms: The Nuclear Nonproliferation Treaty prohibits the acquisition of nuclear weapons by non-nuclear-weapon states, and the Biological Weapons Convention and Chemical Weapons Convention prohibit the acquisition of CBW. This helps dissuade new countries from getting into the WMD (and thus, WMD-delivery) business, impedes and de-legitimizes WMD proliferation, and supports the other measures the U.S. takes to fight proliferation. In addition, the MTCR Guidelines serve as a de facto norm against exports in support of WMD-delivery UAVs.

-- Export controls: U.S. and multilateral export controls help deny proliferators access to the Western technology (the best technology) that might be misused to develop WMD delivery systems, making adversary UAV programs slower, more costly, and less effective and reliable.

MTCR Category I. The MTCR from its inception in 1987 subjected exports of UAVs inherently capable of delivering a payload of at least 500 kg to a range of at least 300 km (so-called "Category I" or "MTCR-class" UAVs) and their directly associated technology to an unconditional "strong presumption of denial." Exports of

complete guidance sets and warhead safing/arming/fuzing/firing subsystems useable in such UAVs, and their directly associated technology, also are subject to a "strong presumption of denial." Exports of the specially designed production facilities for Category I UAVs and their complete subsystems, and the technology directly associated with such facilities, are prohibited. (Of course, these strictures apply only to MTCR members and unilateral adherents.)

MTCR Category II. Key components and materials useable in producing MTCR-class UAVs -- such as small, fuel-efficient jet engines; structural composites and their production equipment; various types of avionics, guidance, and flight control systems; telemetry and ground support equipment; various test equipment; and stealth technology -- are controlled as MTCR Category II items. MTCR countries review exports of such items on a case-by-case basis against specified nonproliferation criteria, and such exports are subject to a "strong presumption of denial" if judged to be intended for use in WMD delivery. In 1994, additional UAVs -- those not captured under Category I, but inherently capable of a 300 km range regardless of payload -- were added Category II MTCR controls.

Wassenaar. In addition to being controlled under the MTCR, military UAVs and their components are controlled under the Wassenaar Arrangement -- the nonproliferation regime for conventional arms and associated dual-use items. Wassenaar also requires controls on the export of a wide range of materials and equipment useful in the production of UAVs, beyond those controlled by the MTCR.

Catch-all controls. Moreover, there are a large number of UAV-relevant items that are not controlled under the MTCR or Wassenaar, mostly because of their broad civil uses (e.g., in manned aircraft). On a national basis, the U.S. and most other members of the nonproliferation regimes have enacted "catch-all" controls to cover exports of such items when an exporter knows or is informed by his government that they are intended for use in WMD programs (including WMD delivery).

Non-regime suppliers. The MTCR Guidelines encourage all countries to unilaterally abide by ("adhere to") the Guidelines. To the extent non-MTCR countries apply similar export controls, proliferators' efforts to obtain items for their UAV programs are further complicated. (Israel and several Central and Eastern European countries have adhered to the MTCR Guidelines.) The U.S. has a worldwide program of export control assistance -- focused on Central and Eastern Europe and the Newly Independent States, but also operating in East Asia, the Middle East, and South Asia -- to help countries enact regime-compatible export control laws and regulations, to erect effective interagency export licensing systems, and to improve enforcement.

-- Regimes: In addition to its role as a de facto norm -- and its export controls covering UAVs down to a range/payload capability of 300 km/0 kg, as well as key items of equipment and technology -- the MTCR also serves as a forum where Partner (member) countries can share information and concerns, and coordinate their national missile nonproliferation efforts. UAVs have taken on increasing prominence in the MTCR over the past several years, including specific attention in the annual Information Exchanges during MTCR Plenary meetings.

-- Interdiction: The U.S. has a longstanding, day-to-day program of identifying potential exports of proliferation concern (including those related to UAVs) and working with other countries to investigate and, if warranted, stop such exports from proceeding. While the details of these activities are classified, they are an important contributor to achieving our nonproliferation objectives.

-- Sanctions: A variety of U.S. domestic laws require sanctions against foreign governments or (usually) entities involved in proliferation activities, including certain activities related to UAVs. The threat of sanctions can act as a deterrent to proliferation activity, and in some cases the diplomacy surround sanctions or waivers can result in positive nonproliferation progress.

The missile sanctions law (amendments to the Arms Export Control Act and Export Administration Act, codified in the National Defense Authorization Act for FY 1991) requires sanctions against foreign persons knowingly involved in the trade of MTCR-controlled items that contribute to MTCR-class missile programs (including UAV programs) in countries that are not "MTCR adherents" as defined in the law. As a result of one such sanctions case, China committed in October 1994 not to export ground-to-ground MTCR-class missiles (including UAVs of this type); as far as we are aware, China has abided by this pledge.

The Iran-Iraq Nonproliferation Act requires sanctions against foreign governments or persons that contribute knowingly and materially to efforts by Iran or Iraq to acquire destabilizing numbers and types of advanced conventional weapons (which include such cruise missiles as the President determines destabilize the military balance or enhance offensive capabilities in destabilizing ways).

Lethal Military Equipment (LME) sanctions (contained in annual Foreign Relations Authorization Acts and in the Foreign Assistance Act) require sanctions against governments that provide LME (which would include cruise missiles) to countries on the U.S. terrorist list (Cuba, Iran, Iraq, Libya, North Korea, Syria, Sudan).

The Iran Nonproliferation Act provides for possible sanctions against foreign persons that export to Iran items on multilateral export control lists (including the UAV-relevant items on the MTCR and Wassenaar lists).

-- Military capabilities: Our efforts and those of our friends and allies to defend against adversary UAVs and the WMD they might deliver, as well as to be able, if necessary, to destroy adversary UAV holdings and to retaliate against UAV and UAV-WMD use, help to deter use of UAVs against us and to make UAVs a less attractive option for our adversaries to pursue.

-- Intelligence capabilities: Good intelligence is central to all aspects of nonproliferation. The U.S. Intelligence Community has done a very good job in building awareness within the Policy Community of the UAV threat, and in supporting U.S. efforts to sensitize other countries. Intelligence liaison relationships also are important means of facilitating interdictions and of assisting other countries' export control enforcement.

-- Diplomacy: All of the above tools are enabled by active U.S. diplomacy. We are a leading member of the WMD treaties and the nonproliferation regimes and have worked actively to promote export controls and to obtain behavior changes in sanctions cases. Even military and intelligence capabilities require coalitions, access, overflights, etc., are made possible by diplomacy. In addition, we can sometimes use diplomacy directly as a nonproliferation tool, independent of the others, to promote good behavior and dissuade irresponsible behavior.

Energetic U.S. use of all of these tools, and intensive cooperation with our friends and allies, have had a positive impact in impeding the UAV proliferation threat. Adversaries' efforts to acquire UAVs have been complicated, and made more time-consuming and expensive. To the extent they have been able to acquire UAVs, our adversaries have had to settle for systems that are less effective and less reliable than if our nonproliferation efforts had not existed.

Conclusion. Just as they provide real opportunities for U.S. and allied militaries, UAVs also provide opportunities for our adversaries to threaten us. Dealing with that threat has been a part of U.S. nonproliferation efforts for over 15 years, and we have been strengthening our ability to impede and cope with it -- broadening MTCR export controls, adding "catch-all" controls, improving our military and intelligence capabilities. But we will need to keep working hard to keep pace with the threat, not only because our adversaries are determined, but because the increasing reliance on UAVs worldwide (including in civilian roles) and the dual-use nature of much UAV technology will make our job more difficult in the future.