Opening Statement
Of
Dr. Charles R. Gallaway
Director (Acting), Domestic Nuclear Detection Office
Department of Homeland Security

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"General Aviation: Assessing Risks and the Road Ahead"

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Introduction

Good afternoon Chairwoman Jackson-Lee, Ranking Member Dent, and distinguished members of the Subcommittee. As Acting Director of the Domestic Nuclear Detection Office (DNDO) at the Department of Homeland Security (DHS), I would like to thank you for the opportunity to discuss the work we are doing with regard to general aviation (GA). I would also like to thank the Committee for its support of DNDO's mission to reduce the risk of radiological and nuclear terrorism to the Nation.

DNDO was established to improve the Nation's capability to detect and report attempts to import, possess, store, develop, or transport nuclear or radiological material for use against the Nation, and to further enhance this capability over time. To that end, our work is guided by our development of a global nuclear detection architecture (GNDA). DNDO has developed a time-phased, multi-layered, defense-in-depth GNDA that is predicated on the understanding that no single layer of defense can detect all radiological and nuclear (rad/nuc) threats. For this reason, the GNDA provides multiple detection and interdiction opportunities overseas, at our borders, and within the United States to effectively increase the overall probability of system success. DNDO has worked with intra- and inter-agency partners to develop time-phased strategies and plans for improving the probability of detecting and interdicting nuclear threats. DNDO will continue to enhance the GNDA over time by developing better detection technologies, working with our operational partners to improve concepts of operations (CONOPs), enabling real-time reporting of detection events, and supporting effective response to real threats.

My testimony today will focus on DNDO's efforts to address one aspect of the GNDA – international GA. Specifically, I will speak about our ongoing work to secure the international GA threat pathway.

General Aviation Pathway Studies

The United States border is the first layer within the GNDA where the United States has full control over detection and interdiction. For this reason, considerable effort and

resources have been placed at this layer to provide robust radiological and nuclear detection capabilities, particularly at ports of entry (POEs). While no current, known terrorist threat exists that pinpoints general aviation as a vehicle for a specific plot, DNDO's initial architecture study highlighted several exploitable gaps that existed in the current rad/nuc detection architecture, including the use of GA aircraft to move or deliver rad/nuc weapons. Further, the study concluded that GA was an attractive option for adversary exploitation because it offered a number of operational advantages—including speed, control of the weapon, and the relative lack of inspection, detection, and regulation—when compared to scheduled passenger and cargo operations.

Initiatives for GA security include several interrelated activities that are considerably broader in scope than radiation detection. DNDO has approached the solution to the GA threat through a four phase series of architecture studies:

In Phase I DNDO developed an end-to-end architecture and identified gaps by various pathways, including the use of GA as a pathway for the movement and delivery of weapons. The Air Pathways Phase II study explored measures to mitigate the vulnerabilities presented by GA and concluded that the most difficult scenario to counter was the use of GA aircraft delivering a weapon from outside the borders of the US directly to a target. The study identified that once a weapon-carrying aircraft is airborne, detection and interdiction of rad/nuc threats are unlikely. A primary Phase II recommendation was to consider a concept that would provide for screening of all international GA aircraft for nuclear weapons prior to takeoff for a flight into the United States. The Phase III study followed with specific recommendations: 1) pre-departure screening of most GA aircraft entering the United States, and 2) requiring all near-border GA traffic to land only at a small number of specific GA airfields in the United States for screening. The Phase III study established an architecture, a CONOPS and rough order of magnitude (ROM) cost estimates for establishing and operating a system of foreign and domestic airfields that could perform rad/nuc screening for inbound international GA traffic. Phase III recommendations were subsequently followed up with variants that

included screening at US airfields and screening at U.S.-Canadian airfields. Phase IV seeks to expand the GA work and address additional elements within civil aviation.

International General Aviation

DNDO is working closely with U.S. Customs and Border Protection (CBP) to facilitate detection and interdiction of illicit rad/nuc weapons or materials entering the United States via the international GA pathway. For rad/nuc detection with regard to international GA arrivals, CBP uses handheld Radiation Isotope Identification Devices (RIIDs). By the end of 2007, CBP was scanning all international GA aircraft upon arrival in the United States. Once these detection processes were established, we worked with CBP to characterize the current radiological scanning capability and identify methods to improve effectiveness by enhancing equipment and operational techniques. In Spring 2008, DNDO, in partnership with CBP, began testing detection equipment in the GA environment and in controlled laboratory tests using next generation human portable devices. Focusing on international GA applications, the testing was conducted at Andrews Air Force Base (AFB) in March-June 2008. Five test sessions were conducted at Andrews AFB to baseline the performance of currently-deployed systems for scanning of small, medium, and large international GA aircraft, to determine if any CBP operational procedure changes are necessary and to evaluate performance of other human-portable scanning equipment. Test results validated the effectiveness of the current technologies for use during a majority of state-side scanning operations. These test results will be used to guide subsequent research and development efforts, including improvements to identification capabilities of current technologies through the use of alternate systems that are being assessed through our Human Portable Radiation Detection Systems (HPRDS) program. The evaluation of operational systems also resulted in recommendations to enhance scanning Standard Operating Procedures for this type of rad/nuc detection.

Scanning of international GA arrivals in the United States is one step towards mitigating the rad/nuc threat, but the international GA pathway presents other unique challenges that we are working with our partners to address. Unlike other pathways, once an aircraft is

in transit, opportunities for determining the contents of the aircraft or the intention of the operators are extremely limited. Challenges include the GA "direct-to-target" scenario, which describes the ability of a GA aircraft to deliver a weapon directly from overseas, non-stop to a target in the United States. GA aircraft originating from overseas and flying to a target would enable an adversary to bypass the multiple detection and interdiction opportunities that are part of a defense-in-depth architecture. To effectively secure the GA pathways there must be a capability to detect any noncompliant aircraft (aircraft that do not submit a flight plan or otherwise attempt to enter the country illegally and aircraft that divert from their legal flight plans) and options to mitigate the threat.

Gateway Airports

Additionally, the Gateway Airports concept was developed as a way to defend against the international GA threat. Gateway Airports are airports at which GA aircraft are screened for the presence of rad/nuc material (a) before they enter the United States, or (b) before they approach major population centers or high-value targets. International Gateways are airports outside the contiguous United States. Some international GA aircraft flights may originate from International Gateways and others may choose to pass through them for rad/nuc screening enroute to the United States. In either case, rad/nuc screening is accomplished as the last act prior to takeoff for the flight into the United States. We recommend exploring the option that all other U.S. entry screening and inspection activity (e.g., Customs, Agriculture, and Health) be conducted concurrently with rad/nuc screening at the Pre-Clearance Gateway. This option would allow international GA aircraft to proceed onward to any destination in the United States, rather than having to stop at a CBP Aerial Port of Entry (APOE) and might allow for increased efficiency and reduced costs to GA operators. In fact, the Gateway Airport system might be presented as a convenience for GA operators—as part of a "one-stop" service that would consolidate disparate activities and provide for more efficient flight operations.

The United States already operates border preclearance facilities at a number of ports and airports in foreign countries. They are staffed and operated by CBP officers. Travelers pass through Immigration and Customs, Public Health, and Department of Agriculture

inspections before boarding their aircraft, ship or train. This process is intended to streamline border procedures, to reduce congestion at ports of entry, and to facilitate travel between the preclearance location and some U.S. airports that may not be equipped to handle international travelers. Preclearance exists at most major Canadian airports, providing convenience to travelers from those cities to the Unites States. Arrangements also exist with some airports in Bermuda, Aruba, and at two airports in Ireland. The proposed Gateway Airport plans could leverage some of these existing foreign pre-clearance sites and would require some additional locations for rad/nuc detection. Based upon the priorities identified in the GNDA, DHS and the Department of State are working to increase international awareness and participation in our general aviation pre-clearance programs.

In order to properly serve international GA traffic with minimal flight deviations, our proposed plan would pair the international Gateways with a complementary network of Domestic Gateway airports, to serve short flights originating from Canada and Mexico. Domestic Gateways would be current CBP APOEs spaced around the U.S. southern and northern borders. These would be inside the United States but at least 100 miles away from major urban areas designated by the 2006 Urban Area Security Initiative (UASI). The 100-mile standoff range is arbitrary, but it provides increased reaction time for identification and interception of non-complying aircraft when compared to the 30-mile distance commonly used for the largest temporary flight restricted (TFR) areas.

I would like to note that while the Gateway Airport concept is a proposal for rad/nuc detection for international GA, it is only a piece of the viable solution. The Gateway Airports plan as proposed would require international and domestic participation and addresses mainly those aircraft that are compliant with the system. We are still faced with the challenge of identifying and dealing with noncompliant aircraft. With our partners, we are exploring options to increase air domain awareness and use available information to quickly and accurately determine if aircraft present a threat. This ongoing analysis of GA is part of DNDO's work to enhance the GNDA and ascertain appropriate programs to effectively fill gaps.

Path Forward

In the near term, we will work with partners and stakeholders to support programs to produce widespread awareness of rad/nuc scenarios at airports of all sizes across the United States. Detection capabilities will become more available at air POEs with improved detection capability over current assets. Initial deployments of rad/nuc detection technology for GA outside the United States will begin the process of scanning international GA traffic and introduce the concept of gateway airports, beyond what already is in place.

The long-term structure of the GA architecture will expand to include a network of gateway airports, including overseas pre-clearance airports. GA traffic will be tracked more closely, providing increased air domain awareness and an enhanced ability to interdict rad/nuc materials or devices. The end result will be integrated security programs that provide a high degree of protection against GA transport of radiological/nuclear materials, including direct-to-target scenarios.

Conclusion

DNDO will continue to work with TSA, CBP, and other partners and stakeholders within and beyond DHS to improve the Nation's ability to detect radiological and nuclear threats at our ports and borders. DHS intends to balance facilitating the flexibility and mobility of general aviation and the need to sufficiently scan inbound flights for radiological or nuclear threats.

I welcome and appreciate the Committee's active engagement with this program, and look forward to continuing our cooperation as we move forward together. Chairwoman Jackson-Lee, Ranking Member Dent, and Members of the Subcommittee, I thank you for your attention and will be happy to answer any questions that you may have.