THE DOMESTIC NUCLEAR DETECTION OFFICE: CAN IT OVERCOME PAST PROBLEMS AND CHART A NEW DIRECTION?

HEARING

BEFORE THE

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THE DOMESTIC NUCLEAR DETECTION OFFICE: CAN IT OVERCOME PAST PROBLEMS AND CHART A NEW DIRECTION?

Thursday, September 30, 2010

U.S. HOUSE OF REPRESENTATIVES,
COMMITTEE ON HOMELAND SECURITY,
SUBCOMMITTEE ON EMERGING THREATS, CYBERSECURITY, AND SCIENCE AND TECHNOLOGY,
Washington, DC.

The subcommittee met, pursuant to call, at 2:20 p.m., in Room 311, Cannon House Office Building, Hon. Yvette D. Clarke [Chairwoman of the subcommittee] presiding.

Present: Representatives Clarke and Lungren.

Ms. CLARKE [presiding]. The subcommittee is meeting today to receive testimony on, "The Domestic Nuclear Detection Office: Can It Overcome Past Problems and Chart a New Direction?"

Good morning. I want to thank the Members of the committee and our witnesses for being here at this very important hearing.

This subcommittee meets today to welcome Mr. Warren Stern as the new director of the Domestic Nuclear Detection Office. I think it bears emphasizing that the title of today's hearing is, "The Domestic Nuclear Detection Office: Can It Overcome Past Problems and Chart a New Direction?"

That pretty much sums it up, Mr. Stern. DNDO is tasked with arguably one of the most important National security missions there is—prevention of nuclear terrorism.

There are many facets to the mission. DNDO is responsible for the Global Nuclear Detection Architecture, our overall National strategy for locating and interdicting illicit nuclear materials in this country. This means working with the Department, across agencies, with the White House, with Congress, and with international partners to find, deter, and prevent nuclear smuggling.

You are the coordinator of the National Technical Nuclear Forensics Center, focused on attribution of nuclear materials and devices. You are responsible for supporting the operational entities within the Department, such as CBP, the Coast Guard, and the Secret Service, in carrying out their mission to stop terrorists with weapons of mass destruction. You are responsible for developing, procuring, and deploying cutting edge technologies to support these missions.

The DNDO has had some low-profile successes and high-profile failures in all of these areas. As we on this panel know, that is sometimes the nature of public service. Despite the challenges that

DNDO faces, I would like to commend you, Mr. Stern, for your dedication to your duty to protect this country, as evidenced by your willingness to take on this difficult task within a Department that is still in transition.

While I do assume that you understand full well that you have a lot of work to do and a lot of problems that need to be fixed, it is my responsibility as the chair of the subcommittee to remind you of those problems and the work you need to do nonetheless.

The Advanced Spectroscopic Portal, as one major example, has morphed from a promising technology offering the hope of improved security and commercial efficiency to a symbol of failure for your office. You have to bring that program to a satisfactory conclusion, one way or another, in the very near future. Your credibility and the future success of DNDO depend on it.

There are many other topics that I look forward to discussing with you, and I once again thank you for being here this afternoon.

I would like to welcome today as our sole witness Mr. Warren Stern, the director of the Domestic Nuclear Detection Office at the Department of Homeland Security. Mr. Stern served as the head of the International Atomic Energy Agency, IAEA, incident and emergency center from August 2006 to March 2010, where he led international efforts to prepare for and respond to nuclear and radiation emergencies and helped create the IAEA's response assistance network.

Prior to that, Mr. Stern served as a fellow in Senator Hillary Clinton's office in 2003, providing guidance on nuclear energy, waste, safety, and security issues, and helping to write the Dirty Bomb Prevention Act, and went on to serve as the Department of State's senior coordinator for nuclear safety and deputy director of the Office of Nuclear Energy, Safety, and Security.

Mr. Stern began his career in 1985 at the Central Intelligence Agency, then served as the senior technical advisor in the U.S. Arms Control and Disarmament Agency, where he advised senior U.S. officials on nonproliferation and nuclear security issues from July 1990 until May 1999.

Without objection, the witness' full statement will be inserted in the record. I now——

Mr. Stern, if you will just indulge us just for one moment, my colleague, the Ranking Member of the committee, as you can see, has made a timely arrival just in time to give his statement, and so I would like to give him the opportunity to do so before you get into your statement.

The Chairwoman now recognizes the Ranking Member of the subcommittee, the gentleman from California, Mr. Lungren, for an opening statement.

Mr. LUNGREN. Thank you very much, Madam Chairwoman. I am sorry. I apologize. I did not mean any disrespect to the Chairwoman or to our speaker.

I was engaged in another meeting and this thing has frozen up on me so many times that I should have been paying attention and did not check the time myself as things were going on. Simple statement—I meant to be here. My apologies.

If I could just submit my statement for the record?

Ms. CLARKE. So ordered.

[The statement of Mr. Lungren follows:]

PREPARED STATEMENT OF RANKING MEMBER DANIEL E. LUNGREN

SEPTEMBER 30, 2010

Thank you Chairwoman Clarke for scheduling this important hearing on what I believe is the most serious issue facing our Nation—a nuclear or radiological attack in our Homeland.

The Domestic Nuclear Detection Office (DNDO) was established to help our country avoid such a tragedy by improving our detection capabilities and preventing a nuclear device or its radiological materials from being smuggled into the country.

This on-going threat was the reason DNDO was established in 2005 to develop a global and domestic nuclear detection architecture and thereby prevent a nuclear incident. The Office has an extremely difficult mission—to detect and prevent nuclear materials from illicitly entering our borders.

In pursuit of this mission, DNDO embarked on an aggressive program to develop the next generation radiation detection portal monitors—the Advanced Spectroscopic Portal Monitors (ASP). These monitors positioned at our ports of entry were expected to not only detect nuclear materials, as the existing PVT monitors now do, but also identify the type of radioactive material that was being smuggled. ASP technology, if proven to identify radioactive materials at our ports of entry, would be a significant improvement over existing systems by minimizing missed threats and false alarms. After 5 years of testing, the Secretary announced last February, because of cost and performance problems, that ASP will be limited to secondary screening only. Our taxpayers have made a huge investment in this technology and we were told—it's not yet ready for primary screening, if ever.

Unfortunately, this isn't the only example of mismanaged technology development programs at DNDO. The Cargo Advanced Automated Radiography System (CAARS) was also initiated in 2005 but cancelled in 2007 because of poor planning and oversight. DNDO failed to effectively communicate with its CBP client over the operation limitations that would be placed on these machines. The CAARS machines would not fit within the existing inspection lanes at CBP ports of entry.

Director Stern, you have a very critical job—to develop a domestic nuclear detection defense for our Nation. As a result of what appear to be earlier mismanaged opportunities, we have failed to significantly improve our domestic nuclear detection capability. I know this didn't occur on your watch, but these management deficiencies are jeopardizing the American people and must be eliminated. While we all want the very best technology, we cannot ignore the planning, testing, and oversight necessary to develop those technologies. Your first responsibility, Director Stern, should be to restore the best management and development practices to DNDO. This should help DNDO produce the most affordable and innovative radiological monitors we need and desire.

I look forward to your testimony.

Ms. CLARKE. So, without any further delay we now will hear from Mr. Stern.

STATEMENT OF WARREN M. STERN, DIRECTOR, DOMESTIC NUCLEAR DETECTION OFFICE, DEPARTMENT OF HOMELAND SECURITY

Mr. STERN. Thank you, and good afternoon, Chairwoman Clarke and Ranking Member Lungren.

To the Ranking Member, I am very impressed with your temporal precision, but I look forward to working with both of you and the rest of the committee in the future.

As the Chairwoman noted, I am the new director of the Domestic Nuclear Detection Office within the Department of Homeland Security. I appreciate the opportunity to speak today to testify to you, to answer your questions, to hear your concerns, and so share my vision for the office in the future. As a result of our dialogue today I hope you will conclude that, in fact, we are now headed in the right direction.

As you noted, DNDO's mandate is to improve the Nation's capability to detect and respond to illicit movement, possession, storage of nuclear and illicit radioactive material. We have accomplished a lot, and as you, Chairwoman, noted, some of our problems have received a lot of attention and some of our successes have received very little.

So this afternoon I would like to acknowledge some of the challenges we have had in the past. I would like to first address some of the issues that your staff has told me you are most interested in, but also say a few words about some of our successes.

I understand that you are interested, in particular, in the Advanced Spectroscopic Portal device, the CAARS program, and the status of our strategic plan for the Global Nuclear Detection Architecture, so I will address those those briefly—first, and briefly.

Regarding the ASP, we are currently implementing operational and field validation testing with CBP. We expect these to be done early next year and we hope to, as you suggested, be, in essence, done with the development phase of the program sometime later next year. This will include after the operation and field testing there will be a cost-benefit analysis completed, which will then be presented to the Acquisitions Review Board within the Department of Homeland Security, and assuming ARB agrees with our recommendation it will go to the Secretary of Homeland Security for her decision on certification.

Just a quick note, and as we earlier notified Congress, our intention is to seek certification for the use of the ASP in secondary and no longer in primary inspection measures. This relates to the concept of operations used by CBP and their inspections, and we have discovered through extensive testing that in secondary position it yields—the device yields a great benefit over the current technology, whereas in a primary inspection it does not. So we will be seeking certification in secondary.

Regarding the CAARS program, which I think has received a lot of attention since—in particular since our hearing on the Senate side, I would like to inform you today that the CAARS program will end essentially now. The technology that has been developed and may be useful in other programs will be migrated to those other programs, but the program known as CAARS will terminate.

On the strategic plan, we are working closely with our interagency partners so that we can have a complete and useful strategic plan for the Global Nuclear Detection Architecture delivered to Congress by the end of this year. All U.S. agencies and DHS components that have a role are participating. I have received a lot of support from each of the agencies and I have no doubt that we will, in fact, complete this report in time and it will guide our efforts into the future.

The strategic plan is just that. It is a very high-level document that will address such issues as our mission, agreement on what the architecture actually is, where it begins and where it ends, what our objectives, what our goals are, what are metrics we can use to achieve those goals? Likely it will include also roles and responsibilities of each of the agencies. Subsequently, we will be developing more detailed implementation plans, written definitions of

the architecture in technical detail, but these will all fall under the umbrella of the strategic plan.

Again, as you noted, some of our problems have received a lot of attention; some of our successes have not. The ASP, the CAARS program, and the strategic plan are all very important in their own right but they should not be seen as a definition for DNDO. We have developed, over the years, a world-class testing and development program that other countries look to for assistance in their testing and development programs, and this testing program exists at a number of the U.S. laboratories.

We have conducted over 48 separate, very high-definition tests within our program the last several years. We have trained State and local officials and, with other agencies, have succeeded in educating over 15,000 State and local officials throughout the country, and we have a number of programs related to supporting State and local officials.

We have deployed, with Customs and Border Protection, nearly 15,000 portal monitors at our borders. We have, with also CBP, nearly 3,000 handheld detectors. We have supported over 25 TSA VIPR teams and radiation monitors.

With the Coast Guard we have supported deployment of over 6,500 detectors and we have helped the development of radiation detection capabilities in 39 different regions within the United States. As you noted also, we have the role of coordinating technical nuclear forensics development within the United States, and that capability is looked to, again, by other countries and by other U.S. agencies.

So the programs that have received the most attention are important. We are doing what we can to turn those around and to terminate the ones that should be terminated, but we have also accomplished a lot in the past 5 years.

But, as you noted, I am also new and I have my own views on where we should go, and I do believe that we can turn our efforts in a slightly different direction. I see the specific path forward as completing the near-term programs that have received so much attention.

We hope next year to complete the ASP—the development phase of the ASP program and made a decision on whether to deploy or not. We, as I mentioned, will terminate the CAARS program; and we will complete the strategic plan of the Global Nuclear Detection Architecture. But in order to move beyond these we have to, as you noted, complete them, and we will.

We also, early next year, will begin to deploy the next generation of handheld detectors in Customs and Border Patrol, and a number of other U.S. Government agencies will begin to use those, and into 2012 we look to deploy technology that will help to relieve some of the helium-3 shortage issues we have had in the past.

We will also continue to develop many of the more advanced technology that you have heard of, so I believe we are at a turning point and we are beginning to move in the right direction. In terms of my personal views that will translate into reality now that I am in DNDO, I believe we need to place greater emphasis on the architecture—the Global Nuclear Detection Architecture. I am not sure we have done that in the past.

To me, the architecture for DNDO is a great challenge—our greatest challenge—but it is also our greatest strength. It is the one area where we clearly lead and we need to focus more attention on that, beginning with a strategic plan and, as I mentioned, developing more detailed documents that can be used in a rational, logical way to ultimately guide our deployment into the future.

I also believe that we need to place greater focus on programs that aid State and local officials. We have certain assumptions in what we have done regarding how we will ultimately find threat material, and I think those assumptions need to change a little bit and we need to begin to look more within the United States and not just at our borders, and that means focusing more on supporting State and local officials in their development of capabilities to detect and respond to radiation emergencies.

Finally, I think that we intellectually need to look at the lessons we have learned in the past—not just the procurement lessons, which I think we have already begun to do in terms of the large procurement programs like ASP, but also in terms of how we define our strategy.

We don't have any cases of illicit movement of nuclear material at U.S. borders or within the United States, but there are small but significant cases abroad, and I think we need to look very carefully at how those cases came to be, where the material came from, and in particular, how they were detected, and I think those lessons will help us guide the development of our strategy.

So this concludes my initial prepared statement, Chairwoman Clarke and Ranking Member Lungren. Again, I appreciate the opportunity to present it to you, especially on this wet and windy Washington day. I am very happy to answer any questions you may have, and I look forward to working with you in the future.

[The statement of Mr. Stern follows:]

PREPARED STATEMENT OF WARREN M. STERN

SEPTEMBER 30, 2010

Good afternoon Chairwoman Clarke, Ranking Member Lungren, and distinguished Members of the subcommittee. As Director for the Department of Homeland Security's (DHS) Domestic Nuclear Detection Office (DNDO), I am here today to describe the work we have done at DNDO to reduce the risk of nuclear terrorism. We know that this mission is of critical importance to the committee, as it is to the Department and the Nation. As a result of today's hearing, I hope that you will agree that DNDO's efforts are increasing our country's security.

DOMESTIC NUCLEAR DETECTION OFFICE

On April 15, 2005, President Bush signed National Security Presidential Directive–43 and Homeland Security Presidential Directive–14 directing the Secretary of Homeland Security, in coordination with the Secretaries of State, Defense, and Energy, and the Attorney General, to establish a jointly-staffed, National-level Domestic Nuclear Detection Office (DNDO) within the Department. Subsequently, the SAFE Port Act of 2006 formally codified the DNDO and added a Presidentially-appointed Director.

DNDO's mandate is to improve the Nation's capability to detect and report unauthorized 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. With assistance and participation from a wide variety of U.S. Government departments and agencies, DNDO synchronizes and integrates inter-agency efforts to develop technical nuclear detection capabilities, characterizes detector system performance, ensures effective response to detection alarms, integrates nuclear forensics efforts, coordinates the global detection architecture and conducts a trans-

formational research and development program for advanced technology to detect nuclear and radiological materials.

I would like to take some time to discuss several of our high-profile programs, including the Advanced Spectroscopic Portal (ASP) program, the Cargo Advanced Automated Radiography System (CAARS) program, and the status of the overarching strategic plan for the Global Nuclear Detection Architecture (GNDA).

ADVANCED SPECTROSCOPIC PORTAL (ASP) PROGRAM

In 2005, DNDO embarked on an aggressive program to develop the next generation radiation portal monitor to address key detection gaps. The ASP program was one such effort; at that time, we set a schedule without sufficiently accounting for technical risk, which has caused a number of delays. We have accepted many of the Government Accountability Office's (GAO) recommendations and have substantially improved program management and oversight. Under the leadership of the Under Secretary of Management, the Department has developed Acquisition Directive 102–01, which gives us greater insight into all acquisition programs in the Department, and which we have leveraged to significantly improve the ASP program.

The ASP program is approaching a key decision milestone. DNDO and CBP are currently working together to resume field testing in October. Upon successful completion, DHS will finalize the cost-benefit analysis and proceed to the Acquisition Review Board (ARB). The ARB will make its recommendation to the Secretary on ASP certification. We continue to believe that if certification is realized, the ASP deployment will enhance DHS' capabilities at the border to counter nuclear threats without impeding the flow of commerce.

It is important to note that we will seek certification for the ASP in secondary scanning only. While ASP serving in primary scanning was once considered, ASP's demonstrated performance to date and DNDO's preliminary cost-benefit analysis suggest ASP would be best utilized in secondary scanning.

CARGO ADVANCED AUTOMATED RADIOGRAPHY SYSTEM

To complement passive detection systems, DNDO also embarked on an ambitious program to develop advanced radiography systems. The CAARS program sought to develop and demonstrate non-intrusive inspection technology that could automatically identify dense materials used to shield special nuclear and threat materials in cargo. In 2007, DNDO recognized that the CAARS technology was not as mature as originally anticipated. Accordingly, DNDO scaled the program back from an acquisition program to a research and development program. The CAARS program is now designed to demonstrate the potential future capability of the technology through the development and evaluation of prototype systems.

The CAARS research and development program has nearly reached its conclusion. While it will not continue, a decision regarding the future direction of the relevant technology is pending the CAARS final report, expected later this year. DNDO will use technologies developed in the program to advance other research and development efforts and will continue to test commercially available non-intrusive imaging systems. Development of improved algorithms to address shielded nuclear material will also continue as part of DNDO's Advanced Cargo Imaging program. Additional work to build upon what we have learned from the CAARS technology will be included in DNDO and CBP's participation in the DHS Science and Technology Directorate's CanScan program.

GNDA STRATEGIC PLAN

One of DNDO's core mandates is to develop a Global Nuclear Detection Architecture (GNDA). The GNDA is a risk-informed, multilayered network to detect illicit radiological and nuclear materials or weapons. This involves interagency and DNDO efforts for the development and deployment of effective detection solutions within the United States and abroad, maintaining situational awareness, working collaboratively and integrating with the intelligence community, and sharing critical information related to detection.

GAO has highlighted, and Congress has reinforced, that the GNDA should have a strategic plan to guide its implementation. We agree and are working with other DHS components to rapidly complete a strategic plan for the GNDA, with an interagency Assistant Secretary-level committee providing guidance and oversight. The GNDA Strategic Plan will be the first important step to define and form the GNDA in the future, and will include a description, a vision statement, and time-phased goals, objectives, and performance metrics. The strategic plan will articulate what the GNDA must accomplish and outline its development and implementation.

DNDO will complement the GNDA strategic plan with a revised GNDA annual review report on the Joint Interagency Review of the GNDA, as required by Congress, which will provide a means to document and track progress to assist DNDO and the interagency in developing and refining the GNDA. The GNDA strategic plan and annual report will be jointly produced and agreed upon by the interagency, enabling a coordinated implementation of the GNDA.

DNDO PROGRESS

While they are some of the most discussed aspects of our work, ASP, CAARS, and the GNDA strategic plan do not define DNDO. Under its mandate to develop a GNDA and implement the domestic nuclear detection architecture, DNDO has created programs supporting Federal, State, and local agencies and foreign governments within its core competence of nuclear detection. At our borders, DNDO works with CBP to deploy nuclear detection technologies at ports of entry and for the Border Patrol. Working with our partners, DNDO has executed pilot programs to evaluate nuclear detection equipment and operations in maritime and aviation environments. Furthermore, DNDO has produced a world-class development and testing program for radiation detection systems and has become a coordinating entity for U.S. Government technical nuclear forensics efforts. We have made progress in implementing and supporting the GNDA as follows.

Interior

Building upon the layered structure of the GNDA, DNDO works within the Nation's borders to develop radiological and nuclear detection capabilities for urban areas, internal transportation vectors, special events, and other State and local venues. DNDO works regularly with Federal, State, local, and Tribal entities to integrate nuclear detection capabilities in support of the GNDA. Our "Securing the Cities" (STC) initiative, piloted in the New York City (NYC) region, has brought together law enforcement and first responders to design and implement a layered architecture for coordinated and integrated detection and interdiction of illicit nuclear and radiological materials.

STC involves 13 State and local partners, who represent over 150 jurisdictions in the New York City region, as well as the Department of Energy, FBI, and the Nuclear Regulatory Commission. The STC pilot program provides assistance to State and local jurisdictions, which enable these entities to build and sustain capabilities by: Leveraging current technologies and deploying them regionally in a coordinated manner; designing, acquiring, and deploying the components of an operationally viable regional architecture for radiological/nuclear detection focused on State and local jurisdictions; developing and implementing a common, multi-agency concept of operations (CONOPS) for sharing sensor data and resolving alarms; and instituting training and exercising by the regional agencies to execute the CONOPS at a high level of proficiency. Once capabilities are developed, DNDO will assist regional partners in building a self-supported sustainment model allowing for real-time sharing of data from fixed, mobile, maritime, and human portable radiation detection systems. DNDO plans to evaluate the STC pilot initiative in fiscal year 2011 to assess the detection capability established in the New York City region and extract the lessons learned from the pilot. DNDO will continue to support the NYC region with experienced program management and subject matter experts in radiological and nuclear detection technologies and operations, and we will be actively supporting a regional full-scale exercise in 2011.

Within the United States, DNDO works with the Transportation Security Administration's (TSA) Visible Intermodal Prevention and Response (VIPR) teams to enhance security on aviation, rail, mass transit systems, and maritime venues Nationwide. VIPR teams have augmented security at key transportation facilities in urban areas around the country and work with local security and law enforcement officials to supplement existing security resources, provide detection capabilities, and a deterrent presence, and introduce an element of unpredictability to deter and disrupt potential terrorist activities. Currently, all VIPR teams are equipped with human portable radiological and nuclear detection systems. Through September 22, 2010, TSA has conducted 1,219 VIPR operations that have utilized radiological and nuclear detection equipment.

DNDO's outreach also includes a State and Local Stakeholder Working Group with 25 States and territories meeting quarterly to bring the Nation's radiological and nuclear detection community together, inform participants on activities within DNDO and the community, and obtain feedback on DNDO's programs and initiatives. DNDO has conducted Nation-wide radiological and nuclear detection situational awareness briefings with 52 Urban Area Security Initiative (UASI) regions and metropolitan region emergency responder and law enforcement agencies.

DNDO has also created a Preventive Radiological and Nuclear Detection Program Management Handbook created for State and local authorities, which provides consistent guidance for building or enhancing State and local radiological and nuclear detection programs. Together with our Federal partners, DNDO provides technical input, review, evaluation, and developmental improvement to the preventive radiological and nuclear detection training curriculum. Since 2005, DNDO has facilitated the training of more than 15,000 law enforcement officers and public safety professionals in radiological and nuclear detection operations.

Providing support to the operators of radiological and nuclear detection equipment is critical to an effective architecture for detection. The DNDO Joint Analysis Center (JAC) is an interagency coordination and reporting mechanism and central monitoring point for the GNDA. The JAC coordinates adjudication of nuclear detection events, analyzes intelligence and sensor information, and facilitates technical support for Federal, State, and local authorities. JAC staff partner with the DHS Office of Intelligence and Analysis to produce relevant intelligence-based analytical products, and develop linkages to State and local fusion centers for information sharing.

Ports of Entry

The U.S. border is a key point at which where the United States has full control over detection and interdiction. DHS has made a considerable effort at the border to provide comprehensive radiation detection capabilities with an initial majority of resources concentrated at ports of entry. DHS has focused on these authorized pathways at ports of entry, underscored by the SAFE Port Act's requirement that "all containers entering the United States through the 22 ports through which the greatest volume of containers enter the United States by vessel shall be scanned for radiation." A key consideration is the need to effectively detect threats without impeding the flow of commerce across the border. In 2005, when DNDO was first established, there were a total of 552 radiation portal monitors (RPMs) at our land and seaports of entry. As of this July, there are a total of 1,426 RPMs. Our on-going work with CBP to facilitate container security has resulted in the scanning of over 99 percent of all incoming containerized cargo for radiological and nuclear threats at our land and seaports of entry. As this work has matured over the last few years, DNDO has shifted its workforce to place a greater emphasis on our land borders between ports of entry, maritime, air, and the interior.

Non-POE Land Border

DNDO has been working on a cooperative effort with the CBP Office of Border Patrol (OBP) to develop a strategy for deploying a radiological and nuclear detection capability that is focused on those areas between the official ports of entry along our land borders. Under the Phased Deployment Implementation Plan, DNDO and OBP have evaluated selected radiation detection equipment and their concept of operations. Indeed, the very presence of BP Officers on the border, performing their duties with regard to enforcing immigration laws and preventing smuggling, is a significant defense and deterrent against nuclear smuggling whether or not they carry radiation detectors. This is an example of how the normal activities of the Department contribute to the prevention of nuclear terrorism.

Maritime

In the maritime environment, DNDO has worked closely with the United States Coast Guard (USCG) and CBP Office of Air and Marine (OAM) to provide radiological and nuclear detection capabilities. Through the USCG Joint Acquisition Strategy, DNDO has equipped and trained USCG boarding teams with detection technologies, and budgeted funds to recapitalize existing USCG equipment and to acquire newly developed systems. DNDO has also trained CBP OAM boarding teams and worked to develop, acquire, and recapitalize CBP equipment.

DNDO has also established the West Coast Maritime Pilot (WCMP) to work with authorities in Washington's Puget Sound and the San Diego area to design, field, and evaluate a radiological and nuclear detection architecture (specific to each region) that reduces the risk of radiological and nuclear threats that could be illicitly transported on recreational craft or small commercial vessels. The project develops radiological and nuclear detection capabilities for public safety forces to use during routine public safety and maritime enforcement operations. One immediately recognizable lesson learned of the WCMP is the value of the Maritime Transportation Security Act creation of Area Maritime Security Committees (AMSC). WCMP efforts were coordinated through the respective AMSC in the region, both of which established subcommittees for the preventive radiological and nuclear detection mission.

DNDO continues to work with Federal, State, local, and Tribal participants in support of the WCMP efforts. CBP OAM and USCG will continue to determine the best methodology for screening vessels based on resources, geographic consider-

ations, and security levels. The lessons learned from the WCMP, particularly with regard to maritime chokepoint operations, will inform and improve standard operating procedures.

In addition to this pilot, we have tested boat-mounted detection systems. Results of the fiscal year 2008 "Crawdad" Maritime test campaign and early deployments of selected systems in the West Coast Maritime Pilot in Puget Sound will shape the identification of an effective boat-mounted radiation detection system. DNDO also conducted the Dolphin Test Campaign to characterize several commercial off-the-shelf (COTS) and Government off-the-shelf (GOTS) systems in the spring of this year and is analyzing the results. If we can demonstrate that operational and technical requirements of the maritime mission area can be met by COTS/GOTS boat-mounted systems, they may be incorporated into DHS acquisition programs. If not, DNDO will launch a program to develop and test a prototype system that is both effective and suitable for this mission.

Aviation

DNDO has similarly expanded efforts to secure the air pathway—both commercial and general aviation. To address radiological and nuclear threats in aviation, DNDO is working with CBP to enhance capabilities to detect and interdict illicit radiological and nuclear weapons or materials entering the United States via international general aviation. These efforts have included a test campaign with CBP officers at Andrews Air Force Base in 2008 that analyzed CBP's radiological scanning capability and identified methods to improve effectiveness by enhancing equipment and operational techniques. As a result of these efforts, 100 percent of international general aviation flights are scanned for radiological and nuclear materials by CBP upon arrival in the United States. Also in partnership with CBP, DNDO has developed a pilot to detect and interdict illicit radiological and nuclear weapons or materials entering the United States via the commercial aviation pathway. The Pax/Bag (passenger/baggage) Pilot was conducted during fiscal year 2010 at the Seattle/Tacoma and Charlotte airports to evaluate radiological and nuclear scanning capability for passengers and baggage entering into the commercial airport environment from overseas. The results of the pilot program will inform future deployment strategies for airports and will provide input for research and development efforts to optimize radiological and nuclear scanning of passengers and their baggage in the airport environment.

Additional architecture studies will examine the aviation environment holistically—looking simultaneously across multiple aviation operations such as movement of passengers, baggage, cargo, and the aircraft themselves. As with other domains, the application of random, agile, and mobile solutions will create uncertainty in the adversary across the various aviation operations. This approach will also incorporate the detection and deterrence benefits provided by non-radiological and nuclear security measures already in place, such as scanning checked luggage with automated explosive detection machines. This holistic approach examines the intersection of multiple aviation pathways, including the commonality of systems and processes that can be leveraged and shared.

Testing

DNDO has also established the U.S. Government's premier radiological and nuclear detection system test and evaluation organization. DNDO has conducted 48 separate test and evaluation campaigns at more than 20 experimental and operational venues. These test campaigns were planned and executed using rigorous, reproducible, and peer-reviewed processes. Tested detection systems include pagers, handhelds, portals, backpacks, mobiles, boat- and spreader bar-mounted detectors, and next-generation radiography technologies. The results from DNDO's test campaigns have informed Federal, State, local, and Tribal operational users on the technical and operational performance of radiological and nuclear detection systems to help select the most suitable equipment and effective CONOPs as we work to keep the Nation safe from nuclear terrorist threats.

DNDO constructed and operates the state-of-the-art Radiological and Nuclear Countermeasures Test and Evaluation Complex (RNCTEC) at the Nevada National Security Site (N2S2) to allow testing against significant threat quantities of special nuclear material. Further, DNDO established the Rail Test Center (RTC) at the Port of Tacoma in Washington State to conduct testing in an operational port environment. DNDO's testing expertise and experience is sought by interagency partners, such as the Departments of Energy and Defense, and international partners such as the United Kingdom, Canada, Israel, the European Union, and the International Atomic Energy Agency (IAEA). DNDO has recently entered an active partnership with the European Community's Joint Research Center to conduct the Illicit

Trafficking Radioactive Assessment Program + 10 (ITRAP + 10), an ambitious 3-year test program to evaluate nine classes of radiological/nuclear detection systems in U.S. and European test facilities.

Research and Development

To support basic research and the long-term development of systems with increased capabilities, DNDO is conducting R&D using advanced compact high-performance handheld systems; advanced passive standoff detection technologies; improved detection through networked and distributed detection systems; better detector materials; and improved material attribution and radiochemistry. Additionally, DNDO is pursuing targeted technologies for the detection of shielded special nuclear material through passive and active interrogation programs and development of key supporting systems for varied deployment schemes.

Underlying these efforts is our work to ensure a continued pipeline for human capital development and basic research, executed through DNDO's partnership with the National Science Foundation for the Academic Research Initiative. To date, the Academic Research Initiative has awarded 36 grants to 27 Universities. DNDO will continue to collaborate on these longer term research and development activities as the transformational research and development programs transition to DHS's Science and Technology Directorate pending Congressional approval of the fiscal year 2011 budget.

Nuclear Forensics

DNDO's National Technical Nuclear Forensics Center (NTNFC), has also done an impressive job coordinating and advancing U.S. Government technical nuclear forensics efforts. Established in 2007, the NTNFC serves as a National-level "system integrator" for joint planning, exercising, and evaluating our National capabilities, while also investing in technical capability advancement. The NTNFC led the interagency effort to develop the "National Strategic 5-Year Plan for Improving the Nuclear Forensics and Attribution Capabilities of the United States," which was signed by the President and submitted to Congress in April. U.S. policy emphasizes that any nation or group that enables a terrorist to acquire nuclear devices or materials will be held accountable. Robust forensics and attribution capabilities help to underwrite this policy.

PATH FORWARD

I look forward to continuing our work with our partner U.S. agencies and Congress to prevent nuclear terrorism. We will complete the ASP program so that a final decision on certification can be made; we will end the CAARS technology demonstration this fiscal year; and we will complete the GNDA strategic plan. Further, we will continue to develop technologies and systems that will address gaps in our capabilities to detect threats. Our development of new neutron detection technology to replace helium-3 detectors will mitigate the impact of the helium-3 shortage by decreasing and ultimately eliminating the need for helium-3 in our radiation portal monitors. To support operators in the field, DNDO will purchase current and next-generation handheld systems for use by CBP, USCG, and TSA. DNDO also will work with State and local agencies to establish new radiological and nuclear detection programs in urban areas and train more than 4,000 additional law enforcement and emergency management officials in fiscal year 2011.

We will continue to work on next-generation human portable detectors for varied applications, including a focus on systems with new detector materials and advanced algorithms, as well as smaller, more capable systems. DNDO plans include the potential development of helicopter-mounted, boat-mounted, and long-range radiation sensors to allow more flexible operations. We will also continue our important test and evaluation collaborations with Federal and international partners. We will focus on addressing challenging operational environments, such as international rail and break-bulk cargo, to increase our ability to scan for radiological and nuclear threats.

Overall, we will place much greater emphasis on defining the GNDA, both as it exists now and as we would like it to exist in the future. The responsibility to define the architecture is DNDO's greatest challenge and its greatest opportunity. Over the next several years, our long-term architectural vision can be characterized by several common themes that apply across all layers. In every layer and pathway, we will seek to increase detection coverage and capability, deter terrorists from planning or attempting nuclear terrorism, introduce as much uncertainty as possible in the minds of the adversaries with regard to the risk of interdiction, and take maximum advantage of pre-existing activities that can contribute to the overall capability to prevent nuclear terrorism.

In parallel, we will look carefully at the lessons we have learned from past cases related to the illicit trafficking of nuclear and other radioactive material. While there have been no cases within U.S. borders, we have evidence of small but significant cases overseas. We must continue to look at how illicit trafficking takes place and refine our strategies accordingly. While this analysis is still incomplete, I believe it will improve law enforcement efforts within the United States.

I anticipate that future implementations of the GNDA will emphasize mobile or agile detection components, which will increase our capability to respond to escalated threat levels by focusing or surging detection assets to interdict these threats. I recognize the important contributions that other U.S. Government agencies and Congress make in accomplishing the mission to prevent nuclear terrorism and I am committed to working in coordination with all parties to develop effective strategies and technologies.

My vision of DNDO is that of a highly competent agency that has a broad spectrum of capabilities including nuclear detection, reporting and analysis specialties, and nuclear forensics. My expectation is that, over time, we will develop a reputation that allows us greater leverage in defining detection architecture throughout the world. We have made some significant steps in this regard. For example, under the President's Global Initiative to Combat Nuclear Terrorism, DNDO coordinated the international development of the Model Guidelines Document for Nuclear Detection Architectures. This document promotes the development of National nuclear detection architectures and capabilities to combat the illicit trafficking of nuclear and radioactive materials, weapons, and components. While this is an important achievement, I recognize that there remains room for growth.

Chairwoman Clarke, Ranking Member Lungren, I thank you for this opportunity to discuss the status of DNDO. I am happy to answer any questions the subcommittee may have.

Ms. CLARKE. I would like to thank you for your presentation and testimony here today, and frankly, found your candor very refreshing and look forward to continued dialogue as well. I want to thank you for your testimony.

I am going to remind my colleague that we will have 5 minutes to question Mr. Stern, but I think we can use more time given the fact that it is just you and I.

I will now recognize myself for questions.

Mr. Stern, in your testimony you stated that the ASP program is approaching a key decision milestone. DNDO and CBP are currently working together to resume field testing in October. It was my impression that testing was finally to conclude on the ASP at the end of this month.

What is this round of testing for? Will that be it for testing? What if the test should fail?

I will strongly caution you that proposing several more rounds of testing is not going to go over too well with me, my Ranking Member, or other Members of this subcommittee, so I just wanted to get some feedback from you on that.

Mr. STERN. Thank you for the question, Chairwoman. I would like to begin by explaining that there are really two types of what we call testing, and they go for different names. One is on the technical end, and that is to see if the device will find the material that we are looking for, and that we have spent a lot of time and money on, and that is what helps us conclude that, in fact, there is a benefit—substantial—in secondary inspection but not in primary inspection.

The other type of testing is more of a validation and an operational testing to make sure that it fits reasonably well within the process that the end user—in this case Customs and Border Protection—within their process, without unduly interfering with what otherwise happens and our ports of entry and other locations.

So we are done with the technical testing. What we are doing now, and we have actually been through before, we are doing more the operational and the field testing, and this is an iterative process, so I think it is highly likely that we are, in fact, at the end, because again, for the field validation we have been through this before. We learn; we tweak the system; and then we bring it back to make sure it has fixed the operational problems that we have had before.

So this isn't, as you noted, the last time we are at—this isn't the first time we are at this point, but this is the process. It is iterative. We are done with the technical testing. We are making sure that it operates the way it needs to operate, that the inspectors can use it, that it doesn't unduly alarm, that it is not confusing, that it doesn't impede the flow of traffic unnecessarily.

While it is a test, so I can't confirm that it will pass that test, otherwise, of course, there would be no need for the test, but I do feel that we are at the end of this process because we have been through this iterative cycle and we think we understand all of the problems that have been identified before. So we do believe that this coming year, this—well, this fiscal year, actually, we will be able to make a decision on the ASP one direction or another.

But again, I caution you that I can't guarantee you that we will pass the test, if you will, instead of having to go back and tweak something because, again, that is what the test is for, to make sure that it works the way we need to. But I do, as I think you suggested you do also, want to move beyond the ASP because that should not be seen as defining DNDO.

Ms. CLARKE. Let me ask you, you have been able to determine, through a detectable testing, that the ASP had a secondary screening use. Ultimately, do you see DNDO qualifying that as significant, and what is that significance if that is the case?

Mr. STERN. Thank you, Chairwoman. Yes, there is a significant benefit in secondary, and using it in secondary is an important role. The concept of operations used by CBP at most ports is that the conveyances are first put through a more general device that examines whether radiation levels are too high or too low—or rather too high.

If, in fact, they reach a certain level they are then sent over to secondary inspection to find out if the reason the radiation levels are too high are because of some legitimate use of medical isotope, or many commercial materials have some level of radioactivity, or whether it is a threat material. So yes, that role in secondary is important.

It was always envisioned, actually, as a possibility from the beginning of the ASP project—it was initiated with the possibility of using ASP either in secondary or in primary inspection. As discussion proceeded, it was—its primary inspection has greater focus but it was never—the secondary role was never ignored.

Again, the use of the term "secondary" sometimes comes across as pejorative, as if, well if you can't use it in primary we will use it in secondary, but that is not really the way we look at it or the way it is. In fact, secondary is a very important role within the concept of operations of the CBP, and this is the role it will likely play.

Ms. CLARKE. As you probably know, Mr. Stern, I am a New Yorker and I have been a strong supporter of the Securing the Cities, STC, program in New York. Last year the DNDO budget did not contain any funding for STC. The stated reason was that DNDO thought that the program was far enough along that local funding could sustain it, and I can tell you that it is not what I or the other members of New York's delegation were told by the NYPD and others, and we would support an amendment to restore funding for the STC in the fiscal year 2011 appropriations bill.

What are your intentions this year regarding the STC funding?

Mr. STERN. Thank you. Just as a side note, I actually on Monday was able to go up to New York City and view some of the participants and the capabilities developed within the STC program, and I was incredibly impressed with the level of competence and dedication at the New York Police Department and the officials involved in the program. I actually never really thought that I would see a police force that knew how to use radiation detection devices, and knew how to read them, and knew what these meant. So I was very impressed with the people that I met there.

We have a challenge in the sense that the STC was always envisioned as a pilot program, 3 to 4 years, to see if, in fact, we could reach certain milestones, and the intention in fiscal year 2011 now is to evaluate the progress that was made in the past in this program to see whether we should proceed in the future. The question of whether STC will proceed or not is only part of the question because we at DNDO view—and I view—support of State, local, city officials in detecting nuclear material to be a fundamental part of our obligation and our role.

The question of whether this particular program proceeds will depend in part on the outcome of this evaluation, but it was always intended to be a pilot program to see if we can create self-sustaining infrastructures, and that is one of the things that will be measured.

Ms. CLARKE. When do you envision this evaluation commencing and ending?

Mr. STERN. We don't have a precise timeline, but it will be during this—well, the next fiscal year, fiscal year 2011—it will begin and commence.

Ms. CLARKE. One part of your testimony gave me considerable pause. You stated, "DNDO has also established the U.S. Government's premier radiological and nuclear detection system test and evaluation organization. DNDO has conducted 48 separate test and evaluation campaigns at more than 20 experimental and operational venues," and, "to support basic research and the long-term development of systems with increased capabilities, DNDO is conducting R&D using advanced compact high-performance handheld systems, advanced passive standoff detection technologies."

This seems to go against the entire reorganization where basic and transitional research and development activities as well as performance were moved from DNDO to the science and technology directorate. This was done for good reason, the most well-known being the continued problems with research, development, and testing of the Advanced Spectroscopic Portal—excuse me. So does your

testimony indicate that we are going back to the bad old days, or would you just want to give me some——

Mr. STERN. No. We are not going back to the bad old days, as you called them. This is, in my view, a turning point.

The explanation is perhaps two-fold. One is, of course, that the—under the law the transfer hasn't—occurs when the budget is approved. But the other is, of course, that—and this is a rather complicated issue that has taken me quite some time to understand, but within the testing of devices there are a variety of different phases of testing and ways of approaching, and it has always been envisioned, and the role of S&T—the S&T under secretary overall is essentially regulating the testing.

So the testing of devices is still performed and has always been performed outside of the directorate TAR that you mentioned, and that would continue. But under the new law we would fully transfer the transformation research and development, the TAR directorate, to S&T, as envisioned by Congress.

Ms. CLARKE. I now yield to our Ranking Member, Mr. Lungren, for his questions at this time.

Mr. LUNGREN. Thank you very much, Madam Chairwoman.

Mr. Stern, thank you very much. I realize you have only been in this position a short time so I hope my questions aren't unfair.

You talked about the CAARS program. You talked about how it is being ended now—I presume you mean now.

What did we learn out of that? I mean, what did we learn out of the mismanaged technology development program known as CAARS?

Was it poor planning and oversight? Was it one part of the operation not communicating with the other part of the operation? Was it an idea that was a bad idea? Was it failure to communicate with the CBP?

Was it someone at the front end not understanding what you were going to do at the back end to design something that doesn't fit the need? Seems to be elementary; maybe I am making it too simple. But are there lessons learned to ensure that we won't repeat this kind of thing again?

Mr. STERN. Thank you, Ranking Member Lungren. Yes, there are definitely lessons learned, and I will elaborate a few of them in a moment, but first I would like to make sure—clear that the need for a technology to meet the objectives of the CAARS program existed, and it actually still exists, and it is why I mentioned some of the more useful technologies will be migrated to other programs——

Mr. LUNGREN. Right, but who determines that need? Who tells you of the need?

Mr. STERN. We define the materials that need to be detected and the—we being DNDO—and the——

Mr. LUNGREN. Right.

Mr. STERN [continuing]. Approaches that are useful to find those materials.

But if I could go on, there clearly were many steps that were taken that were the wrong steps, and there are two key lessons for me that I take away, and I think we as a Department, also. The first is the need for more intense, better cooperation and coordina-

tion early on. As you noted correctly, there wasn't such coordination and the program got off track and it didn't satisfy—and wasn't going to satisfy—the operational needs of CBP. That was wrong, and that won't happen again.

In addition——

Mr. LUNGREN. So, you say it won't happen again. How are you ensuring that it will not happen again?

Mr. STERN. Thank you. This is the second part of my answer. It won't happen again because now we have a system in place that we didn't have before.

At the Department of Homeland Security level we have management directive 102.01, which requires that as the system moves forward at each step certain things have to be met, and some of those include, of course, a mission statement and clear cooperation and coordination of those who will be the ultimate end users.

Within DNDO we have devised a subsidiary system that is fully consistent with the Homeland Security system but is much more detailed so that we now have in place a system that assures that that mistake of lack—non-coordination as well as other mistakes won't happen again, and I see it as my role to make sure that we follow that system so that it doesn't happen again.

Mr. LUNGREN. So if I am CBP do I wait to hear from you that you folks have developed a range of things that have to be detected, or do I come to you and say, "In our operations we have determined that it would be particularly helpful if we had a particular technology which allowed us to uncover this kind of object"? See what I am saying? I am trying to find out who starts the process, or is it a collaborative effort from the very beginning, or do you have something which anticipates that you could have the beginnings of a concept of the need from either end?

Mr. STERN. Thank you, Congressman Lungren. The process really begins in the interagency, particularly in the relationship between us at DNDO and the Department of Energy, where we define the threat materials—what does it look like? What is the level of thing that we have to find? Which materials? How big? What shape?

From that we derive the technologies, working very closely with CBP, again, at every step, that will allow this material to be detected. The importance of our coordination gets more and more relevant as we get closer to the end goal.

We coordinate early on—I have to say also, some of my first outreach efforts since I began has been to CBP. I have met with the commissioner, the deputy commissioner. We now have very good working relationships that we didn't have 2, or 3, or 4 years ago.

But the process is one that we work together. CBP starts it by defining, again, with the Department of Energy and a few other places, what the material is we are looking for. We work on devices. Once we get closer to something that is tangible CBP is a fundamental part of what we do.

Mr. LUNGREN. Thank you. Let me, if I might, ask you about ASP.

Mr. STERN. Sure.

Mr. LUNGREN. We have been talking about this in this committee and subcommittee for what, 5 years, 6 years, something like that. Were we too ambitious when we hoped for and were told that ASP

would be one of the crucial answers to the challenge that we had and would be used—at least as I understood it, would be used as primary rather than secondary—and I know you are saying secondary is still important, but we were led to believe that it would be a crucial aspect of primary not only in terms of being able to detect more precisely but also to, in essence, speed up the system. At least that was my understanding. You can correct me if I am wrong.

But again, what have we learned from that? Is it that we missed the mark in terms of what our ambition was? Or was it in terms of the concept to achieve that? Or was it a failure, then, if we had the proper mission, we had the proper concept, it was the execution of the concept?

Because I appreciate what you say when you say, look, we didn't lose everything; these are still valuable. Just like you mentioned with respect to CAARS. We may cancel the CAARS program but we are still using things that we developed out of that, which is good—not as good as it should be, because presumably you want it to take care of that which you first designed it for.

So in the ASP, again, were we too ambitions? Was the concept inappropriate? Or was it the execution of the concept where you find the most problem?

Is it status accompli that ASP is only going to be used for secondary, or are we still envisioning the possibility of it being used as primary in the future?

Mr. STERN. Thank you, Congressman Lungren. In answer to your first question, there are, like with the CAARS program, a number of lessons to be learned.

The two of the three that you listed that I believe we should have learned and did learn is, No. 1, that we moved too aggressively. We were seeking, back in 2005 and even before, a quick fix, and moved too quickly through the acquisition program. That is, again, why—the development and acquisition program—and that is, again, why we have the new management directive and the more precise directive that I am in charge of at DNDO.

The second element that rings true about the reasons are this lack of coordination. Just like with CAARS, we didn't have relations with CBP that would have allowed the process to move forward in a smooth way. So those are two big-picture reasons why the program has taken a much longer——

There are a few other more technical reasons, which I think we would have reconsidered with the benefit of hindsight, one of which was, at the outset we required that the intellectual property be retained by the Government. That is a good approach and used in many programs, but in this case it led a number of the more advanced companies in the field to not participate, to drop out of the program. In retrospect, for this program I think that might have been a bad decision.

Mr. LUNGREN. I guess one of the concerns you would have with that is if you don't retain the intellectual property with respect to the Government, are you talking about a question of security or you talking about a question of ownership and therefore making money on it?

Mr. STERN. If it were a question of security it would be clear we would regain ownership, and of course the devices and things that they are detecting, they don't know. I mean, they don't know what they look like——

So it is more of a commercial issue, and it is also the desire to not be tied to one particular supplier. If we retain the intellectual property rights we can have other suppliers. So it is not a security—the decision, as far as I understand it, wasn't made on security—out of security concerns.

Mr. LUNGREN. Thank you. The two examples we have been examining here, CAARS and ASP, could, I suppose, lead you in one of two directions. One is that we accepted less than the best, or the other is the pursuit of the perfect interfered with us trying to deliver usable items that would quantitatively improve the status quo but wouldn't get to where some would seek, you know, perfection—100 percent, et cetera.

How do you make sure you strike the proper balance between those two problems?

Mr. STERN. Well, we work, really, on both ends, in the sense that we have the R&D, which, as was noted, we have become part of the different—part of DHS, so we can look at, if you will, the perfect, the longer-term, and develop that along the development cycle while also developing equipment that is based on current technology that improves, in a significant but not transformational way, our capability to detect threat material. Again, we work on both ends.

The programs that you have listed were poorly implemented, and my job is to ensure that in the future we implement our programs in a more reasonable and more rigid way, following the systems that my predecessors have correctly developed.

Mr. LUNGREN. Is there any analogy that is appropriate between this situation and the arena of cybersecurity? What I mean by that is, having discussions with some experts on cybersecurity in the private sector, they were making the point that you can develop something in one of two ways. You can develop it using operating systems that are in the commercial marketplace and bringing them together, integrating them in a certain way; or you can, from the very beginning, demand that they be sole idiosyncratic or sole—or require them to be unique such that the reality is it will take a lot longer for it to develop, you may scare away some potentials that are out there, and you may not advance as quickly as you otherwise would because in a sense you are reinventing the wheel or you are trying to go around the wheel.

Is there anything analogous to what you do or are your examinations so unusual that going to conventional, commercial—I don't want to say off-the-shelf, but I think you know what I mean, that that is not possible?

Mr. STERN. No. For certain applications it is possible and we are looking increasingly to commercial, off-the-shelf cut technology for our uses, and also in support of State and locals. For example, one of our newer programs that I support strongly is our GRaDER program, where we, working with the private sector, offer them a mechanism where we will test their devise, in essence, giving them

a good-housekeeping—good Homeland Security—seal of approval so State and locals know they can buy them.

One of the lessons from the CAARS program was that while we were developing our own technology the private sector made—for other reasons, made a leap in its capability to do some of the elements. So if you see a next generation of radiography, which again, is the objective of the CAARS program, it will be a combination of off-the-shelf and unique algorithms that we have helped devise based in part on materials that are in the classified form. So we certainly support using, where we can, off-the-shelf technology.

The other point that you raised, being overly precise in your requirement, was, in fact, one of the lessons when I reviewed the history of the ASP problems, one of the technical lessons is we were too precise in things that we needed the companies to deliver, which would likely raise the costs and delay it a little bit.

Mr. LUNGREN. So, you just mentioned a moment ago create a program dealing with local jurisdictions. Is that an accomplished program, or is that something you are moving to? If it is an accomplished program do we have any actual results where that has been achieved?

Mr. STERN. Yes, well, the program requires that the companies being tested take on the cost of the testing, and that was, of course, a deterrent. We shifted a little bit so this year we are allowing DNDO to cover half the cost of the testing, and two companies have thus far signed up. I don't believe they have actually been tested yet, but——

Mr. LUNGREN. You obviously have confidence that it is going to work or you wouldn't be trying it.

Mr. STERN. Right. We think it will be a useful thing in particular for State and locals so they have some guidance when they——

Mr. LUNGREN. Is there any additional or enhanced authorization that you need in order to carry out your functions right now?

Mr. STERN. Thank you, Congressman Lungren. At this point, having just been here for a month and a half, my answer has to be no. As you know, an important part of the Global Nuclear Detection Architecture—one of the unique features is most of the thing that we are responsible for running, implementing, coordinating falls under the authority of other agencies, so there is, of course, an inherent challenge.

But I have found in the month-and-a-half I have been here such incredible support and good will from all of the agencies and the—such strong support from the White House that I am confident that we will be able to work—and accomplish the objectives we need to without additional authority.

Mr. LUNGREN. Okay. Well, I would just hope that you would keep in mind that this committee stands ready to assist you, and even though you find a number of these component parts the jurisdiction of other agencies and you are supposed to sort of put them together, sometimes we might be able to assist on that, and again, I hope that you would keep us properly informed so that if a gentle nudge is needed—or even a strong nudge is needed—that we would know about it sooner rather than later.

Mr. STERN. I very much appreciate that offer and I intend to keep in close contact with you and your staff so that you know what is going on at DNDO and can make decisions——

Mr. LUNGREN. Thank you very much.

Thank you, Madam Chairwoman.

Ms. CLARKE. Thank you, Ranking Member.

Mr. Stern, I found one part of your testimony almost incredible: 100 percent of the international general aviation flights are scanned for radiological and nuclear materials by CBP upon arrival in the United States. We have been under the impression that general aviation was actually a threat vector which we had nearly zero coverage.

Am I understanding your statement correctly that we now have this security gap closed?

Mr. STERN. That particular gap is closed. That statement is accurate. There are other issues we have with the architecture, although I would feel more comfortable discussing those gaps or those issues in a different setting.

Ms. CLARKE. Very well. Mr. Stern, I would like to give you an opportunity to tell this subcommittee what new directions you believe are important. What drives you? What do you want to achieve? What things do you think this subcommittee should be aware of or focus on?

Mr. STERN. Thank you, Chairwoman Clarke. What drives me is the ability to look at the mistakes that have been made in the past and try and correct them, to look at the events that have occurred in Europe with illicit trafficking and see how that can guide us in our architecture at home. That is a process we have begun and actually will never end, but it is an intellectual challenge which will help ensure that we do the right thing in our architecture at home, so that is what drives me.

I see and believe that one of the outcomes—one of the results—will be—of this relook—will be that we shouldn't focus as much on borders as we have but need to look within the country for mechanisms for detecting nuclear and radioactive material, which means working very closely with State and local officials so that there is, you know, effective, ultimately, detector on every block and every policeman can have a manageable detector that will identify threat material.

We are not there yet, either in terms of research and development or in terms of actual deployment, but those are the directions I want to go, and again, I am working on the architecture, taking advantage of the lessons we have learned and supporting State and local officials.

Mr. LUNGREN. Can I just follow up on that?

Mr. STERN. Sure.

Mr. LUNGREN. Is that truly your vision, that we would have that massive proliferation of devices so that we would have that capability throughout the country?

Mr. STERN. That is illustrative. I mean, I can certainly see and would hope in the future—I can't tell you when; 2 years, 10 years, 30 years—that every police officer would have a device that would allow him, in the course of his normal investigation, whether it is a drug bust or some other type event, to, you know, whether there

is nuclear or radioactive around, we can't have—we need to close all of our gaps. We can't assume that we will find materials at the borders, so if we have to assume that the material will be in the United States we need to do what we can——

Mr. LUNGREN. No, I agree that would be the perfect world. I am just trying to make sure that you think that is a practical goal, because if it is that would guide us in certain decisions; if it is not, other decisions.

I guess what I am saying is, can you envision that not only we could do that technologically, not only could we do it with a scaling-down of the size of the instruments necessary so, in fact, an officer could have a readily available piece of equipment, but also in terms of the cost? Because if that is a reasonable objective then we move in that direction and we commit resources to that. If that is not, particularly the last part of it, then we could spend a lot of time trying to devise something that in the end we would never be able to make the commitment to.

Maybe it is so early that it is—in your tenure and early in the concept that that is an unfair question, but I would just like your observations on that, if you don't mind.

Mr. STERN. Thank you, Congressman. It is not practical today, but I was asked about my vision.

I can see, as we drive down the cost of detectors—right now, one of the biggest problems is size—the size of detectors. As we increase the accuracy of the detectors and the ability to specify threat material, sure, in the future, without, again, specifying a date, it is a possibility.

While I said every cop, well that may be every other cop, or every 10 cops. Of course, in New York, under the Securing the Cities program, a very large number—and I can't tell you offhand how many—but a very large number of police officers do have chirpers and handheld devices. So it is not an outlandish concept. It is reaffirmation that I believe we need to focus internally with State and local officials and see where the analysis takes us——

Mr. LUNGREN. The other thing I would just ask you about is I have some people very, very much involved in interstate protocol—Internet Protocol version 6, and one of the things they tell me is if we move to that we will have almost—I have heard someone say we will have, but I have been corrected by others who say an almost infinite number of locations on the internet, and that that will allow us—as they would tell me, you could put sensors every 2 feet along the southern border. You could have sensing devices on every road in America.

When I start to envision that world what you just said—the concept you just had—develops greater credibility. That is, maybe not handheld devices but—with every officer, but you could have them located on street corners, and yet you could have them interconnected by way of the internet, which would allow for this kind of advanced warning or something.

So I just find it intriguing that you mentioned that because there are things that we have never considered possibilities for in terms of detection—and of course—the question of privacy rights and so forth.

But it is a whole different world than we have ever thought of before, and I was just thinking, as you have your vision, if you have that kind of a backbone to such a system you make it far more credible than, I guess, under present circumstances one would envision. So appreciate what you are talking about on that.

Ms. CLARKE. Director Stern, was there anything further that you didn't cover that you would like to add at this time?

Mr. STERN. No. Again, I appreciate the opportunity to speak with you today. It is a real opportunity to hear your concerns and to let you know where I think I would like to take DNDO, and just welcome to work with you.

Ms. CLARKE. Well, thank you very much. I, too, am intrigued by your vision.

Ranking Member Lungren, as you well know, as we do the work that we do with this subcommittee there could very well be an app for that not too long from now.

So I want to thank the witness for your valuable testimony here today.

Thank you, Ranking Member, for making it in the nick of time. If you have any questions—any additional questions—for Mr. Stern, and I do too, I will make sure that we ask, that you respond expeditiously in writing to those questions.

So, hearing no further business, this subcommittee stands adjourned.

[Whereupon, at 3:14 p.m., the subcommittee was adjourned.]