



Don Cook Confirmed as NNSA Deputy Administrator For Defense Programs

Don Cook was officially confirmed and sworn in last month as the new NNSA Deputy Administrator for Defense Programs. He will oversee the nuclear weapons program for NNSA and will be responsible for ensuring that the U.S. nuclear weapons stockpile remains safe, secure and effective without the need for underground testing.

"Dr. Cook brings a tremendous amount of experience to this position as NNSA continues to transform from a Cold War-era nuclear weapons complex into a 21st century nuclear security enterprise," said NNSA Administrator Thomas

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NNSA SECURES AND PROTECTS: NNSA completed the recovery of a high-activity cesium-137 device that had been in secure storage at a New York City hospital.

NNSA Works to Reduce Radiological Threats in NYC

The NNSA announced in July the removal of a high-activity cesium-137 blood irradiator from the recently closed St. Vincent's Hospital in lower Manhattan. This recovery is part of NNSA's broad strategy to keep dangerous nuclear and radiological material safe and secure and to protect the American people by enhancing our nation's nuclear security.

NNSA's Global Threat Reduction Initiative (GTRI) partnered with St. Vincent's to safely and securely remove the irradiator once the hospital announced it was closing. Prior to decommissioning the device, St. Vincent's played a critical leadership role by volunteering for several NNSA source security enhancement efforts in New York City and was one of the first sites in the U.S. to install in-device delay upgrades on their cesium device through a project now run by NNSA. Cooperation between NNSA and NYC began in September 2009. In the past nine months, NNSA has provided more than \$7 million to accelerate efforts to enhance radiological security in NYC. In partnership with New York City and state agencies and nine partner sites in NYC, NNSA has begun security enhancements at 28 buildings with more than 85,000 Curies (Ci) of radioactive material, conducted alarm response training courses for more than 80 NYC security

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D'Agostino. "His background in science, technology, engineering, manufacturing, and executive leadership is a tremendous asset in helping to implement President Obama's nuclear security agenda."

Cook most recently served as managing director and chief executive officer of the Atomic Weapons Establishment (AWE) in the United Kingdom from 2006 to 2009. In this capacity, he was accountable for AWE's performance on the contract with the UK Ministry of Defence.

Prior to leading AWE, Cook worked at Sandia National Laboratories for 28 years. "I am both honored and excited to be a part NNSA's Defense Programs, while assisting with President Obama's nuclear security agenda," Cook said. "I look forward to working with the men and women of NNSA in preserving the safety, security and effectiveness of the nuclear stockpile and to ensuring that our enterprise continues to lead the world in scientific discovery."

See page 3 for a Q&A session with Dr. Cook.

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EDITORS: *William Gibbons, Andrew Hallock, Damien LaVera, Tracy Loughead, Michael Padilla, Casey Ruberg, Al Stotts, Jennifer Wagner.*

ASSISTANT EDITOR AND DESIGN:
Barbara Courtney

CONTRIBUTORS: *Raffi Papazian, NSTec; Tanya Snyder, Honeywell FM&T; Jordan Vita, NNSA*

Administrator's Corner

The last few weeks have been a particularly exciting time for the NNSA.

Earlier this month, Dr. Donald Cook was confirmed as NNSA's fifth deputy administrator for Defense Programs. Most recently, Dr. Cook was the managing director and chief executive officer for the United Kingdom's Atomic Weapons Establishment (AWE). Previously, he worked at Sandia National Laboratories for 28 years in pulsed power sciences, microtechnologies, infrastructure, and security. Dr. Cook is the perfect choice to lead the way as we transform a Cold War nuclear weapons complex into a 21st century nuclear security enterprise. I am very pleased to have Dr. Cook join us as a key member of the NNSA senior leadership team.

We also have new leadership at Sandia and at two of our site offices. Dr. Tom Hunter recently retired as the president of Sandia after 43 years of exceptional service. He has done an outstanding job leading Sandia, and he has made major contributions to the national security of the United States. Most recently, Tom has been working tirelessly with Secretary Chu to help stop the oil leak in the Gulf of Mexico. I will sorely miss Tom's friendship and counsel. Dr. Paul Himmert, the new president of Sandia, is continuing the strong leadership that has made Sandia one of our Nation's crown jewels for scientific achievement.

At our site offices, Kevin Smith has been selected to be the new site office manager at Los Alamos, and Mark Holecek was chosen to lead the Kansas City Site Office. I am very pleased with these appointments, and I look forward to working with Kevin and Mark in their new assignments.

Each year, R&D Magazine recognizes the best technological advances at universities, private corporations and government laboratories around the world. The R&D 100 Awards are occasionally referred to as "the Nobel Prizes of Technology," and the "Oscars of Innovation." The NNSA recently received 16 of the 100 awards! I am proud to be part of an organization that is regularly recognized as an engine for major innovations in science, technology and engineering. I am confident that the NNSA's record of achievements will continue to grow under the leadership we have throughout our nuclear security enterprise.

Tom D'Agostino



NNSA Works to Reduce Radiological Threats in NYC

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personnel and conducted a counterterrorism table top exercise for local first responders and the FBI New York City Field Office.

These NNSA security efforts in New York City are part of a larger program to further reduce the potential risks of terrorism involving nuclear and radioactive materials in the United States. NNSA has targeted more than 3,000 buildings domestically for these voluntary security enhancements and looks to continue partnerships with state and local agencies in major metropolitan areas to accelerate voluntary security enhancement efforts for high-activity radioactive materials within their regions.

Q&A: NNSA Deputy Administrator Don Cook

What do you see as the heart of NNSA Defense Programs?

COOK: People are the heart of NNSA's Defense Programs. I look forward to working with the women and men of NNSA to preserve the safety, security and reliability of the nuclear deterrent.

What are your core values/fundamentals of getting the job done?

COOK: The three key themes are speed, accuracy and simplicity and I want to emphasize the safety, security and reliability in our people, in our stockpile, in our infrastructure, and in our policies, procedures and actions. Together these constitute the deterrent. Strengthening the deterrent and promoting nonproliferation both require investment in our infrastructure. They both require a capable and very similar science, technology and engineering base – and they both require the best people working together to solve tough national challenges.

What are your short-term and long-term goals for DP?

COOK: Energizing the people and modernizing the deterrent are both the short- and long-term goals that I seek. We will run a tighter ship. We will improve the way we manage our programs. We will ensure that we are the best stewards of tax dollars. We will promote innovation and technical achievement. We will meet our mission requirements. And we will continue to meet the reduced stockpile quantity levels by safely dismantling and disposing of those nuclear weapons that have been designated in excess of U.S. national security needs.

How do these goals fit into President Obama's nuclear security agenda?

COOK: They are of core importance. This is an historic and exciting time to be a part of NNSA. President Obama's nuclear security agenda, including the Nuclear Posture Review, highlights the critical role we play in keeping the country safe and secure. On the one hand, the President talked about strengthening nuclear arms control and non-proliferation. At

President has a clear nuclear agenda, the policy framework is now in place (NPR, START, NPT) and now we have the obligation to modernize the deterrent.

How do our investments in science benefit NNSA's defense programs mission?

COOK: I see our investments in science provide benefit across the board. Strengthening the deterrent and promoting nonproliferation both require investment in our infrastructure. They both require a



Dr. Don Cook

the same time he has made a real commitment to modernizing our deterrent. These two goals play very well together. And, in fact, we play a critical role in making them both possible.

What are some words of encouragement for the women and men of NNSA?

COOK: This time is like no other time I've seen in more than 30 years of my career. The

capable and very similar science, technology and engineering base – and they both require the best people working together to solve tough national challenges.

When not at work, what are your hobbies?

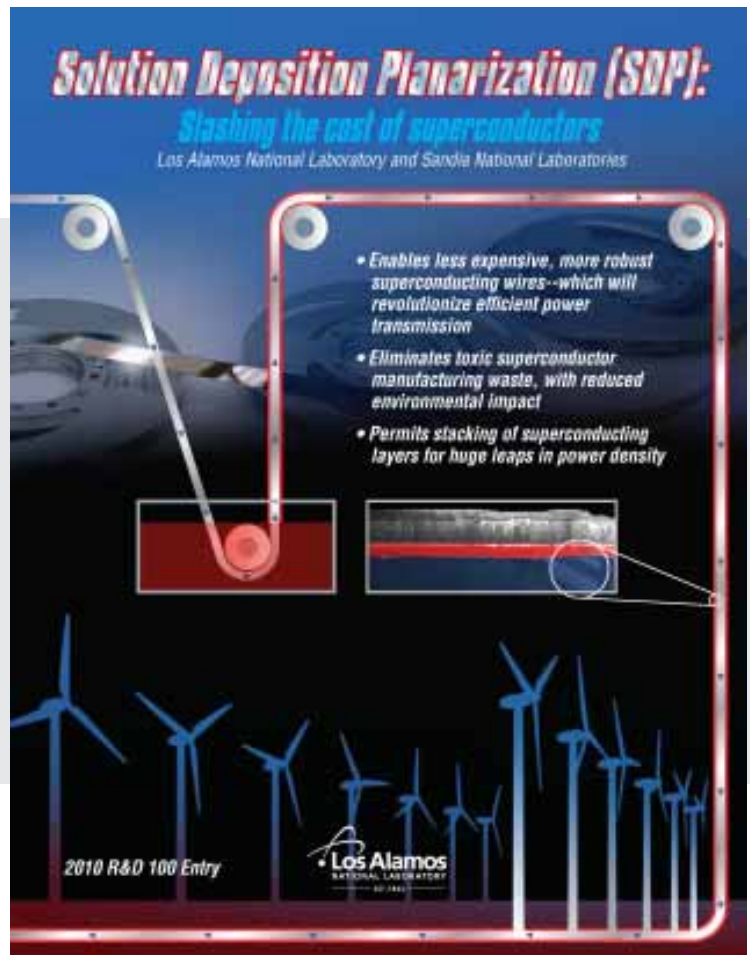
COOK: . I enjoy running, rollerblading and riding motorbikes. I also enjoy spending time with my grandkids.

NNSA's Nuclear Security Sites Garner 16 R&D 100 Awards

NNSA's three national laboratories and Y-12 National Security Complex received a combined total of 16 of this year's R&D 100 Awards.

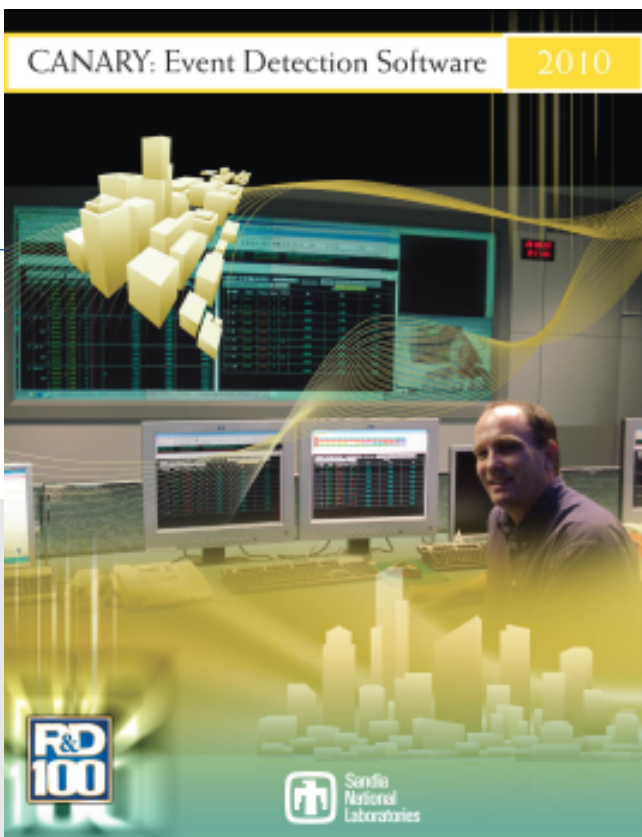
Awarded each year by R&D Magazine to the best technological advances at universities, private corporations and government labs around the world, the R&D 100 Awards are occasionally referred to as "the Nobel Prizes of technology." They were first awarded in 1963 as the I-R 100s, in keeping with the original name of the magazine, Industrial Research. The awards will be presented in November in Orlando, Fla.

This year, NNSA nuclear security sites were recognized for a wide range of advances including an ultrasonic biofuel harvester, a statistical radiation detection system, and a simple, safe and a handheld instrument that performs rapid, point-of-care medical diagnostic analyses. Listed here are the R&D 100 Awards presented to Los Alamos National Laboratory, Sandia National Laboratories, Lawrence Livermore National Laboratory and Y-12 National Security Complex. For more information on these and other NNSA accomplishments, please visit www.nnsa.doe.gov.



Los Alamos National Laboratory

- Ultrasonic Algal Biofuel Harvester
- DAAFox Environmentally-friendly Secondary Explosive
- MOXIE: Movies of eXtreme Imaging Experiments
- Ultraconductus
- Solution Deposition Planarization (SDP) Superconductor Substrate Preparation Process



Sandia National Laboratories

- Acoustic Wave Biosensor for Rapid-Point-of-Care Medical Diagnosis
- CANARY: Event Detection Software
- Micro Power Source
- Multifunctional Optical Coatings by Rapid Self-Assembly

Y-12 National Security Complex

- Modulated Tool-Path (MTP) Chip Breaking System

Additional NNSA Supported Awards

- GammaTracker, developed by PNNL, NNSA's Kansas City Plant and the University of Michigan



LLNL: Retina tomography in 3D shown with 3-micron resolution, smaller than most eye cells.

Lawrence Livermore National Laboratory

- Statistical Radiation Detection System
- High-Performance Strontium Iodide Scintillator for Gamma-Ray Spectroscopy
- Energy Monitor for Ultrahigh-brightness X-ray Pulses
- Grating Actuated Transient Optical Recorder (GATOR)
- Ultrapervious Carbon Nanotube Membranes
- Microelectromechanical Systems (MEMS)-based Adaptive-Optics Optical Coherence Tomography

The Science of Nuclear Security

NNSA's Cygnus Dual Beam X-Ray Celebrates 1000th Shot

Recently, the Nevada Test Site (NTS) celebrated an important milestone in NNSA's Stockpile Stewardship Program. The dual beam Cygnus X-Ray source system

acquire Cygnus. These collaborators accomplished the design, fabrication, and testing of Cygnus-1 and 2 respectively at LANL and L-3. After proving

with an outline of the architecture of Cygnus. Cygnus begins with state-of-the-art Process Controls allowing operation, monitoring, and cycling of the several subsystems. This requires highly-experienced operators and staff. The Data Acquisition and Triggering System requires dozens of specialized voltage/current monitors that feed into four racks of digitizers and digital trigger generators.

Cygnus has become an essential element to a long list of successful experiments i.e., Armando, Step Wedge, Thermos, Odyssey, Barolo and Bacchus.

"Cygnus is a great NNSA investment and multi-agency success story highlighting the

working relationship between NNSA, national laboratories, the NTS M&O - National Security Technologies (NSTec), and private industry," said Raffi Papazian, Missions and Projects Division manager for NSTec.

The Cygnus Dual Beam Radiography System remains quite viable and available for future experiments and research. The system continues to be the subject for published research on pulsed power, x-ray source characterization, and radiography.



ASSURING STOCKPILE SAFETY: Cygnus is the machine that generates the power for the 2.5 MeV radiography pictures taken of the subcritical experiments.

completed its 1000th shot last year. Primarily used during subcritical experiments (SCE), Cygnus helps gather data on the dynamic properties of plutonium and other special nuclear materials. It utilizes a dual beam pulse powered penetrating flash x-ray source to provide images during SCEs.

As early as 2001, NNSA recognized the need for a penetrating dual x-ray source and teamed with Sandia National Laboratories, the Naval Research Laboratory (NRL), Los Alamos National Laboratory (LANL), NTS, and L-3 Pulse Sciences (L-3) to

sufficient dose and refining spot size, each x-ray source was relocated and integrated into the U1a Complex at NTS.

Initially, Cygnus was designed assuming a life cycle of only a couple hundred shots. But the collaborators developed a meticulous maintenance and operations protocol to sustain x-ray source integrity for future experimenters, leading to the successful milestone of 1,000 shots.

The difficulty of maintaining source integrity becomes clear

NNSA/NSO's Aviation Program Receives Federal Award

NNSA Administrator Thomas P. D'Agostino has congratulated the Nevada Site Office (NSO) Aviation Program for receiving a major Federal Aviation Program Award for the second time in the last three years. NSO Aviation Program Manager Joe Ginanni accepted the top award in the Small Program Category on behalf of the team during the 2010 GSA Federal Aviation Awards Ceremony in Phoenix in mid-July.

"We congratulate the NSO Aviation Program for its outstanding work and we are proud to have programs of its caliber serving throughout the nuclear security enterprise," said Administrator D'Agostino. "From stockpile stewardship to international nonproliferation efforts to emergency response, NNSA is committed to excellence in every aspect of our mission. That wouldn't be possible without the hard work and dedication of the NSO Aviation Program and others like it from across our enterprise."

Each year, the GSA Federal Aviation Awards recognize the best aviation programs and professionals from across the federal government.

Comprised of the NSO and its contract partner the National Security Technologies LLC Aviation Department, the NSO Aviation Program provides aerial support to the NNSA Office of Emergency Response. Together, they work to protect U.S. citizens from nuclear and radiological attacks or accidents 24 hours a day, seven days a week from Nellis Air Force Base in Las Vegas, Nev., and Andrews Air Force Base outside of Washington, DC.

The ceremony marked the second time this year the NSO Aviation Program has received a major award. Earlier this year, they received the 2009 U.S. Department of Energy Jeff Snow Aviation Program Memorial Award. This was the fourth time in six years that this team has been recognized as the most outstanding DOE aviation program.

Kansas City, Los Alamos Site Offices Announce New Managers

Kansas City and Los Alamos site offices have announced Mark Holecek and Kevin W. Smith as new site office managers respectively.

Holecek will be responsible for managing all aspects of the Kansas City Plant (KCP) contract which includes operations in Kansas City, Mo.; Albuquerque and Los Alamos, N.M.; and Ft. Chaffee, Ark.

Mark Holecek



Holecek most recently served as deputy manager for the Office of Stockpile Management at the Kansas City Site Office. In that position, Holecek had day-to-day responsibility for administering the mission aspects of the contract with Honeywell Corporation at KCP. He also served as the prime leadership champion for the Kansas City Responsive Infrastructure Manufacturing and Sourcing project (KCRIMS). In

2008, Holecek served for a year on the NNSA Acquisition Strategy Team developing an acquisition strategy for NNSA plant contracts. Prior to that, he worked on a team to develop the NNSA Strategic Framework.

Smith will lead the NNSA Los Alamos Site Office which is responsible for administering the management and operations contract for Los Alamos National Laboratory as well as managing federal activities at the laboratory.

Kevin W. Smith



Smith had been serving as the acting site office manager for the Kansas City Site Office. His past DOE assignments include being deputy manager for the Y-12 Site Office and assistant manager for the Nuclear Materials Stabilization Project at Savannah River. While in the Air Force, he served in a number of senior capacities including an F-16 squadron commander, F-117 Stealth Fighter Group commander, deputy J3 for U.S. Forces Korea, and chief of safety for Air Combat Command. In addition, Smith has received a number of awards to include the DOE Exceptional Service Award, the Air Force Distinguished Flying Cross and the Bronze Star Medal.

NNSA's KCP Reaches Five Million Hours Without Lost-time Injury

A gang of motorcycle riders arrived at NNSA's Kansas City Plant on July 1 to help the plant celebrate a significant safety achievement – working nearly five million hours, in a one-year period, without a worker missing work as a result of a work-related injury.

The bikers, some of whom are plant employees, represent Bikers Against Child Abuse (BACA). BACA's Kansas Chapter was the local nonprofit selected to receive a \$5,000 donation as part of the plant's safety achievement celebration. The organization was selected because it aligns with the plant's community outreach focus on Family Safety & Security and has a partnership with the plant union members.

During a ceremony, Kansas City Site Office Deputy Manager Mark Holecek recognized the plant's long-standing commitment to health and safety and thanked employees for their hard work. This safety achievement included nearly 2,700 people working 365 days without injury resulting in time off work.



SAFETY ACHIEVEMENT: Honeywell FM&T President Tony Broncato (left) and Kansas City Site Office Manager Mark Holocek jump on motorcycles during a ceremony at the Kansas City Plant to recognize five million hours without lost-time injury.

NNSA Launches New Online Safeguards Tool

In July's annual Institute for Nuclear Materials Management (INMM) conference, NNSA unveiled a new web tool to help countries implement their safeguards commitments under the International Atomic Energy Agency's (IAEA) Additional Protocol (AP). The new tool, dubbed the AP Declaration Helper (<http://nnsa.energy.gov/aphelper>) utilizes a simple, web-based interface to assist safeguards managers determine which information to report. It provides an online road map for countries' key safeguards decision-makers to help them decide which information should be submitted to the IAEA under the AP.

On adopting the AP, countries agree to declare a broader range of facilities and activities to the IAEA – making them available to inspections aimed at ensuring that civilian nuclear programs are not being diverted to military programs. For countries pursuing peaceful uses of nuclear power for the first time, determining what is and what is not reportable has been a real challenge. The AP Helper, developed by NNSA's International Nuclear Safeguards and Engagement Program (INSEP) with support from Oak Ridge National Laboratory, aims to overcome those technical challenges making widespread adoption of the AP possible.

INSEP is a key component of NNSA's Next Generation Safeguards Initiative (NGSI), a robust, multi-year program to develop the policies, concepts, technologies, expertise, and international infrastructure necessary to strengthen and sustain the international safeguards system. INSEP draws on the unique expertise of the DOE and NNSA national laboratories to engage partner countries to improve the application of international safeguards through all stages of nuclear development.



GATES VISITS LANL: Los Alamos National Laboratory Director Michael Anastasio presented Secretary of Defense Robert Gates with an official lab commemorative coin that features the lab's first director, J. Robert Oppenheimer.