

National Nuclear Security Administration/Nevada Field Office
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**TWO UNMANNED AERIAL SYSTEMS PURCHASED FOR USE AT THE
NEVADA NATIONAL SECURITY SITE**

LAS VEGAS, Nev. – Two state-of-the-art unmanned aerial systems (UAS) have been purchased as part of a research and development program at the Nevada National Security Site (NNSS). According to NNSS officials, the research and development is designed to expand the development of sensor technology for unmanned aerial systems and enable scientists to further the capabilities of current systems.

“This is a huge opportunity – a real game changer for the NNSS,” said Jim Holt, president of National Security Technologies (NSTec), the contractor that operates the NNSS for the U.S. Department of Energy’s National Nuclear Security Administration (NNSA). “A UAS can be used in situations where manned aircraft may not be used safely. These small aerial platforms can be used at the NNSS for sensor development, as well as site security, environmental monitoring, radiological remote sensing and national security applications.”

NSTec acquired the two Sandstorm UAS platforms from Unmanned Systems Inc. (USI), a company based in Henderson, Nev. USI is a small company with a variety of state and federal customers. The Sandstorm UAS platforms are small to medium-sized, and can carry a payload up to 20 pounds. With the purchase, NSTec becomes a “full user” of UAS technologies.

In December 2013, the Federal Aviation Administration (FAA) named Nevada as one of the six FAA authorized test sites for unmanned aerial systems. NNSS officials were instrumental in supporting Nevada’s successful bid for the FAA Test Site designation, and continue to work with the Nevada Institute for Automataous Systems (NIAS) to further the UAS initiative in the state.

The NNSS was selected because it has the potential to be a premier testing, evaluation and training facility for UAS platforms. Successful UAS activities have already been conducted at the site by other federal and commercial entities as a part of a Strategic Partnership Program in which NSTec is involved. The NNSS overall mission includes emergency response, national security, defense applications and experimentation; nuclear weapons stockpile stewardship, and environmental management.

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UAS Purchase (CONTINUED)

Daniel Blumenthal, program manager of NNSA's Consequence Management Program in Washington, D.C., supports the research into using unmanned systems for radiological remote sensing.

"The ongoing aerial measurements collaboration between the United States and Japan after the 2011 Fukushima accident has demonstrated the expanded need for such measurements and the value of research into adding UAS-based methods to the well-established aerial measuring systems."

In Nevada in April 2016, representatives from 12 foreign countries exchanged technical ideas and information regarding the usage of unmanned systems for emergency response and remediation missions. Japan provided insightful information regarding the operational usage of unmanned systems for continuous monitoring after the Fukushima accident. As a part of the Technical Exchange, a UAS demonstration flight was conducted at the NNSS to display the system's capabilities.

"The acquisition of the UAS platforms is a big step forward," said Karen McCall, UAS program manager for NSTec. "In a few years, we will look back and realize how we have expanded our national mission. We are looking at a multi-modal approach for data fusion of a variety of sensor technologies from radiological, imagery, and other interesting remote sensing systems.

"The process to acquire the platforms was long and intense. We put together a team of scientists and aviators across multiple NSTec divisions. Over a six-month period, the team determined the best platform to meet our R&D requirements."

Included in the contract with USI is training, service, and maintenance. The FAA requires all commercial UASs to be flown by a licensed pilot. McCall said seven NNSS team members have been placed in the training, including pilots, engineers and mechanics.

"The UAS provides another platform for sensor development and integration," McCall said. "In order to grow, we also need a team who knows every detail about the operation of the platforms, and how to integrate a variety of sensors. The expectation is for the team to be ready to conduct R&D UAS missions testing new technology over the NNSS in the Fall of 2016."

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