



# ONE VOICE

September 2015

A Publication for the Nevada Enterprise (NvE) Complex

**Connecting During an Emergency**

Do you know what to do when you get "the call?"



See page 4.

**A Spotless Performance**

Custodial staff show how they keep the NNSC clean and tidy.



See page 6.

**NTec Honors Employees**

Project Management Excellence Award, Performance Awards showcase outstanding work.



See page 8.

# NNSS Responders Join FRMAC for Southern Exposure

By Jeff Donaldson, NSTec

More than 60 federal and contractor employees joined state and local emergency officials in July for the Southern Exposure 2015 (SE-15) exercise in Florence, S.C.

SE-15 was the largest national-level exercise at a nuclear power plant conducted since the terrorist attack on the World Trade Center on Sept. 11, 2001. The scenario called for a radioactive release at the H.B.



Federal and local radiological responders take plant and soil samples as part of their response during Southern Exposure 2015.

Robinson Nuclear Plant near Hartsville, S.C. The event was coordinated in conjunction with Duke Energy, who owns and operates the plant.

Responders from the NNSS joined the Federal Radiological Monitoring and Assessment Center (FRMAC) in responding to the exercise, deploying with detection assets used in monitoring radiological conditions and providing assessment data for use by local, state and federal response agencies. Also, NSTec's Counter Terrorism Operations Support conducted three days of Rad/Nuc Responder Operations training and one day of Population Monitoring-Community Reception Center training for the South Carolina Emergency Management June 2-5, in preparation for SE-15.

The FRMAC worked directly with the S.C. Division of Emergency Management as well as the Federal Emergency Management Agency, the Environmental Protection Agency, Nuclear Regulatory Commission and other federal agencies to monitor and assess the incident and provide data to state responders for use in public protection and mitigating the disaster.

FRMAC also was supported by a public affairs contingency that worked with public information officers from more than 40 agencies to respond to mock media queries, conduct press conferences and interface with responders to provide the most complete "big picture" look at the event.

## RSL's Aerial Assets Join Southern Exposure Exercise as Part of WINGS

By OneVoice Staff Reports

While local emergency officials worked the Southern Exposure exercise on the ground, aerial personnel responded from the air through WINGS.

A collaboration between the Department of Energy National Nuclear Security Administration's Aerial Measuring System program and the Department of Homeland Security's Federal Emergency Management Agency, WINGS was designed to integrate the aerial capabilities of local, state and federal assets into a unified response. Using multiple aircraft equipped with radiation detection systems, pilots and air crews fly based on requests to collect radiological data from the air to provide valuable information for areas of interest.

For this particular exercise, WINGS 2015 was supported by more than 100 participants from at least 15 federal agencies, and used more than nine aircraft. Aircraft and aircrews, staged out of the fixed-base operator in Sumter, S.C., flew over the H.B. Robinson Nuclear Plant near Hartsville, S.C. and surrounding areas during the exercise.

In addition to fulfilling requests for flights during Southern Exposure and making final aerial radiological map products, WINGS air crews also flew missions for their own interoperability exercise, which included the Savannah River Site (with additional radiography sources), the Brunswick Nuclear Generating Station, local land-water interfaces, and point sources in the vicinity of the Sumter airport.

Continued on page 5

## NvE Executive's Corner

**Dave Taylor, General Manager, Navarro Research & Engineering**



"We Build Trusting Relationships" is one of the key Nevada Enterprise (NvE) values and an important element in successfully accomplishing the very complex missions that serve our nation. Whether we're talking about us as individuals going about our regular day-to-day activities or as teams working together to accomplish an overarching mission, trust is a vital component.

A key to building trust is really listening to each other and focusing on what will help us achieve goals of critical national importance. A great line from the old western movie, "The Magnificent Seven" is "... wait, please don't understand me too quickly..." All too often we jump to conclusions and build stories. A better way is to be patient and listen for facts that help to understand (hard for me!).

For Navarro, building trusting relationships helps us contribute to the NvE team as we push to accelerate completion of the Environmental Management (EM) mission at the Nevada National Security Site (NNSS).

As we plan for the next five years, the entire EM team is setting objectives to accelerate cleanup and transition sites into closure. This approach will concentrate efforts and allow for more in-depth characterization and analysis at sites with a higher potential risk to the public, workers and environment. The Pahute Mesa groundwater characterization area is one of the sites that will benefit from this strategy.

Collaboratively working with the Nevada Field Office and National Security Technologies to improve transparency of the Radioactive Waste Acceptance Program is another way Navarro aims to build trust and confidence with stakeholders – to include the public, state and local governments, headquarters and low-level waste generators. The NNSS is a national asset for our security as well as cleaning up the cold war legacy, and Navarro is dedicated to preserving site capabilities.

The NvE has always been prepared to tackle the most difficult national challenges – from technical, environmental, safety and regulatory perspectives. As a proud member of the NvE team, Navarro accepts these challenges with the knowledge that we will be most effective in overcoming them by listening to and working with our associates and partners. The success of NNSS' current missions and the potential to explore new ones hinges on our commitment to all the NNSS principles which contribute to the preservation and protection of our nation.

- We Safely and Securely Achieve Common Goals
- We Effectively Solve Problems
- We Build Trusting Relationships
- We are a Learning Organization

Dave

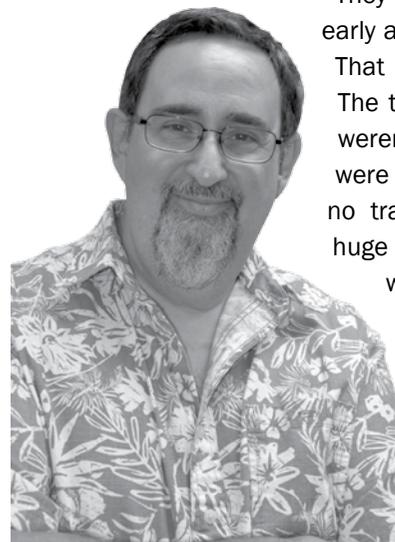
# What I Will Never Forget About 9/11

By Bob Litt, NSTec

I was in New York City on 9/11. At that time, my wife and I lived on Long Island. Both of us commuted into the city for work.

9/11 started out as a glorious summer day. In New York City, the most beautiful days almost always have at least a few white fluffy clouds. That morning, however, the sky was a perfectly clear blue. I remember walking from Pennsylvania Station (the train station at 34th Street on the west side of Manhattan) up 8th Avenue to where I worked on 51st Street. It was such an incredibly delightful walk.

Before the real work of the day began, there was a buzz throughout the office. The TV in the break room was on with live reports of the "accident" downtown at the World Trade Center. If we craned our necks as we looked out the windows, we could barely see the plume of smoke rising from downtown. Then the second plane hit. And later that morning the towers collapsed.



They closed the office early and let us go home. That wasn't easy to do. The trains and subways weren't running. There were no buses. In fact, no traffic at all. Just a huge mass of people walking in the same direction – uptown. All was very quiet.

It was the strangest thing I had ever seen: The streets of

New York with no traffic. I felt like I was in one of those futuristic science fiction movies. Every once in a while an emergency vehicle would rush by, blaring its siren when it reached a major intersection, but that was about it. Otherwise, the silence was deafening.

By the afternoon of 9/11, the city had responded and was prepared to treat hundreds, thousands of casualties. But the number of the injured that needed to be treated at the hospitals was minor. There were even fewer processed at the morgue.

It wasn't until days later that I started to realize what had really happened. I don't recall hearing anyone say it out loud, or reading it in the newspapers, or seeing it on TV, but to me the reality was undeniable: It wasn't that almost 3,000 people had died. It was that they had disappeared.

I first saw the 8½ by 11-inch posters (in New York we call them flyers) at Penn Station when I returned to work. As I walked uptown, I passed a fire station and there were more flyers. And then more in front of a local hospital. Almost immediately after 9/11 the flyers started as a trickle, then a stream, and then a flood. "Have you seen this person?" they asked, with a picture of a missing loved one. The reality was that their loved ones were no more.

I remember walking past those flyers every day for almost a year. In the morning going to work, and in the evening going home. Every day, thinking about those people who had disappeared and their faces on those flyers. For me, that is what I will never forget about 9/11.

*Bob Litt is a native New Yorker who now lives and works in Las Vegas.*

## ONE VOICE

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65<sup>th</sup> Anniversary of the Nevada National Security Site

# CELEBRATING 65 YEARS OF PROTECTING AMERICA'S NATIONAL SECURITY INTERESTS

By Jeff Donaldson, NSTec

In October, the Nevada National Security Site (NNSS) will officially begin celebrating 65 years of atomic testing and homeland security history. From June through the rest of 2015 and into next

year, *OneVoice* will feature the Site's bygone story, paying tribute to the men and women who served to protect national security there.

## APOLLO ASTRONAUTS VISIT NNSS

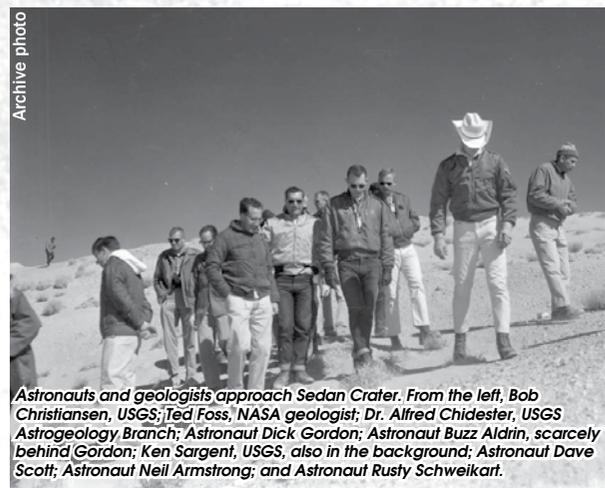
During the Apollo era of space flight to the moon, craters were a critical part of how astronauts identified landmarks on the lunar surface.

In February 1965, U.S. astronauts Neil

Armstrong and Buzz Aldrin were among several astronauts who visited the NNSS to study craters as part of their pre Apollo-11 training.

Below are excerpts from the Nevada Test Site (NTS) News concerning that visit:

...The first group of astronauts started the Test Site study February 16; the second group will arrive March 2. The tours start at Yucca Flat, where nuclear explosive tests have been conducted since the early 1950's. A number of explosion-produced craters are inspected; the astronauts practice geophysical observations.



Astronauts and geologists approach Sedan Crater. From the left, Bob Christiansen, USGS; Ted Foss, NASA geologist; Dr. Alfred Chidester, USGS Astrogeology Branch; Astronaut Dick Gordon; Astronaut Buzz Aldrin, scarcely behind Gordon; Ken Sargent, USGS, also in the background; Astronaut Dave Scott; Astronaut Neil Armstrong; and Astronaut Rusty Schweikart.

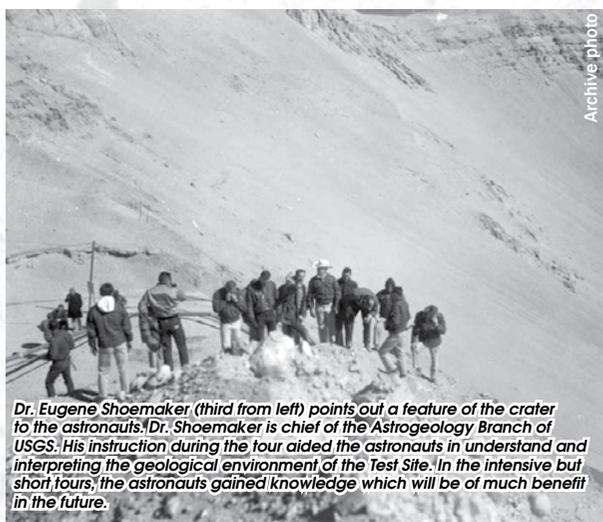
Air Force helicopters are used on the second day of each trip to cover a wide area of rough Nevada country near the western edge of the Site. The field trip members will make stops at several calderas to study the geology of these ancient volcanic formations...

Because there is so much fascination with the moon, it is imagination-provoking that some of the Test Site region is considered similar to the lunar surface. (U.S. Geologic Survey) USGS studies show that the largest caldera known in the United States, Timber Mountain Caldera, is on the NTS...

Along with the study of these ancient formations, the astronauts practice geophysical observations using seismic equipment. Small dynamite blasts are set off in a forward area and the spacemen attempt to locate a buried ridge in that area.

The men are gaining a good working knowledge of geology. Along with their field trips they hear lectures in formal classes. Geology is but one phase of the complete science program developed for their training, but it is an important one.

Neil Armstrong, senior astronaut who was in the first group making geological studies at the Site, has been assigned to a Gemini space project which could be an orbital ride for him before the end of 1965. The Apollo moon program, under NASA direction, hopes to put a man on the moon by 1970. There's much for America to gain from this great adventure...



Dr. Eugene Shoemaker (third from left) points out a feature of the crater to the astronauts. Dr. Shoemaker is chief of the Astrogeology Branch of USGS. His instruction during the tour aided the astronauts in understanding and interpreting the geological environment of the Test Site. In the intensive but short tours, the astronauts gained knowledge which will be of much benefit in the future.

## News Briefs

### Scientists Discuss, Showcase their Work at Target Fabrication Meeting

General Atomics and the University of Rochester, N.Y., hosted their 21st Target Fabrication meeting in June at the Nevada Support Facility (NSF) in North Las Vegas, Nev. About 120 prominent scientists and engineers from the U.S. and international target fabrication field gathered for five days to discuss all aspects of fabricating targets for experiments used by high-power, high-energy laser and ion facilities. The attendees showcased their research and work during oral presentations and poster sessions.

According to Don Czechowicz of General Atomics Inertial Fusion Technologies, the National Nuclear Security Administration (NNSA) recommended they hold the meeting at the NSF because of its proximity to the Nevada National Security Site.

Czechowicz told the audience in his introduction that target fabrication is essential to the success of current experiments at the NNSA's high-energy density (HED) facilities, and essential to refining models that describe nuclear weapon performance critical to the stockpile stewardship program. Further, understanding this performance relies on models developed from HED experiments; the goal is to correctly describe the behavior of materials under extreme conditions. The targets are at the heart of these HED experiments and are critical components used in HED implosion experiments.

"The Target Fabrication specialists meetings, ongoing since 1981, are essential to the Department of Energy and NNSA mission since the U.S. declared a moratorium on all nuclear underground testing in 1992," said Czechowicz.

### Annapolis Midshipmen Intern at RSL-Nellis

U.S. Naval Academy midshipmen Ryan Gaffney and Brock Cremean spent three weeks at the Remote Sensing Laboratory (RSL) at Nellis Air Force Base in Las Vegas, Nev., where they learned about the Department of Energy's Radiological Emergency Response assets and performed several tasks. These included hands-on radiation detector characterization, radiation data analysis using software developed at RSL, literature study on uranium geology, and nuclear nonproliferation and nuclear test ban treaties.

The midshipmen were part of the NA-10 Military Academic Collaboration program. NA-10 funds military academy cadets and midshipmen to intern with the National Nuclear Security Administration (NNSA) at the various laboratory locations around the nation. Interns receive hands-on experience in a variety of disciplines and technologies used within the NNSA as part of our nuclear enterprise.

## In Memoriam

Robert Haney, NSTec, 1957 – 2015  
Steven Munns, NSTec, 1949 – 2015  
Ronald Savage, NSTec, 1947 – 2015

# Chemical Management: Mixing Safety and Efficiency

By Kirsten Kellogg, NSTec

Almost 69,000 chemicals are housed at National Security Technologies (NSTec)'s Nevada facilities – the Nevada National Security Site (NNSS), North Las Vegas Complex and Remote Sensing Laboratory-Nellis – and even more are at outlying locations in California, Maryland and New Mexico. Without proper management, these chemicals could pose a hazard to workers or the environment.

So how does NSTec track and manage all of those chemicals?

Initiated in 2014, the new Chemical Safety and Lifecycle Management Program (CSLMP) provides a “cradle to grave” capability regarding purchase, use and disposition of chemicals. In support of NSTec's efforts on process improvements and cost efficiencies, the CSLMP will also be used to reduce costs commonly associated with maintaining chemical inventories, reduce level of effort required for annual assessments, reduce volume of chemical storage across NSTec, and provide just-in-time delivery capabilities.

The implementation of the CSLMP will provide a series of benefits, such as:

- Capability to monitor actual chemical inventory, including expiration (e.g., shelf life);
- Generate cost savings through bulk orders versus individual orders at the facility level;
- Enhance emergency response capabilities (e.g., Fire & Rescue) by providing capability to view current chemical inventory via Facility Data Warehouse software;
- Enhanced delivery time;

- Significantly reduce level of effort required to complete annual chemical inventory reporting.

To allow for real-time tracking, a new module was built into Maximo, the company's maintenance management system. The current chemical inventory is being entered into Maximo, and any new chemicals purchased will be entered when they arrive on site. Most chemicals will now be processed only through the NNSS warehouse and every chemical will get a barcode before being placed in use. All of this will allow chemicals to be tracked from the moment they arrive on site through disposal. It will also provide an accurate count of chemicals at any time and help the company avoid unnecessary purchases.

As of this writing, at least 75 percent of chemicals have been inventoried and 37 percent of chemicals have been assigned chemical ID numbers in Maximo and barcoded. A company directive regarding the program was also recently published and chemical custodians are completing training. It is anticipated that the CSLMP will be fully implemented by the end of 2015.

“The key to the deployment of the CSLMP is the cross-functional team under the direction of Coby Moke, the NSTec CSLMP manager,” says NSTec Occupational Safety and Health Division Manager Mike Kinney. “Personnel from throughout NSTec have been actively engaged in the CSLMP initiative, and when fully implemented, it will serve as yet another example of best-in-class and support NSTec's commitment to excellence.”



Photo: Kirsten Kellogg

In the A-1 Machine Shop at the North Las Vegas Facility, Principal Scientist Coby Moke identifies cleaning chemicals.

# Connecting with You During an Emergency

By *OneVoice* Staff Reports

“Hello?”

*“This is the Nevada National Security Site Communicator NXT, with an important message.”*

When employees receive these phone calls, many wonder why they're getting them, or how to make the calls stop. Or they may even ask, “What is my User ID?” Employees' curiosity about these calls was piqued after a June 16 offsite fire in North Las Vegas that could have impacted our North Las Vegas Facility's operations.

Employees received such calls from the Communicator NXT, a notification system that has the ability to simultaneously call during an emergency or other urgent event. Communicator NXT reaches out through contact pagers, cell phones, home phones and email accounts with important messages for employees.

When contacted by the Communicator NXT, you must listen to the message in its entirety, and when asked “Did you understand?”, follow the prompts. But don't hang up in the middle of the message: Communicator NXT will call you back. If you successfully check in, Communicator NXT will not contact you again with the same message.

If the Communicator NXT was unable to reach you, the system will leave a message asking you to call back into the system. If you receive this message, call the (702) 295-1296 number provided. The system will then ask you for your User ID.

- For NSTec employees: Your User ID is your employee number.
- Nevada Field Office, Centerra-Nevada, Navarro and other contractors: Your User ID is typically the last five digits of your work phone number, i.e., 5-XXXX. For future notifications, you will receive an email with your User ID embedded in the email message.

If you call back into the system after the scenario has timed out, you will be notified that “there are no positions available for you at this time, thank you.” However, if you need additional information regarding an ongoing incident or notification, please call the Operations Command Center at (702) 295-0311.

# STL's Miller Earns a Patent for Revolutionary Calibration

By Chelsea Gonzalez, NSTec

National Security Technologies (NSTec)'s Global Security directorate recently congratulated Edward "Kirk" Miller for his calibration Patent # 8,970,724B2, "Mach-Zehnder-based Optical Marker/Comb Generator for Streak Camera Calibration." This patent demonstrates NSTec's long-term commitment to technologies that enable diagnostic measurements under extreme conditions.

NSTec's Special Technologies Laboratory, where Miller, a senior principal scientist, works, has innovated calibration systems for high-speed streak-cameras for several decades.

"This latest development extends the capabilities of those tools to use on ultra-fast-sweep cameras used to image picosecond phenomena," said Miller. "Streak cameras have imperfect time bases, so adding timing

fiducials to the record allows researchers to accurately reconstruct the temporal evolution of the experiment. In many cases, timing marks at a repetition rate of up to one gigahertz (GHz) are sufficient, but for picosecond phenomena, 10 GHz or higher marker rates are required. This new technology allows timing markers up to 20 GHz to be added for streak camera sweeps as fast as one nanosecond."

NSTec awards \$2,000 for each patent. To award a patent, the United States Patent Office uses statutory requirements to determine that the submitted invention is new, useful and

unique.

With the award, NSTec gains the exclusive rights to the technology for a period of 20 years from the filing date of the application. Having the exclusive rights allows NSTec to sell/license the technology to other companies, with the U.S. Department of Energy (DOE) National Nuclear Security Administration's approval. Patents are a visible means of promoting the DOE and NSTec technology transfer missions. The patent demonstrates that DOE dollars are being spent effectively on cutting-edge research.

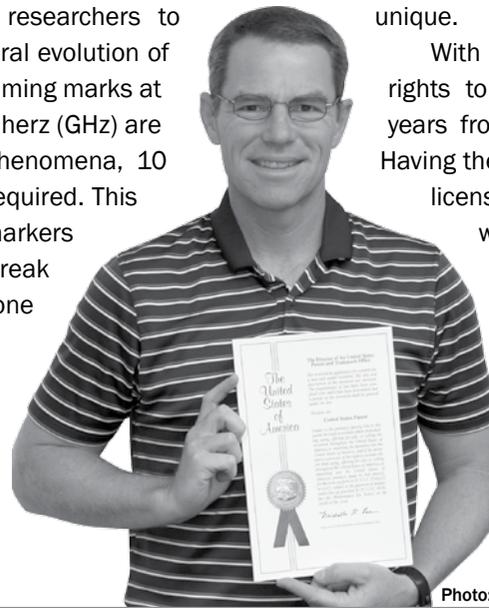


Photo: Chelsea Gonzalez

## NNSS Responders Join FRMAC

Continued from page 1

"SE-15 was a valuable opportunity to assemble the whole community of emergency response personnel who would deal with a nuclear power plant accident," said the Department of Energy's Dan Blumenthal, the exercise director who led the FRMAC. "The well-trained teams may keep their basic skills sharp with regular proficiency drills, but rarely do they get a chance to operate in the fast-paced and unpredictable interagency environment. All of the NA-42 consequence management assets performed admirably during SE-15 and received high praise from observers, evaluators, and other players."

The Nevada FRMAC team members were the first to arrive at the beginning of the event, during which Duke Energy still was conducting initial response activities

associated with a mock cooling system failure at the reactor. The scenario tested local response agencies' ability to follow established guidelines for mitigating a radioactive release.

By the end of the first day, FRMAC monitors were on the ground and, in a separate component of the exercise, aerial assets from the WINGS program were providing aircraft to fly over the region to simulate the acquisition of data from sensors (see p.1 sidebar on WINGS). A fixed-wing airplane and helicopter from the Remote Sensing Laboratory at Joint Base Andrews in Maryland also participated in the aerial measuring portion of the exercise.

On day two, hundreds of emergency management



A monitor is set up in the FRMAC showing plume cloud models in the affected area of the mock radioactive release.

personnel, including military assets, from all over the United States worked to provide various levels of support to South Carolina officials, including evacuation information, medical assistance, agricultural forecasts and other needs.

The FRMAC team began providing plume and exposure maps to assist state agencies in determining response. The support continued on the third and final day, with most agencies moving to a "tabletop" response - or talking through various scenarios in a simulated "Day 14" of any potential radioactive release.

Local emergency officials echoed Blumenthal's comments in saying Southern Exposure, while complex, was a huge benefit in evaluating existing plans and procedures. FRMAC assists with similar exercises at various locations around the country each year.



Federal, state and local officials work in the FRMAC near Hartsville, S.C. during SE-15.

## A DAY IN THE LIFE

# NNSS Custodial Staff Play Important Role In Keeping Aging Facilities Clean

By Jeff Donaldson, NSTec

OneVoice reporter Jeff Donaldson recently spent a day with the custodial staff of the Nevada National Security Site (NNSS) to observe firsthand what they do to help maintain the facilities there. Donaldson shadowed employees as they made their rounds at some of the Site's oldest buildings.

There's an old adage about housecleaning: "Housework is something you do that nobody notices until you don't do it."

Such couldn't be truer for the staff of National Security Technologies (NSTec)'s Housing, Feeding and Custodial division. Some 20 custodial staff is responsible for cleaning almost 100 buildings in Mercury and the forward areas of the NNSS. Some of these buildings date back to the Site's beginnings 65 years ago.

The staff members get to know the buildings' occupants on a first-name basis. Those occupants count on the custodians to ensure the facilities are maintained and continue to be functional in support of their various missions.

**7:00 a.m.:** This writer reports to custodial supervisor Judy Smith, who is preparing to brief her staff on their assignments for the day. Smith knows each staff member well. She spends many of her

days inspecting their work, or shadowing them to see what challenges they might face.

Smith admits the staff is much smaller than it used to be, meaning that custodians are responsible for more space. The custodians no longer clean all of the buildings every week. They clean restrooms daily and vacuum and clean common areas weekly, but individual office cleaning, dusting and vacuuming has been cut back to once a month.

Smith's primary concern during her daily inspections is the restrooms and water fountains, some of the first things that people notice when they enter a building. "A lot of people are already skittish about using a public restroom," Smith says. "We want to be sure that the facilities are not only sanitary, but those people can be comfortable using them."

**7:10 a.m.:** Smith greets the staff before they head out for a long day. Unfortunately, her first briefing item is a vehicle accident the previous day, bringing to an end more than a year of incident-free work.

"Our person is OK. It really was a miscommunication between the two drivers at an awkward turn spot in the road," Smith says, but as with anything, she reemphasizes driver safety. Many of the workers will drive small "Tiger" trucks due to the short distance between buildings. They are slow moving and sometimes hard to see.

Smith then reviews building assignments and assigns this writer to accompany Cecilia Flores as she does her rounds in Building 23-600, or the Blue Box where the Site's Operations Command Center, as well as offices for the National Laboratories, are located.

Outside the Housing office, Flores gets a ride from fellow custodian Yonathan Saavedra, a nine-year veteran of the NNSS, who right now is loading up a mini-van with bags of rags. Saavedra worked his first seven years at the NNSS



Flores maintains a chart of cleaning areas for the sprawling labyrinth of hallways at the NNSS "Blue Box."

as a part-time kitchen employee. When the full-time custodial job opened up, he jumped at it.

Saavedra lives in Las Vegas, but makes the trek out to the Site by bus each day to clean some eight buildings on his shift. He bids us farewell as he drops Flores and this writer at our first assignment.

**7:30 a.m.:** Flores has worked in Custodial Services for 15 years and loves what she does. It's apparent when we first enter the building: Calls of "Cecilia" echo through the hallways from Emergency Services staffers who are happy to see her come in.

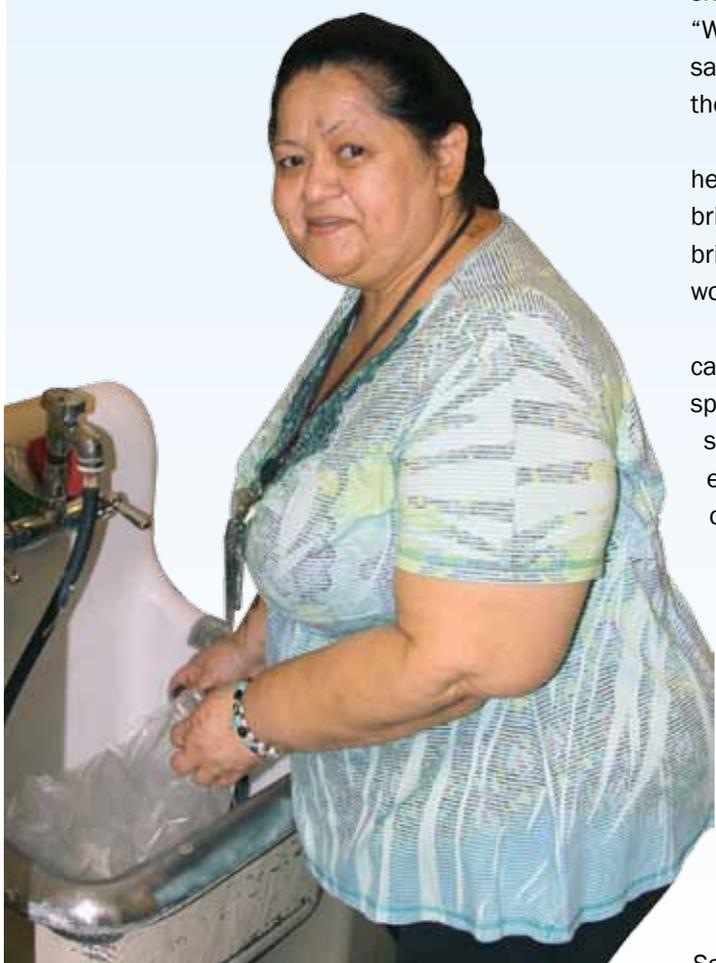
Like Saavedra, Flores takes a bus to the Site, but since she lives in Henderson, Nev., her day actually begins at 4 a.m. She typically doesn't return home to her husband and two grown sons until almost 7:30 p.m. That's a long day by anyone's standards.

Flores moves through the corridors of 23-600 with an air of confidence. She knows every building's small, out-of-the-way places; these buildings served as a sort of basecamp for laboratory workers for decades.

Her first stop is the janitor's closet, a small room with a sink that Flores has turned into her own personal office space. There are personal pictures, snacks for her break time and a chart which shows which parts of the sprawling building she'll clean on specific days.

"I have a routine I follow, but sometimes you feel like you're juggling," Flores admits, "because not every day is the same situation. If somebody makes a request, or one area is more dirty than another, I adjust the work to keep up."

Indeed, Flores' approach is trying to be invisible to workers who may be in meetings or conducting



Custodian Cecilia Flores preps cleaning materials in her "office" at 23-600.

# A DAY IN THE LIFE

their business. She knows many of their schedules and as such, she'll start by cleaning office space around where workers from Los Alamos and Sandia already have ventured out to work this particular morning.

**8:00 a.m.:** A native of Glendale, Calif., Flores is cleaning up the snack bar area which is being upgraded by the labs. They've brought in four refrigerators and a number of old shelves that need to be cleaned. Flores wipes down countertops and vacuums the floor. Her method seems random to the onlooker, but in no time the room is clean and organized.

Flores used to work as a waitress in California, and her family now installs marble and tile flooring in Las Vegas. She says building trust is something her whole family knows a lot about, and it's something she takes very seriously in her work in Bldg. 23-600.

"When you first start in a new building, people don't know who you are and are maybe suspicious of you," Flores recalls. "But after a while they get more comfortable with you being around their work space. That's important. You want them to trust you and know you're going to do a good job. You are a part of their lives every day."

Cecilia's reputation is one of accommodation: She'll work hard for occupants and they recognize her commitment with Christmas cards and by inviting her to holiday office parties. Although she admits she is reluctant to accept many of the offers because she wants to stay out of the way, she beams with pride when she speaks of their appreciation for her efforts.

**9:10 a.m.:** Flores takes her break by sitting in her "office," or the closet, where she enjoys a cup of coffee with sweet Agave poured in, and a breakfast cookie. She talks of her family, having been married for more than 35 years. She says the afternoon will be focused on cleaning the restrooms. "The mornings are too busy for that. That's an afternoon job," Flores says with a smile.

A short time later, Flores has moved into cleaning several of the Los Alamos engineers' offices, dusting

desktops and vacuuming floors. She moves out into the common areas, vacuuming the long hallways and labyrinths of corridors that lead back to the main entrance at 23-600.

**11:00 a.m.:** Smith picks up this writer to meet Stephanie Marshall. She's busy cleaning the Industrial Hygiene office, taking out trash and mopping the restrooms.

Marshall is one of Smith's younger employees, but she comes from a long line of Site workers. Her father started as a pipefitter; her grandfather was a mechanic, and her uncles and other relatives have been employed here as well.

Marshall moves quickly through her routines: "I always do trash first because afterwards your hands get wet." She'll fill a mop bucket, then focus on sinks and toilets before moving to the floor.

Soon, we're at the Nye County Sheriff's Office substation, and then the Post Office, where Marshall quickly moves through her tasks. All totaled, she'll work in eight buildings today - five before lunch and three after.

"I guess what I like best about working here is meeting the people," says Marshall, who previously worked in guest services at Disneyland. "You really come to know them in the short time you spend in each building. And I love that I'm part of my family's history of working at the NNS." "

**11:30 a.m.:** Marshall and this writer climb in the tiny Tiger truck and head down the road - our next stop, security contractor Centerra-Nevada's Support Services building. There, Marshall begins cleaning restrooms and dusting cubicle walls. Before long she's vacuuming a huge common area and wiping down counters.

"You have to focus on quality," Marshall says, right after she dusts the top of an older cabinet, likely forgotten after years of non-use. She brushes the large "dust bunnies" off into the trash can and shakes her head. "This is the stuff you have to get to. That's what keeps these buildings up and running for so long."

**12 noon:** The custodial staff stops for lunch in



Custodian Stephanie Marshall prepares a mop bucket for cleaning floors at the NNS Post Office.

Photos: Jeff Donaldson

the Mercury cafeteria, then attends an all-hands meeting with company management. Many times, these meetings or the morning briefings are the primary ways employees gain information, as many go straight from the buses to their duties each day.

Later in the day, we're back to 23-600 with Cecilia, set to start cleaning restrooms and emptying the trash. Such will continue until almost 5 p.m. She stops only briefly to take a call from her supervisor Smith, and to answer a staff query about packing tape. "My mentality is we're here to help each other," Flores says, "and that helps make the mission work better."

**5:00 p.m.:** At day's end, this writer stops to debrief with Smith and reflect on how committed and detail-oriented the custodial staff has appeared to be. Rick Medina, manager of Site Services Division, summed it up best:

"These folks work hard and as you can imagine are at times not well appreciated. I constantly tell them to think about it in these terms - when we go on vacation, enter a hotel room and notice the bathroom is filthy, what is the impact to the customer (you) and how important are those services to the owner of the hotel? It really is an eye-opener for each one of the custodians performing the work," Medina says.

Before long, Flores, Saveedra and the other staff members board buses bound for home. But they'll return tomorrow to take up where they left off - helping to keep the NNS's oldest structures clean.



Marshall takes out the trash as she prepares to move on to other buildings.

# AWARDS

## Thomas Receives NSTec Project Management Excellence Award

Recently, National Security Technologies (NSTec) President Ray Juzaitis presented the NSTec FY2015 Second Quarter Project Management Excellence Award to Kelly Thomas, project manager of the 14-GED Phase 1 Project performed by the Remote Sensing Laboratory within the Global Security directorate. The Phase 1 activities consisted of the design, fabrication, assembly and shipment of 1,681 sensor targets. The project met challenging schedule performance objectives by executing tasks in parallel to achieve the required delivery date. It also successfully achieved many innovations and accomplishments, including simplified mechanical design, reduced numbers of parts and streamlined fabrication procedures that reduced labor hours. Based on the number of units produced, this is the largest fabrication and assembly effort to-date under the NSTec contract.

The Project Management Excellence Award was established to provide formal recognition of superior project performance. The selected project must have achieved notable performance in one or more of five criterion areas: Customer Satisfaction, Cost and Schedule Performance, Technical Performance, Safety/Security or Quality. All NSTec projects are eligible for award consideration including: Construction, Environmental Management, Research and Development, Work for Others and indirect funded projects.



Kelly Thomas (center) receives the award from NSTec President Ray Juzaitis (left) and Mission Assurance & Safety Director Ken Walker.

## NSTec's Performance Awards

NSTec recently awarded Performance Awards to individuals and teams for outstanding accomplishments during fiscal year 2015. Operations Vice President Jim Holt and Program Integration Vice President Chris Deeney honored these employees during the NSTec Employee Meetings Aug. 4-5. (Employees in photo captions are positioned left to right.)

### Excess Integrated Project Team

The Excess Integrated Project Team developed and implemented an excess plan from FY14 data that would use current resources and funding to:

- Reduce the footprint of government property that no longer has a mission requirement
- Lower non-environmental management liabilities
- Reduce future inventory cost
- Increase sales revenue for FY15 and beyond.



Front row: Mike Sowers, Craig Mercadante, Amber Gould, Danny Diaz, Steve Pennock, Miguel Ramos, Mike Vest. Back row with Chris Deeney: James Wiley, Nick Simpson and Jim Holt. Not pictured: Jeff Nath

### A-1 Machine Shop Research & Development

In February, Los Alamos National Laboratory (LANL) engineers needed a puller, so they presented the A-1 Machine Shop with a problem statement, concept sketch, and a sample piece of what was needed for the construction. In March, the A-1 Machine Shop team expanded upon LANL's concept, making a hand-held manual puller, researched and developed a "reversed clothes pin" puller, and used special software for creating a 3-D model of the base to house and stabilize the puller and shorten the housing design. The software model was then sent to the drafting department to be printed overnight. The 3-D printer created the model of the base for the puller, which provided a working model. The result was a device with a moveable pulling device which could be raised smoothly by turning a threaded knob assembly.

Team members include: Chris Naffzinger, Adam St. Clair, Mitchell Franta, Anthony Montoya, Keith Doering and Greg Schmett.

### Radiometry R&D

The Radiometry Research and Development Team has performed well beyond customer and NSTec management expectations in efforts to develop a new compact radiometer.

The team innovatively redesigned an existing diagnostic tool to meet significantly enhanced requirements and created a compact radiometer with improved performance and ease of use. The system has been received with great excitement, with one customer describing it as a "great design and a dramatic improvement over our earlier work together. . . It has some very fine work on the design."

The customers appreciate the added value they have received and are enthusiastic about continuing their corroborative efforts with NSTec.

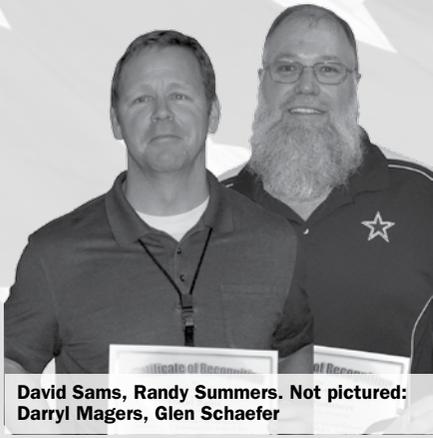
Team members include: Carl Carlson, Robert Corrow, Thomas Graves and Adam Iverson.

### Second Generation 3-Frame Camera Development

Solid-state framing imaging sensors have become the ultimate goal for sensitive, high-resolution, high-bandwidth, low-noise imaging cameras. Subcritical experiments have yet to receive the benefits of these new imaging devices. Leveraging advances in the design of imaging sensors, this NSTec team made that goal a reality. The team developed an improved second-generation 3-frame camera that uses an image sensor developed by Los Alamos National Laboratory. The new 3-frame camera design offers a series of new features and is engineered with a modular design that requires no additional wiring inside the camera.



Mike Jones, Logan Fegenbush, Andrew Corredor, Kristina Brown, Lorynne Kennel, Morris Kaufman, John Hollabaugh, Jaylene Martinez, Tom Waltman and Matthew Trembley. Not pictured: Derek Aberle, Stuart Baker, Jesus Castaneda and Julie Nusbaum



David Sams, Randy Summers. Not pictured: Darryl Magers, Glen Schaefer

**Confined Space Mock-up Training Team**

For several years, the Environmental, Safety & Health Training team had sought a way to make mandatory confined space training more interactive and effective by creating a true “confined space mock-up” at the Nevada National Security Site (NNSS). Instead of using a “pretend” confined space (a garbage can lid on the ground), they wanted a method where rescues could be simulated using actual tripod equipment and holes in a building/area that employees could deal with. In early 2015, their project to create such a mock-up was completed. A small container was converted, modified with two entryways, stairs, safety railings and even a space inside for mock electrical and piping (for use with lockout/tag out). Assistance from Engineering, Construction, Industrial Hygiene, Occupational Safety and Work Control representatives helped them ensure the mock-up was safe for use and compliant with NSTec requirements.

Use of the new mock-up also allowed changes to the Confined Space Training curriculum, in that a four-hour, hands-on course was created for the annual refresher requirement. This reduced the annual refresher from eight hours to four hours, providing a savings in student and instructor time per year of more than \$185,000.

**MPDV Rapid Analysis Team**

The Subcritical Experimental (SCE) Program has reinvigorated the NNSS mission. Fundamental to that was the multiplexed photon Doppler velocimeter system which enabled a million-fold increase in data collected from an experiment. Five years ago, there was concern that these data couldn’t be analyzed: It could have taken months, perhaps years, to analyze the data from just one experiment. This team completely solved that problem with their QuickView and iPDV (integrated photon Doppler velocimetry) software packages. With innovative computer science and state-of-the-art software engineering, the processing time for the SCE shrunk from months to days, and in many cases, to hours. NSTec’s core business is providing meaningful data to its lab customers. PDV revolutionized how much raw data was collected. This team revolutionized how quickly that data is delivered.

Team members include: Robert Berglin, Abel Diaz and Marylesa Howard.

**Operating Experience/Lessons Learned Team**

Without prompting from management, the Operating Experience/Lessons Learned team took the initiative to research a suitable replacement for the NSTec Lessons Learned database, procure the administrative rights from the supplier, and implement a detailed project schedule to roll out the replacement.

The accomplishment results in significant cost savings, improved user experience and customer satisfaction, and improved data collection to demonstrate an organizational learning culture.

The team provided a decision paper to senior management for the options, including cost saving estimate, and the detailed phase approach to implementation via caWeb action tracking to capture the improvement details.

Team members include: Sara Langlais and Kelly Pavalko.

**Seismic Hammer Team**



Terry Royder

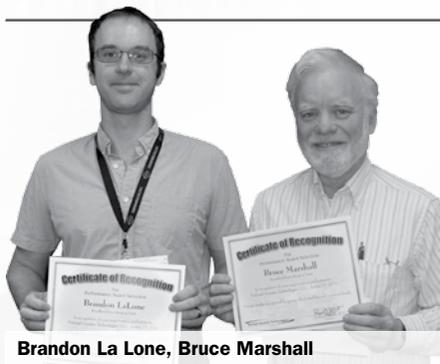


Veraun Chipman

The seismic hammer is a 13,000-kilogram-drop mass that, when it strikes the ground, produces seismic waves that travel through the earth and get recorded on hundreds of seismic geophones. Sandia National Laboratories is using this seismic hammer technology in Yucca Flat to image the rock layers beneath the earth’s surface. NSTec had the primary responsibility for ensuring the crane and seismic hammer were operated safely and efficiently, that the project goals were met, the customer was satisfied and that the seismic stations were deployed safely and recorded high-quality data to meet the science objectives. The NSTec team demonstrated excellence in executing the Seismic Hammer project.



Front row: Gary Skougard, Prince Pollard, William Hockett, Micheal Ponce, Jorge Avila, Abad Bautista, Frank Spenia, Billy Loman. Back row: Deeney, Stacy McReynolds, Robert White, Kent Thomas, Jim Holt. Not pictured: Thomas Kudrako, Johnny O’Neal and Dennis Riedeman.



Brandon La Lone, Bruce Marshall

**Broadband Laser Ranging Team**

A team of NSTec scientists invented a new method to measure the position of an object displaced by a shock wave. This new technique, known as broadband laser ranging, represents a measurement breakthrough in shock wave experiments and is expected to significantly impact the hydrodynamic test community at all three nuclear weapons laboratories. Working with the small budget of the Site-Directed Research and Development feasibility study, the team developed in a few months the concept, assembled a breadboard system and demonstrated a first-ever measurement in a shockwave experiment.

According to NSTec Chief Technology Officer Chris Deeney, Brandon’s briefing of the diagnostic “mesmerized our laboratory colleagues and was a superlative example of how NSTec can innovate through cross organizational/programmatic elements... It’s inspiring to listen to the development journey that is sure to be the next NSTec moniker diagnostic.”

**Leda Dynamic Surface Imaging and Feed Through**

This Leda team developed an entirely new imaging diagnostic for the subcritical program. This important technical achievement provides enhanced laser illumination and stereo viewing. The customers have seen sufficient value in this new diagnostic to increase emphasis and importance on the diagnostic in the upcoming Lyra experiments.

This team stepped up their technical expertise to flawlessly provide an imaging feed-through that was held to Quality Grade 2 standards. This team provided outstanding performance as they carefully planned, examined, reviewed, performed and documented every step of the project to meet the elevated standards. Parts were prepared and tests were run with fine precision to develop the methods of cleaning, assembly, fill and protection of the feed through. A great effort was also expended

to carefully design the methods and document the process, so other technicians could achieve the same quality and reliability feeding into future efforts successful across the NSTec community.



Chris Silbernagel (left) with Russell Knight



Brian Cata, Matthew Teel, Brent Frogget, Robert Malone, Robert Caccavale, John McInnis, Kenneth Watts. Not pictured: Tanya Atencio, Marlon Crain, Maria Davis, Paul Flores, Vincent Romero

# Back to School Supply Drive Supports Local Students

By *OneVoice* Staff Reports

Kicking off the new school year in August, Nevada Enterprise employees in Southern Nevada supported local teachers and students by donating school supplies to educating about environmental programs.

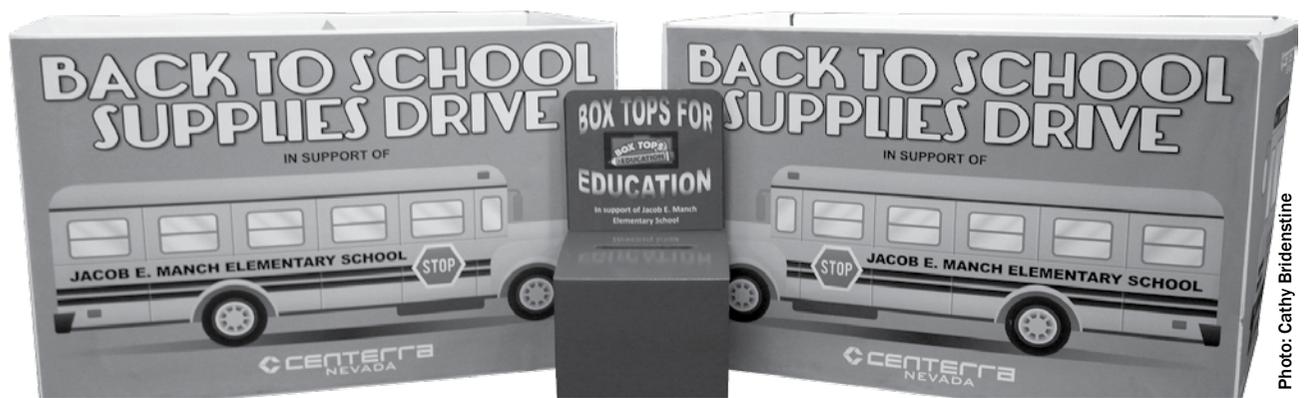
National Security Technologies (NSTec)'s barrels and Centerra-Nevada's decorated boxes collected writing paper, binders, pencils, markers, rulers and other essential items for needy students. NSTec's donations went to Kit Carson International Academy and Jim Bridger Middle School; Centerra-Nevada's supplies drive supported Jacob E. Manch Elementary School. Because Jim Bridger Middle School has a dress code, they also requested everyday polo shirts in multiple sizes for children who cannot purchase their own.

NSTec donated \$500 worth of school purchases each for Carson and Bridger. SNAP (Supporting the Navarro Association for People) also donated \$150 each

to Carson and Bridger.

To support the teachers, Environmental Management's Operation Clean Desert team participated in two recent Clark County School District events. The New Teacher Kickoff and Educators

Appreciation Day provided hundreds of local teachers free Operation Clean Desert learning materials to educate students on the science of environmental cleanup and other missions at the Nevada National Security Site.



Centerra-Nevada's donation collection boxes, plus a Box Tops receptacle, help support local school children's supply needs.

Photo: Cathy Bridenstine

## Performance Awards

Continued from page 9

### Nicki Burns



Nicki Burns

Over the past three and a half years, Nicki Burns has been tasked with three significant training projects outside her assigned Material Control and Accountability organization. Each of these projects – as Inquiry Official with the Office of Enforcement, Classified Matter Protection and Control training, and the Lock and Key Control Program – has involved a significant dedication of time. Burns has taken the responsibility, outside her normal job duties for completing all the necessary analyses, providing options for a path forward, developing or revising training and the associated documentation, creating qualification programs and tracking completions, and providing regular updates to all applicable parties. She has been diligent in providing a superior outcome with every activity completed.

### Carl Fleming



Carl Fleming

When Carl Fleming checked a defective SmartBoard projector, no physical problems were identified with the lamp or unit connections. However, the projector had an internal fault with one of its electronic circuit boards. Fleming took it upon himself to contact the manufacturer to ask questions about the repair of the defective SmartBoard projector. Due to the nature of the projection unit problems Fleming described to the

manufacturer, the manufacturer offered to replace the defective projector with a refurbished one, including a six-month warranty at no cost to NSTec. In this way, Fleming saved the Quality Assurance and Control Division more than \$14,000 for the cost of a new SmartBoard projector.

### Jason Flatt



Jason Flatt

Jason Flatt demonstrated his resourcefulness by automating Design Engineering's manual Management Information System (MIS) reporting processes. This immediately provided a production boost, resulting in greater efficiencies and improved accuracy, and enabled real-time reporting for the Design Engineering's management team. Automating these reports resulted in a cost savings to the business as well. The manual processing hours required to provide this data monthly was reduced to 65 percent. This represents a cost savings in excess of \$18,000 annually to the business. In addition, automated processes require significantly reduced training timeframes.



Paul Flores

### Paul Flores

Paul Flores is deeply committed to NSTec's mission and personally committed to quality, cost savings, productivity and safety. He has great ideas, constantly saving NSTec money. A recent example of

Flores going beyond his normal job duties affected the Cygnus Zoom project. His simple, creative approach to the assembly process for the solid tungsten rod/aluminum tube assembly cut the straightening time from one hour to a matter of minutes, better than 90 percent improvement. This is a significant productivity improvement and cost savings for the hundreds of assemblies to be completed. This revised approach will be used repeatedly over the life of this project.

### Michele Kelly



Michele Kelly

NSTec's Facilities Management evaluated the NNSS' Area 1 subdock legacy items, in light of the chemical stand-down in July 2014. Facility Manager Michele Kelly requested from stakeholders a follow-on walk down of the entire Area 1 subdock. Her objective: identify mission need, chemical compatibility, potential reuse by other organizations, radiological release (legacy) information, and potential excess/disposal actions and waste streams. Facilities Management compiled a list of 375 items that needed to be addressed. An effort began to collect Material Safety Data Sheets and Safety Data Sheets for many of the items, most of which had been stored for more than 20 years. Individuals with historical knowledge were able to identify items and the projects they were related to so that the Radiological Release forms could be completed. Because of Kelly's efforts, the area is now organized and free of excess chemicals and unknown barrels.

# The Network Scores Big for Three Square

By Lory Jones, *OneVoice* Editor

The Network thanks all those who came out to volunteer their time and effort to Three Square on Saturday, Aug. 8.

Said National Security Technologies' Raymond Baez who coordinated the event, "We had a strong showing of 15 people representing the Nevada Enterprise. Our group was tasked with creating 900 Senior Share boxes for individuals who are food insecure and hungry in our community. We were able to surpass that figure by creating 1,338 boxes!"

In the photo below, The Network volunteers include (l-r) first row: Jared Morgan (son of Jennifer Morgan), Kevin Nicholson, Heather Nicholson (wife of Kevin), Raymond Baez, Jeffrey Gill and Paul LeMaire. Second row: Jennifer Morgan, Sandy Connelly, Debi Foster,

Curry Chamberlain, Charlie Bolstrom, Josh Campbell, Omar Bikle, Chris Cutolo and Jeremy Lelah.

Three Square, a non-profit food bank that helps feed needy residents in four Southern Nevada counties, currently provides more than 34 million pounds of food and grocery product per year – the equivalent of more than 28 million meals – to nearly 600 program partners including non-profit and faith-based organizations, schools and feeding sites throughout Southern Nevada. Three Square volunteers make this all possible.

The Network is an employee-led networking organization that offers social networking, professional development and volunteer opportunities to employees of the Nevada Enterprise.



# Largest Team Walks for the Homeless

By *OneVoice* Staff Reports

Las Vegas has a sizeable homeless community. To help them out, 31 National Security Technologies (NSTec) employees and their families tied on their sneakers Aug. 1 for the 4th Annual Walk a Mile in My Shoes event. Not only were participants ready to take on the desert heat – after all, the homeless do this every day – they also won the Largest Team



Team Captain Dennis Fulkerson poses with the Largest Team Award from the 4th Annual Walk a Mile in My Shoes event.

Award. The award is displayed in Bldg. B3 at the North Las Vegas Facility.

Walk a Mile in My Shoes is a one-mile walk benefitting those struggling to survive on the streets of Las Vegas. The event's goal is to gain awareness about the plight the homeless experience daily. The event, hosted by the *Las Vegas Review-Journal*, also benefitted the Las Vegas Rescue Mission, a non-profit which feeds, shelters and serves the local homeless.

Photo: Lory Jones

# NSTec is Finalist for R&D 100 Award

By *OneVoice* Staff Reports

In case you haven't heard, R&D Magazine recently announced the finalists for the 53rd annual R&D 100 Awards, and National Security Technologies (NSTec) is on the list.

A team consisting of scientists and engineers from NSTec's New Mexico Operations and Nevada Operations, as well as Los Alamos National Laboratory, was chosen as a finalist for the development of the Argus Fisheye Velocimetry Probe, a critical enabling technology.

In conjunction with the award-winning Multiplexed Photon Doppler Velocimeter technology, the Argus Fisheye Velocimetry Probe opens new paradigms for experiments critical to national security and enables data collection on an unprecedented scale.

Considered the "Oscars of Invention," the R&D 100 Awards honor the 100 most innovative technologies and services of the past year. The finalists were selected by an independent panel of more than 70 judges. This year's finalists represent many of industry's leading organizations and national laboratories, as well as many newcomers.

R&D will present this year's winners, selected from among the finalists, with their honors at the annual black-tie awards dinner Nov. 13 at Caesars Palace in Las Vegas.

A detailed list of the 2015 Finalists can be found at: [www.rdmag.com/articles/2015/07/2015-r-d-100-award-finalists](http://www.rdmag.com/articles/2015/07/2015-r-d-100-award-finalists).



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## RSL, CTOS Interact with Public during National Night Out

By Lory Jones, *OneVoice* Editor

The 20th Annual National Night Out attracted quite a crowd recently at Town Square in Las Vegas, Nev., where NSTec's Remote Sensing Laboratory (RSL) at Nellis Air Force Base and Counter Terrorism Operations Support (CTOS) showcased how NSTec helps support the nation's homeland security by keeping the public safe.

A collaboration effort sponsored by the National Association of Town Watch, National Night Out was designed for the public nationwide to take back their communities from criminals. The event helps heighten crime prevention awareness, generate support for local anti-crime programs, strengthen neighborhood spirit and police-community partnership, and send a message to criminals that neighborhoods are

organized and fighting back.

Las Vegas interfaced with law enforcement, first responders and emergency response personnel, observing displays and asking questions. RSL's Inga Brennan organized the RSL booth, which included:

- Mobile Detection Deployable Unit truck and trailer – radiation detection equipment for large scale operations
- Aviation assets, such as RSL's Bell 412 helicopter photos and videos of the helicopter performing response missions
- Aerial Measuring Systems map products/displays

At the CTOS display, Brian Richardson (right) showed some of the equipment CTOS uses in their training classes, such as meters and detectors. CTOS trains first responders should emergencies occur in their municipalities.

Richardson also demonstrated CTOS' virtual detector capability with a GPS map-based virtual source placement, which seemed to be popular with visitors. "We spoke with quite a few folks who had many



Photos: RSL - Nellis

questions. They were surprised to learn that our first responders are trained in radiation detection and response missions. It seemed to alleviate some of the fears they had. They were also appreciative of us being there and the work we do," he said.



RSL-Nellis Captain Pilot Mike Toland explains RSL's Bell helicopter to a curious youngster.

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