SITELINES

July/August 2009 - Issue 138

A publication for all members of the NNSA/NSO family

## Final Transuranic Waste Shipment Leaves Nevada Test Site

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The waste, the bulk of which was generated by nuclear research and development primarily at Lawrence Livermore National Laboratory, will undergo final characterization in Idaho at the Central Characterization Project and then be shipped for final disposal to the Waste Isolation Pilot Plant (WIPP) near Carlsbad, New Mexico. The NTS was the first site to ship

waste through the national consolidation site for final characterization for disposal at WIPP.

Prior to shipment offsite, the waste underwent extensive characterization and repackaging activities to ensure it met disposal criteria. This last shipping campaign completed processing and characterization of waste that was previously non-compliant for offsite shipment. It culminated two years of design, construction and operations to complete the significant repackaging and characterization efforts. Since January 2004, 65 shipments with 1,942 drums and 78 boxes have been safely completed.

**Read full story >**

## In This Issue



*Published for all members of the NNSA/Nevada Site Office family*
*Stephen A. Mellington, Manager, NNSA/Nevada Site Office*
*Darwin Morgan, Office of Public Affairs*

*Submit articles or ideas to NSTec Public Affairs at donaldjw@nv.doe.gov.*

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U.S. Department of Energy
National Nuclear Security Administration
Nevada Site Office
P.O. Box 98518
Las Vegas, NV 89193-8518
Phone: 702-295-3521
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*Workers in protective equipment remove a glovebox section after cutting open an oversized box.*

*NTS workers celebrate the final TRU waste shipment from the Site on July 9.*

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“In under two years, the project team constructed and started up a nuclear facility and safely completed processing of highly radioactive waste generated at a national weapons laboratory. Meeting this highly aggressive schedule is a first in the DOE complex,” said National Security Technologies President Steve Younger.

The DOE recognized that NSTec, as the new management and operating contractor in 2006, brought the experience and capability to process the waste. NSTec modified the Visual Examination and Repackaging Building (VERB) in 2008 to help facilitate the repackaging of waste containers. NSTec also modified the waste treatment process to further accelerate processing of TRU waste.

“The safe completion of this complex and high-priority project is a tribute to the professionalism and can-do attitude of the Nevada Test Site staff,” Younger said.

**What is Transuranic Waste?**

Transuranic waste contains man-made radioactive elements heavier than uranium, hence the name “trans” or “beyond” uranium. Most of the

transuranic waste managed at the NTS was generated as part of a U.S. nuclear weapons research and development program at Lawrence Livermore National Laboratory near Oakland, California. This legacy waste, which was shipped to the NTS for temporary storage between 1974 and 1990, includes protective clothing and miscellaneous equipment contaminated with transuranic elements.

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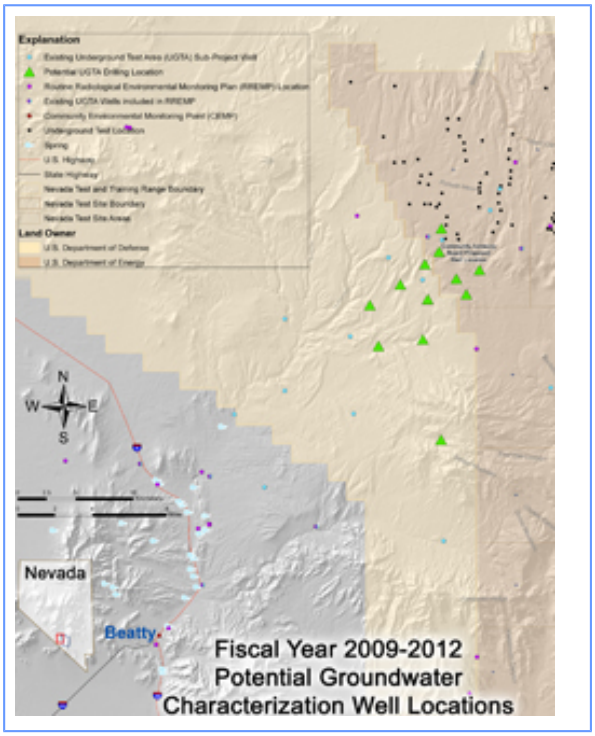
# Digging Deeper into Nevada Test Site Groundwater




The U.S. Department of Energy National Nuclear Security Administration Nevada Site Office (NNSA/NSO) is demonstrating its ongoing commitment to protecting the public by drilling nine new groundwater characterization wells at the Nevada Test Site (NTS). The wells will be installed at various locations in the vicinity of Pahute Mesa, both on and adjacent to the Test Site where 82 underground nuclear tests were conducted between February 1966 and March 1992. These wells will supplement an existing network of wells on the NTS.

Drilling activities at the first well constructed, ER-20-7, were completed on July 3 and, as anticipated, radioactive contamination was detected in the groundwater. “The appropriate protective measures were in place when the detectable levels of tritium were encountered,” said Bill Wilborn, the Nevada Site Office Federal Sub-Project director responsible for the drilling campaign.

Radiological and safety considerations are a priority and are extensively integrated into planning efforts. Other requirements for well drilling include the construction of a pad (foundation) for drill rigs and equipment, and the excavation and lining of sumps used to contain drilling fluids purged from the drill hole and into which groundwater is pumped. Some locations will also need new roads built to provide access through the remote and rough terrain between Pahute Mesa and Oasis Valley.

Each well will be drilled to a depth between 2,500 and 3,700 feet in order to reach the water table and additional aquifers located below the water table, depending on specific data needs. All of these factors contribute to the construction cost of $5 million to $7 million for each well. Funding will be provided, in part, through the American Recovery and Reinvestment Act of 2009. This will allow for an accelerated campaign with completion of all nine wells within three years.

The information obtained from the nine new wells will be used to refine the transport model, a three-dimensional computerized prediction of where and how quickly radioactive contamination is moving in the complex geologic subsurface of the NTS. The transport model includes a flow model to project groundwater movement and a source term model identifying types and amounts of contaminants. Hydrologic data collected from drilling related to past nuclear testing and subsequent well sampling were used to develop these models.

Well locations have been prioritized based upon the need for more specific information in the transport model. Critical information, such as geology and water chemistry, pressure levels, and temperature, will be gathered and evaluated to ensure that the next well to be drilled is in the most beneficial location to acquire the information needed for a comprehensive understanding of the subsurface environment. Analysis of this information will continue after well drilling in order to refine the transport model and the model predictions.

The drilling of new wells, an improved transport model, and input from stakeholders are the foundation for a long-term monitoring network for the protection of the public. In fact, the publication of the *Phase I*

*Transport Model of Corrective Action Units 101 and 102: Central and Western Pahute Mesa, Nevada Test Site, Nye County, Nevada* was the subject of a February 2009 Open House in Beatty, Nevada to address questions from residents in nearby communities, such as Oasis and Amargosa Valleys.

In addition to suggestions from these residents, significant stakeholder input has been received through the Community Advisory Board for Nevada Test Site Programs (CAB). The CAB recommended the NSO obtain a peer review/validation of its groundwater strategy, which includes well drilling, sampling, computer modeling and long-term monitoring. The CAB spent considerable time conducting its own review of the strategy, identifying and recommending sites where future wells should be constructed.

The first of the nine new wells will be drilled at a site recommended by the CAB, and their well site selection process was incorporated by the NSO to identify 12 other potential locations. Residents in communities surrounding the NTS have long been participating in the long-term monitoring process through the Community Environmental Monitoring Program (CEMP). The CEMP, administered by the Desert Research Institute, samples the water supply yearly to test for the presence of man-made radioactivity. The Routine Radiological Environmental Monitoring Program, conducted by National Security Technologies, also monitors wells on and off of the NTS.

Results are published annually in the *Nevada Test Site Environmental Report*.

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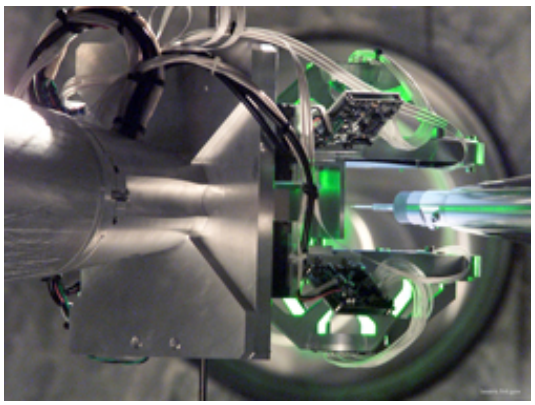
# Department of Energy Announces Completion of World's Largest Laser

## *Certification of National Ignition Facility Marks Major Milestone in Scientific Advancement*

The National Nuclear Security Administration (NNSA) has certified the completion of a historic effort to build the world's largest laser. The National Ignition Facility (NIF) at Lawrence Livermore National Laboratory (LLNL) was dedicated in May and will primarily aid the Nevada Test Site in conducting its nuclear weapons stockpile stewardship mission.



*The target positioner and target alignment system precisely locate a target in the NIF target chamber.*

*The target is positioned with an accuracy of less than the thickness of a human hair.*

NIF, the world's highest-energy laser system, consists of 192 laser beams that will focus nearly two million joules of energy, and create temperatures and pressures that exist in the cores of stars and giant planets. By harnessing the massive power generated by its lasers, NIF will be able to create conditions and conduct a wide range of experiments never before possible on earth.

National Security Technologies (NSTec) and its Livermore Operations team have supported the development of Lawrence Livermore National Laboratory's NIF throughout, and also supported the dedication ceremonies.

Funded by the NNSA, construction of NIF began in 1997 with three scientific missions in mind, the first being to serve as a key component of the Stockpile Stewardship Program to ensure the safety and reliability of the nation's nuclear deterrent without the need for nuclear testing.

Because of its groundbreaking advance in technology, NIF also has the potential to produce breakthroughs in fields beyond national security. Along with this vital national security mission, NIF also offers the possibility of groundbreaking scientific discoveries in planetary science and astrophysics, as well as in energy resources. A large majority of these experiments will be unclassified and will provide a rich source of previously unobtainable data to the world-wide research community.

"Completion of the (NIF) is a true milestone that will make America safer and more energy independent by opening new avenues of scientific advancement and discovery," said NNSA Administrator Thomas D'Agostino. "NIF will be a cornerstone of a critical national security mission, ensuring the continuing reliability of the U.S. nuclear stockpile without underground nuclear testing, while also providing a path to explore the frontiers of basic science, and potential technologies for energy independence."

The NSTec team continues to play a key role in meeting NIF milestones. In May, Livermore Operations participated in synchronization and facility preparation shots as well as software troubleshooting. NSTec's Livermore Operations continues to participate in the detailed daily operations and support of the NIF target area.

"This has brought the NIF mission, milestones, and teamwork into the public eye," said NSTec Manager Jackie Meeker. "This is the future. We are proud to support LLNL at NIF in all their endeavors."

The football stadium-sized NIF is capable of focusing all of its 192 individual beams, each about 40 centimeters square, into a spot about one-half millimeter in diameter at the center of its 10-meter diameter target chamber. NIF has the ability to deliver large amounts of energy

with extreme precision in billionths of a second.

NIF has already produced historic scientific advances. Earlier this month, NIF became the first fusion laser in the world to break the mega joule barrier (a mega joule is the energy consumed by 10,000 100-watt light bulbs in one second) by delivering 1.1 million joules of ultraviolet energy to the center of its target chamber – more than 25 times more energy than the previous record-holder.

The dedication festivities also featured several dignitaries, among them Undersecretary of Science for the U.S. Department of Energy Steven Koonin. “A successful demonstration of ignition and energy gain at NIF would be a transforming event that would solidify fusion’s potential as an important energy source,” Koonin said. “The dedication of NIF is a milestone in an exciting scientific journey that will create a lasting legacy of discovery, innovation, and security and allow the nation to reap the benefits of this visionary investment in its future.”

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# NTS Hosting Navy Midshipmen

*Midshipmen Justin Kramer (left) and Tyler Sordelet join professor Marty Nelson, Ph. D at the Dense Plasma Focus Accelerator at the NTS.*

National Security Technologies (NSTec), the management and operating contractor for the U.S. Department of Energy's Nevada Test Site is hosting two U.S. Naval Academy Midshipmen this summer as part of their Service Academy Internship Program. The area of focus for this year's internship program is Dr. E. Chris Hagen's Dense Plasma Focus Accelerator at the NTS.

NSTec has three such systems in various configurations. Research with the Dense Plasma Focus Accelerator provides for active interrogation of special nuclear material as well as the calibration of nuclear detection equipment. Enhancing national security is the focus of this research, with the goal of improving our capability of detecting a smuggled nuclear device or material. Dr. Hagen and his team of scientists have designed and developed these active interrogation systems with a concentration on usability and repeatability. That is to say, the systems are designed to work.

Many active interrogation systems exist in the marketplace. But, Dr. Hagen's system could be deployed to warfighters with minimal non-recurring engineering.

One of the interns, Tyler Sordelet, is pursuing a career in nuclear submarines, and is a senior at the United States Naval Academy. Tyler has a 4.0 GPA (Straight A) and is near the top of his class. His major is mechanical engineering. Tyler is pursuing a career in the nuclear submarine program, and his focus for this summer is to perform research with radiation detection gear.

The other intern, Midshipman Justin Kramer, joined the Navy in May of 2003, and upon graduation from boot camp reported to Nuclear Power "A" school. He graduated 2nd in his class, and received a promotion to Machinist Mate 3rd Class. Midshipman Kramer then attended Nuclear Power School, where he finished at the top of his section and 10th in his class. His next assignment was to the Nuclear Prototype Training Unit.

Before Midshipman Kramer attended the Naval Academy Preparatory School, he was given the opportunity to receive the required training to become an engineering laboratory technician. An engineering laboratory technician's primary responsibility is maintaining the required chemistry for propulsion systems, as well as control and monitoring of radiation. Midshipman Kramer is a senior at the U.S. Naval Academy, and is pursuing a degree in mechanical engineering. Like Tyler, Justin's career path is leading toward nuclear submarines.

Mark Harper, PhD., and Marty Nelson, PhD., are the nuclear science professors facilitating the internships through the Mechanical Engineering Department at the Naval Academy. They believe the program enables the midshipmen to learn cutting-edge technology by participating in valuable research. The interns learn valuable skills for their military careers, and gain useful insight as to what warfighters' needs will be in the future. And, last but not least, the program provides the Navy with a front row seat to the design, development, testing and evaluation of next-generation nuclear detection gear.

This is the third year of the Midshipmen Internship Program at the Nevada Test Site. When NSTec won the M&O contract for the Nevada Test Site, company President Dr. Stephen Younger implemented the program. In the years since winning the M&O contract, NSTec has hosted eight interns.

The internship program is contributing substantially to meeting the needs of warfighters and providing for cutting-edge collaborative research, from which both participating organizations, the Department of Energy and the nation will benefit.

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# NNSA/NSO North Las Vegas Badge Office Relocates to B-3 Building

The NNSA/NSO Badge Office at the North Las Vegas Facility has been relocated from the Nevada Support Facility (NSF) to the B-3 Building, located at the entrance of the Energy Way gate.

The relocation, which officially was completed June 11, ends a successful joint project involving nearly all the contract partners of the Nevada Test Site, including National Security Technologies (NSTec) which handled construction; Wackenhut Services Inc. (WSI), which brought all badging systems on-line; PAI Corporation, which provided badge office requirements; and the NSO Assistant Manager of Safeguards and Security (AMSS), which oversaw project management.

The relocation was completed under budget and ahead of schedule, according to Wayne Morris, PAI Corporation program manager. “Most places don’t have you coming into a security area to get your badge, as we had here at the NSF,” Morris said. “A year ago, NNSA/NSO had the idea to put the badge office in front of the security line of demarcation, where it should be.”

The following rules are in effect for visitors entering through Energy Way Gate, Station 850:

- Visitors must report to the B-3 Badge Office to receive a NNSA/NSO Local Site Specific Only (LSSO) badge for access through Station 850.
- Access to the NNSA/NSO will be granted to visitors who possess a valid DOE or DNFSB HSPD-12 or Standard DOE badge (issued from other DOE sites). LSSO badges issued from another DOE site are not valid for access at the NNSA/NSO.
- B-3 Badge Office parking is limited to 11 spaces with a one-hour time limit; therefore, it is the responsibility of the sponsors to handle prior badging coordination when hosting a large group, (POC: Sandy

Dyer, (702) 295-5349).

- Sponsors must ensure that their visitors are familiar with and comply with the NNSA/NSO Prohibited Articles Policy (http://www.nv.doe.gov/about/visitors/default.htm) upon entering NNSA/NSO Facilities.
- **Reminder:** Sponsors must submit a WSI Form 336, Energy Way/ Atlas Drive North Las Vegas Facility Visitor Access Form, via fax to the B-3 Badge Office at 295-0599.

**NOTE:** Visitors entering through the Atlas Drive entrance, Station 800, will see no change to current procedures.

Morris emphasized the need for larger groups to coordinate their arrival to expedite badge processing. Meanwhile, it is hoped that streamlining the badging process by moving the badge office will help improve efficiency at the North Las Vegas facility, Morris said. “From a security perspective, it makes perfect sense that everybody coming through the Energy Way gate would stop at the Badge Office there. It will be business as usual at the access points, but this makes it a lot easier on our protective force as they work to clear those accessing the property,” Morris said.

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# Hoover Dam Drill Focuses on Terror Threats

Radiological material is reported stolen in Guadalajara. An abandoned boat, contaminated with Cesium-137, is found near the mouth of the Colorado River and Gulf of California. And a Hoover Dam employee, with access to every area of the structure, is reported missing. Is the Hoover Dam being targeted by terrorists? Is the nexus of water and power supplies to the entire southwest United States in jeopardy?

*The Hoover Dam and by-pass bridge (under construction)*


*The SRT/RAP Team. First Row: Courtney Brown, Les Winfield, Joe Ginanni, Bert Cochran, Tracy Kiellman, Steve Moyle, Mark Montgomery. Second Row: Marvin Preston, Steve Mitchell, Troy Waterman, Krikor Hovosapian, Ron Wells, Teresa Bushgens, Cassandra Zellers.*

*RAP 7 team member Mark Montgomery searches shop area deep inside the Hoover Dam.*

*Rusty Malchow-SRT (in blue shirt), Steve Moyle-RAP7 (in gray shirt), and Tom Lobkowicz-Hoover Dam (in green) use a Detector to obtain a radiological spectrum reading on the Hoover Dam generator floor.*

That was the scenario for the Search Response Team (SRT) radiological search drill conducted at the Hoover Dam in Boulder City, Nev., in April. Participants included personnel from the Radiological Assistance Program (RAP), Team 7 from Livermore, Calif., the Las Vegas FBI, Las Vegas Metropolitan Police All Hazards / Regional / Multi Agency / Operation / and Response (ARMOR) Unit, the 92nd Civil Support Team personnel, and the Hoover Dam Police Department.

The drill began with the SRT providing training to RAP personnel on new detection units. Following that, force multiplication training was presented

to sixteen FBI, ARMOR, CST, and Hoover Dam Police agents and officers. In a real-world response, this training allows for force-multiplication of novice personnel to be able to assist with the radiological search of an area; adding additional “feet on the street” at a most critical time.

Upon completion of the force-multiplication training, personnel were divided into teams, assigned SRT technical advisers, outfitted with various radiation detection devices, and deployed to their respective search locations. The search targeted three real (but safely protected) radioactive sources that were hidden within the dam by drill controllers.

Each team successfully located the three radiological sources. Upon finding the final source, located deep within the Hoover Dam on the generator floor, an ID team was called in to take a spectrum reading, which was evaluated on-site and sent to triage for further analysis.

SRT often participates in events with the local FBI, ARMOR, and CST, but the drill was a first for Hoover Dam Police. The event gave Hoover Dam Police and security personnel a better understanding of the radiological detection capability that they could utilize during a real-world emergency at Hoover Dam, and in turn, it afforded SRT/RAP personnel a realistic venue in which to conduct a drill.

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## Swine Flu: What You Need to Know

Swine flu continues to be in the news, with millions of cases reported and the World Health Organization proclaiming it has reached pandemic levels. National Security Technologies (NSTec) Occupational Medicine wants to make sure everyone is well informed on the subject.

Symptoms of swine flu in people are similar to the symptoms of regular human flu and include fever, cough, sore throat, body aches, headache, chills and fatigue. Some people have reported diarrhea and vomiting associated with swine flu. In the past, severe illness (pneumonia and respiratory failure) and deaths have been reported with swine flu infection in people. Like seasonal flu, swine flu may cause a worsening of underlying chronic medical conditions.

What you can do to protect yourself and others:

- Cover your nose and mouth with a tissue when you cough or sneeze. Throw the tissue in the trash after you use it.
- Wash your hands often with soap and water, especially after you cough or sneeze. Alcohol-based hand cleaners are also effective.
- Avoid touching your eyes, nose or mouth. Germs spread that way.
- Influenza is thought to spread mainly person-to-person through coughing or sneezing by infected people.
- If you get sick, Occupational Medicine recommends that you stay home from work or school and limit contact with others to keep from infecting them. In addition, contact your primary care physician for further guidance.

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# NSO, NSTec Teams Assist With National Radiological Exercise

## *EMPIRE09 Provides Real-Time Response*

*Two explosions rip through downtown Albany without warning.*
*The first bomb detonates in a parked car on the corner of Eagle and State streets. The second blast occurs around the same time about a half-mile away on Swan Street near Madison Avenue.*
*Emergency responders spring into action. Amid the chaos, six people are dead and another 20 injured.*
*That's when authorities discover the detonations were both dirty bombs. One spreads the radioactive isotope Cesium-137 and the other Americium. Large swaths of downtown Albany are irradiated, including the state Capitol, the county Legislature and City Hall.*
*Rescue workers must evacuate hundreds of people to sites at the University at Albany and Columbia High School in East Greenbush, but they have to do it without many of their normal offices.*
*This is where preparedness comes in. (From Justin Mason, Albany Daily Gazette)*

The thought of not one, but two dirty bombs exploding in a major city is daunting, yet that scenario is exactly what brought more than 650 city, county, state and federal responders together during the just-completed EMPIRE09 exercise held in Albany, New York.

Five Nevada Site Office (NSO) and 60 National Security Technologies (NSTec) emergency response personnel joined in to assist with the "attack," which was focused on two major streets adjacent to the New York State Capitol building and a landmark cathedral.

Responders had to deal with issues ranging from mandatory and voluntary evacuations to a radioactive plume stretching over a wide range of

downtown Albany across the Hudson River and into adjacent counties.

The large-scale EMPIRE09 consisted of three phases. The first phase was a table-top drill which brought together about 75 key first responders to discuss issues associated with the immediate detonation of dirty bombs. The emphasis was placed on actions they would take to protect human health and safety.

Phase two of the exercise consisted of first responders actually converging on Albany to play out their roles in the scenario. The third phase was a final table-top exercise that focused on transitioning from the crisis to long-term recovery efforts.

For Joseph Krol, associate administrator for NNSA's Emergency Operations Programs, while the exercise itself is important, it is the lessons learned he wants to see. "When the real thing happens, we will be really prepared," he said. "Learning how we can have stronger and better procedures, and understanding how to improve the interfaces from the local level all the way to the federal level, is the true value we get out of these exercises."

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# "Dr. Proton" and "Adam the Atom" Make Their Return

## *Community Partnership Extended to Rosemary Clarke Middle School*

*Students at Rosemary Clarke Middle School examine the Adam the Atom and Dr. Proton exhibit.*

Dr. Proton and Adam the Atom took their love for learning, sharing, and having fun to students at Rosemary Clarke Middle School in Pahrump, Nev., on May 20 and 21. The characters are portrayed in the U.S. Department of Energy, National Nuclear Security Administration/Nevada Site Office (NNSA/NSO) Operation Clean Desert exhibit.

Operation Clean Desert follows the adventures of Dr. Proton and Adam the Atom as they visit the Nevada Test Site (NTS) and learn about environmental issues. Approximately 400 sixth graders at the school learned about the history, environmental concerns, and cleanup activities which take place at the NTS.

In addition to the Operation Clean Desert display, students were taken on a visual journey of NTS missions, past and present, through a multi-media

presentation and posters on groundwater and radioactive waste management.

“We appreciate the community partnership with Rosemary Clarke Middle School in helping area children learn about scientific activities and the environmental management efforts at the Nevada Test Site,” says Kelly Snyder, Public Involvement Task manager for the Nevada Site Office. “Our display connects children with local history and the ongoing Nevada Test Site environmental work.”

The annual, two-day event is part of a lesson plan developed by Rosemary Clarke Science Department teachers Carol Hunn and Kim Syverson to address Nevada Department of Education science objectives. Following the presentation by Susan Krenzien, an experienced science professional at the NSO, students were required to complete a worksheet based on the Operation Clean Desert activity book, which was provided for the lesson. Each student was also given a CD of the accompanying interactive computer game.

The success of the event was most evident from the enthusiasm displayed by the students, many of whom have friends or family who work at the NTS. “Using fun characters like Dr. Proton and Adam the Atom helps facilitate awareness of the important environmental cleanup activities occurring at the NTS,” Snyder said. The Operation Clean Desert exhibit has also been displayed at numerous elementary and middle schools in the Las Vegas Valley, and at libraries and community events.

More information on the Operation Clean Desert learning trio can be found at www.nv.doe.gov.

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## NSTec Employees Recognized by DOE

Two managers for National Security Technologies (NSTec), the management and operating contractor for the Nevada Test Site, are being recognized for their energy efficiency achievements. Susan Livenick, project manager, and Lance Rakow, Logistics Services manager, have been selected to receive the 2009 U.S. Department of Energy (DOE) Management Award. Livenick is being recognized for her work on the North Las Vegas Building B3 project. Rakow is being recognized for his work on the Nevada Test Site Fleet project. The awards are given by the DOE Federal Energy Management Program to recognize outstanding achievements in energy and water management.

Livenick has worked at the Nevada Test Site since 1997. As Project Manager for the B3 administration office, she was instrumental in the completion of the National Nuclear Security Adminstration/Nevada Site Office's (NNSA/NSO) first "green" building. The structure incorporates state-of-the-art automation to monitor and control lighting, heating, cooling and air quality. Additional "green" features include an insulated roof which reduces heating, enhanced refrigeration management, and desert-friendly landscaping – all which were expected to improve energy efficiency by 17.5 percent. Completion of the B3 project also brought to a close NSO's beryllium cleanup project and made space available to move employees from the Nevada Support Facility. "The NSTec team worked long and hard to make the B3 project a reality, and I'm honored that the DOE would recognize us in this way," Livenick said.

Rakow is being recognized for his efforts overseeing the conversion of nearly all fleet vehicles at the Nevada Test Site to using environmentally-friendly (E-85) ethanol and biodiesel fuels. Many agencies have switched to using E-85, which reduces vehicles' petroleum use by 85 percent. "We took on the task of constructing and operating an E-85 fuel station, and

have, for a long time, used biodiesel as an alternative to Diesel No. 2 at the Test Site," Rakow said. "It really has been a team effort that's achieved this over the years."

Both managers will receive the award at a special awards ceremony on Aug. 12 in Providence, Rhode Island.

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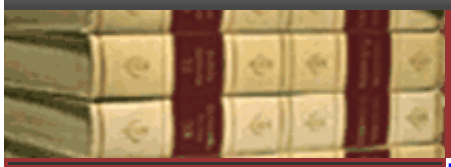

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## Milestones

*WSI*

**25 years**

Dennis Doyle, Richard Workman

**20 years**

Danny Austin, Barry Flood, Bruce Radel

**10 years**

G. Scott Damron, Gregory Stukes, James Layton

**5 years**

Martin Glasser, Starr Gamble, Jared Pearson, Jason Stump, Nicolette Nickell, Edward Potts

*National Security Technologies*

**40 years**

Linda Flaugher, Nelson Cochrane

**35 years**

Alvin Flanagan, Linda Fletcher

**30 years**

Debra Whittington, Yang Lee

**25 years**

Craig Mercadante, Glenn Schaefer II, Linda Land, Tamara Yordy, Thomas Sulliva

**20 years**

Catherine Cooper, Christine Muehlbauer, George Powell, John Buckley, Nancie Nickels

**15 years**

Darlene Johnson, Elaine Forbes

**10 years**

Bruce Oxborrow, Donnivan Waldrip, Eric Nystrom, James Anderson, Larry Saltzman, Mandy Hutchins, Richard Clough, Robert Babbitt, William Trammell

**5 years**

Barry Willis, Benjamin Simpson, David Krausnick, Deborah Davidson, Elizabeth Leonard, Erik Petersen, Hernan Rico, Jack Woods, Jacob Huffines, John Mentgen, Krikor Hovasapian, Louise Kubeldis, Mark Merfalen, Virginia La Vigne

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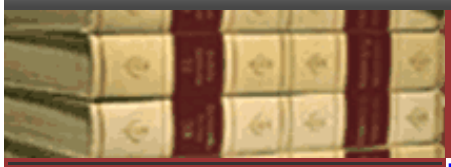

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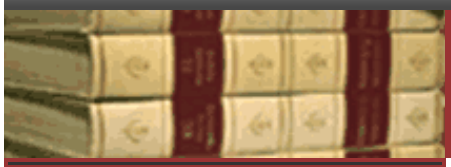

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## Acronyms

**The following acronyms appear frequently in *SiteLines*:**

| | |
|---|---|
| **BEEF** | Big Explosives Experimental Facility |
| **CTOS** | Counter Terrorism Operations Support |
| **DAF** | Device Assembly Facility |
| **DOE** | Department of Energy |
| **EM** | Emergency Management |
| **EM** | Environmental Management |
| **ES&H** | Environment, Safety, and Health |
| **FRMAC** | Federal Radiological Monitoring and Assessment Center |
| **JASPER** | Joint Actinide Shock Physics Experimental Research (gas gun) |
| **LANL** | Los Alamos National Laboratory |
| **LLNL** | Lawrence Livermore National Laboratory |
| **NNSA** | National Nuclear Security Administration |
| **NSO** | Nevada Site Office |
| **NSTec** | National Security Technologies, LLC |
| **NTS** | Nevada Test Site |
| **PIP** | Process Improvement Project |
| **R-MAD** | Reactor Maintenance, Assembly, and Disassembly Facility |
| **RSL-A** | Remote Sensing Laboratory - Andrews |
| **RSL-N** | Remote Sensing Laboratory - Nellis |
| **SC** | NNSA Service Center |
| **SCE** | Subcritical Experiment |
| **SNJV** | Stoller-Navarro Joint Venture |
| **SNL** | Sandia National Laboratories |
| **STL** | Special Technologies Laboratory |
| **WSI-NV** | Wackenhut Services Inc. - Nevada |

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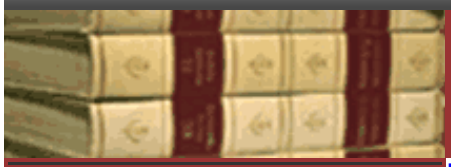

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SiteLines is published by the U.S. Department of Energy National Nuclear Security Administration Nevada Site Office, P.O. Box 98521, M/S NSF119, Las Vegas, NV 89193-8521.

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National Nuclear Security Administration
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*Published for all members of the NNSA/Nevada Site Office family*
*Stephen A. Mellington, Manager, NNSA/Nevada Site Office*
*Darwin Morgan, Office of Public Affairs*
*Submit articles or ideas to NSTec Public Affairs at donaldjw@nv.doe.gov.*

**Publication Management:**

NSTec Public Affairs and Community Relations

**Layout and graphics:**

Shelli Hadley
Team EES

**Contributors:**

John Ciucci
Jeff Donaldson
Lory Jones
Susan Livenick
Dr. Jeff Moon
Lance Rakow
Kelly Snyder
Von Sudderth
Vicky Walter

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