

Preserving the Legacy

Printed below is "Preserving the Legacy," the speech given by Ambassador **Linton Brooks**, NNSA Administrator, at the Atomic Testing Museum Grand Opening celebration on February 19, 2005, in Las Vegas, Nev.

Good afternoon. I'm honored to represent the Administration at the formal opening of the Atomic Testing Museum. You've just heard an eloquent statement of why museums are important to preserve the past. The past has made us who we are today, both as individuals and as a nation. We need to preserve the past so it can help point the way to the future. That's why what is being done here in this museum to capture and remember the events, the history, the people and the activities of the Nevada Test Site is so valuable. It is important that we preserve that history.

But why remember the Nevada Test Site? Why does a piece of remote desert, pockmarked with subsidence craters from underground tests, deserve its own museum? Because the test site was integral to America's nuclear deterrent and that deterrent dominated our history and ensured our security for over 40 years. This museum helps preserve and celebrate a victory in America's longest war, a Cold War with no defined start or end, no front lines, no declaration of war, and no victory parades. It is a war that was won, in part, in the Nevada desert about 65 miles from where we stand this afternoon. It was won because of the site whose legacy this museum will preserve. I'd like to talk about that war and the part the Nevada Test Site played in winning it.

The precursor to the Cold War was, of course, World War II. America developed nuclear weapons as a defensive measure, in the fear that the Nazis would develop them first. We used them to shock Japan into surrendering and to prevent an American invasion that would have resulted in hundreds of thousands of casualties. We thought that surrender would bring an enduring peace. We were wrong.

In 1946, in a small midwestern city named Fulton, Missouri, Winston Churchill delivered a sobering message to the world. He said:

From Stettin in the Baltic to Trieste in the Adriatic, an iron curtain has descended across the continent. Behind that line lie all the capitals of the ancient states of central and eastern Europe...All these famous cities...lie in what I must call the Soviet sphere.

Churchill's speech called attention to an oppression that would lead nations to spend trillions of dollars to prevent aggression and a peace built on the bedrock of the American nuclear deterrent. Three years later, the Soviet Union conducted its first nuclear test and the Cold War came to the U.S. nuclear weapons complex.

The Cold War had many symbols. One was a barbed wire fence and later a wall dividing the city of Berlin and imprisoning its people. Other symbols were the periodic "local wars" in places like Korea and Vietnam, wars seen at the time - especially in Korea - as surrogates for a global war.

The most frightening symbol, however, was nuclear confrontation, which reached its peak over 42 years ago. At 8:45 a.m., October 16, 1962, when President John F. Kennedy received an assessment from the Central Intelligence Agency that Soviet missiles were in Cuba. The President went before the American people and called on Soviet Chairman Khrushchev to "halt and eliminate this clandestine, reckless and provocative threat to world peace...He has an

opportunity now to move the world back from the abyss of destruction."

The following days were filled with the fear of imminent nuclear confrontation. I spent those days on a destroyer as part of the quarantine of Cuba, expecting that we would shortly go to war. Others in this audience spent those days preparing our deterrent. All Americans spent them facing the possibility of nuclear war. We all now know just how close the world came to the brink of a nuclear confrontation. But catastrophe was averted.

The Cold War continued, though America never again came as close to the apocalypse. A permanent condition of global tension became an integral part of who we were as a people. And then, in a three-year frenzy, our longest war ended. In 1989, the Warsaw Pact began to collapse and on November 9, 1989, a mid-level bureaucrat in East Germany prematurely announced to journalists that the ban on travel to the west would be lifted immediately.

That announcement led to a flooding of West Berliners to the Brandenburg Gate. They began to demolish the Berlin Wall and in days it had fallen completely.

In the Soviet Union, General Secretary Gorbachev had unleashed forces he could not control. He allowed demonstrations that led to the call for the end to the Communist Party's stranglehold on power. In a stunningly short time, the Communist Party - a party that had ruled since the October Revolution of 1917 - collapsed and the 15 constituent Republics of the Soviet Union began to gain their independence. Finally, at Minsk on December 8, 1991, Russia, Belarus and Ukraine moved to dissolve the Soviet Union. In an act that symbolized the irrelevance of the Soviet system, those three states informed the American President of their action before telling Gorbachev what they had done. And on Christmas Day in 1991, the Soviet Union, that great experiment in communist totalitarianism, went into the dustbin of history where it belonged and the Cold War ended.

Why was it only a Cold War? Why, when the West was faced with an expansionist power with a messianic ideology did global war never break out? Because the American nuclear deterrent - forged in part here in Nevada - made global war unthinkable. That deterrent was tested and honed a few miles north of here, starting before dawn on January 27, 1951, when a B-50 bomber dropped the first of the hundreds of weapons to be tested at the Nevada Test Site.

That test might not have happened. In March 1949, the AEC concluded that, excepting a national emergency, a test site within the continental United States "was not desirable." The August 1949 Soviet test ended the U.S. monopoly on nuclear weapons, surprised many American leaders, and provided that emergency. The Army Air Corps had established the Las Vegas Bombing and Gunnery Range in October 1940. President Truman gave permission to use part of this range as a test site in December 1950 and the Nevada Test Site was born.

From that day on, America's arsenal was tested in Nevada. New concepts in tactical weapons, weapons for submarine launch, thermonuclear weapons, all were tested here. At Nevada, deep in tunnels, complex effects tests took place to help us understand the effect of nuclear explosions on our own military systems. At Nevada we tested modern safety and security systems that helped ensure the reliability, safety, and security of the deterrent. Year

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photo by Ron Kalb
Ambassador **Linton Brooks** delivers his speech at the Grand Opening of the Atomic Testing Museum.

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Preserving the Legacy

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after year America needed to be certain the deterrent was effective and year after year the Nevada Test Site was there.

When concerns over fallout lead to the a Limited Test Ban Treaty in which both nations ceased atmospheric testing, scientists and engineers developed complex diagnostics for underground testing. Late in the Eisenhower years, a brief moment of euphoria resulted in a three-year moratorium on nuclear testing. The Nevada Test Site severely reduced employment and appeared to have an uncertain future. But when the Soviets broke the moratorium, NTS responded and was ready.

As nuclear doctrine became more complex, the numbers of weapons increased. The test site ensured they were reliable. Gradually, the United States developed weapons that were so survivable that we could begin serious efforts at arms reductions. That would not have happened without the work of the Nevada Test Site.

In 1988, the United States and the Soviet Union reached an historic but little known agreement. They agreed to conduct joint nuclear tests in each other's country. On August 17, 1988, at the Nevada Test Site, Soviet scientists were present for the first Joint Verification Experiment called *Kearsarge*. On September 14, 1988, at the Semipalatinsk Test Site, American scientists were present for the second Joint Verification Experiment called *Shagan*.

These joint experiments were a prelude to the signing of verification protocols to an existing treaty on limiting the yield of underground nuclear weapons tests. Their more important result, however, was to establish a precedent for scientific cooperation between weapons laboratories that lives on in the Cooperative Threat Reduction program and the various Department of Energy threat reductions programs in Russia. They thus set the stage for the important non-proliferation work we are doing today.

On September 23, 1992, the last underground test took place in Nevada. Of the 1,054 American nuclear tests, almost 90 percent had taken place at the test site. Since 1992, the United States – and the Russian Federation – have observed a moratorium on testing. But that doesn't mean that the test site has been idle. Non-nuclear tests routinely conducted here in underground experiments and on complex machines with names like JASPER and Atlas help ensure the continued safety and reliability of our nuclear stockpile. More recently, the test site has taken on new missions relating to

the war on terrorism. And of course, if nuclear testing is ever required to deal with unexpected problems in important elements of the stockpile, Nevada once again will be ready.

From the first Soviet test to the collapse of the Soviet Union was just over 42 years. For much of this time, the world feared total nuclear destruction.

The Cold War wasn't peace. In Korea, Vietnam, Afghanistan, Africa and Central America huge numbers perished. But the apocalypse never came. We don't know why it never came. The nature of deterrence is that you can never prove that it worked, only that it failed. But I believe that nuclear deterrence played a major role in preserving peace and I know that the Nevada Test Site played a major part in that deterrence.

So did Nevada as a whole. In a democracy, you don't spend decades testing nuclear weapons next door without community support. And the support of the people of Nevada for a strong deterrent was – and remains – legendary. Today we honor them as well.

We don't usually look to government documents for eloquence, but the best description of the legacy of the Nevada Test Site that I've found comes from the official DOE history of its founding:

Here is where the Cold War was fought. Here...officials, with the acquiescence and sacrifice of a local population willing and even eager to do its part, conducted some of the most spectacular...important, and potentially hazardous experiments ever seen...by humankind. The Nevada Test Site...stands as a monument to what they did and how they made the world as we know it today.

This museum will provide the world with some glimpse of an important component of the effort that many dedicated Americans gave to maintain nuclear deterrence during the Cold War. It will ensure that we don't forget those dedicated men and women who helped win that war. All Americans can be proud of their legacy and of the consistent support of the people of Nevada for a strong national defense. We are forever in their debt. On behalf of the Department of Energy, of the Administration, of the nation and of generations unborn who will visit this museum and learn of an important part of their legacy, I salute those who have worked so hard to make this day possible.

God bless you all, God bless the men and women of the Nevada Test Site, and, above all, may God continue to bless America. Thank you.

NNSA/NSO put to the test

by Nancy Tufano

On February 23, 2005, NNSA/NSO was tested on its emergency response procedures during a full-scale exercise lasting more than six hours. The exercise, conducted at the NTS and its support facilities, demonstrated NNSA/NSO's ability to quickly respond to and mitigate the effects of an emergency situation at the NTS.

The simulated emergency, an earthquake originating at the site, effected activities and facilities, but was of special concern at the U1a Facility, an underground experimental complex supporting routine test site activities involving the detonation of high explosives. During this exercise, 22 employees were trapped underground at U1a. A special mine rescue team was mobilized to free the captives and bring them safely above-ground. In addition to this exercise scenario, another exercise scenario involved a tanker truck accident with a fatality on Mercury Highway.

As emergency response and rescue activities continued throughout the day, parts of the NTS were evacuated, and barricades were strategically placed at areas on the test site. Employees in North Las Vegas established a simulated information center to manage imitation inquiries from employees, the public, and the media.

"This exercise was more complex than previous years due to the number of emergency events that were included, the length of the exercise, and the large number of participants," said **Teri Lachman**, NNSA/NSO Emergency Management Operations. "The exercise planners deserve special kudos for being able to successfully stage an exercise

this complicated. Exercises give us the opportunity to test our procedures and processes and through the diligent work of the participants, we were able to confirm that many areas worked well. Some areas have improvements that need to be made, which will be worked on over the next few months."

Full-scale exercises such as this one are conducted periodically in accordance with DOE Order 151, with smaller-scale exercises occurring several times per year to test emergency response effectiveness. Each event simulates a different type of emergency situation. The exercises are thoroughly planned and executed to ensure the most realistic situations and responses. Employees are trained in emergency procedures and their skills and knowledge are tested during these frequent maneuvers. This exercise demonstrated NNSA/NSO's level of preparedness in its emergency response plans and procedures.



Face-to-Face



Name: John McCord
 Company: Stoller-Navarro Joint Venture
 Title: Underground Test Area Project Manager
 Hometown: Santa Ynez, California
 Hobbies/
 Interests: Hiking, fly-fishing, southwest road trips and international travel

Key to Acronyms

The following acronyms appear frequently in *SiteLines*:

- BEEF Big Explosives Experimental Facility
- BN Bechtel Nevada
- DAF Device Assembly Facility
- EM Emergency Management
- EM Environmental Management
- ES&H Environment, Safety, and Health
- 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
- NTS Nevada Test Site
- PIP Process Improvement Project
- 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 Incorporated - Nevada

University researchers explore Amchitka Island's marine environment

by Rosemary Rehfeldt

Last summer, a diverse group of researchers from five major research universities boarded the Ocean Explorer, a ship leaving port in Adak, Alaska – the western-most settled community in the Western Hemisphere – and headed for Amchitka Island, part of the Aleutian Islands chain. Just a few miles from the international date line, Amchitka Island is the site where three underground nuclear tests were conducted by the United States government more than 30 years ago.

Research efforts, that will run through April 2005, seek to determine if marine biota are currently accumulating radionuclides that could have been released from the underground nuclear tests and whether there is any current threat to human health or the environment. The marine samples were primarily collected in areas near the three nuclear test locations (Long Shot, Cannikin, and Milrow) on Amchitka Island as well as parallel locations on Kiska Island, a comparison site with comparable marine plants and animals, approximately 50 miles west of Amchitka.

The research team is part of a consortium of universities working to advance environmental cleanup. Under a grant from DOE, the Consortium for Risk Evaluation with Stakeholder Participation, or CRESP, helps provide greater stakeholder understanding of the nation's nuclear weapons production facility waste sites.

Early in the planning phase of the study, the research teams involved the Aleut/Pribilof Islanders and other stakeholders to help assure that the bioindicators selected were directly relevant to their diets and concerns. Furthermore, samples were chosen to adequately characterize uptake and distribution through major food chains. These studies will also provide baseline data for any later scientific evaluations of the effects of the tests, as well as establishing future ecosystem monitoring programs.

The research was designed in three phases: Phase I (Physical Sampling); Phase II (Biological Sampling); and Phase III (Data Analysis of samples collected). During Phase I, teams of researchers from the University of Alberta, Canada and the University of Alaska, Fairbanks reviewed and digitized earlier bathymetric data, or measurement of the ocean's depth, beginning with U.S. Geological Survey data from the 1940s. The historical data was combined with data recently generated by satellite and other means to synthesize the information available about the subsurface marine environment at Amchitka and to develop global positioning system coordinates for the study area. In addition, instrumentation was deployed that produces conductivity, depth and temperature profiles, testing for seeps off of the island. Magnetotelluric

techniques, which characterize the subsurface geology, were used to analyze the on-island subsurface structure of groundwater flow.

The physical data collected radically improved guidance for pinpointing the focus and priorities for Phase II, the biological sampling effort. This portion of the research was performed under the guidance of researchers from Rutgers University and the University of Alaska, Fairbanks. A specimen collection team included researchers from the University of Medicine and Dentistry of New Jersey; the University of Pittsburgh; a representative from the Aleutian/Pribilof Island Association; two Aleut hunters/fishers; as well as three divers from the University of Alaska, Fairbanks.

The samples collected include algae, invertebrates, fish and predatory birds; all of which form part of the Aleut food web and are relevant to commercial fisheries in the region. In addition to marine samples, land sampling included collection of eggs and/or chicks, rats (part of the eagle food supply) and plants. All biological sampling was conducted with appropriate state and federal permits and approved university protocols.

As part of the Phase II studies, CRESP also arranged to have researchers from Rutgers University participate on the full expedition of a National Oceanic and Atmospheric Administration (NOAA) trawling boat. Research conducted from the two ships represent a two-pronged approach to the process by which the marine catch for human consumption was obtained: 1) a research vessel (the Ocean Explorer) that incorporated traditional sampling and collection methods as well as Aleut hunting and fishing methods, and 2) a NOAA trawl that is fishing according to normal commercial fishery practices. Using this approach allowed researchers to obtain, and make available for analysis, organisms that both represent not only the marine and the Aleut subsistence food web but the commercial fishery take as well.

Phase III, analysis of the samples, is currently underway and being performed under strict quality control, with duplicate readings from different laboratories. The analyses will be undertaken first as a screening survey of composite samples, with an attempt to identify radionuclides of greatest concern to human and ecological health. The effort will involve the processing of samples primarily at Rutgers University and Vanderbilt University, with the primary analytic efforts taking place at the Idaho National Engineering and Environmental Laboratory, then subject to confirmatory processes to assure the accuracy of those analytic efforts at Vanderbilt University and another confirmatory lab to be determined. Expected completion date for the sampling analysis is April 15, 2005.

For more information on this expedition, and other CRESP activities, visit their Web site at www.cresp.org. Additionally, information pertaining to NOAA activities can be viewed on their Web site at www.noaa.gov.

Drilling activities at the Central Nevada Test Area

by Rosemary Rehfeldt

Beginning in April 2005, the DOE/NSO Environmental Management program will drill one of three hydrogeologic investigation/monitoring wells around the Central Nevada Test Area (CNTA). The CNTA, located in the Hot Creek Valley in northeastern Nye County, Nev., was the site of an underground nuclear explosion that took place in 1968.

The drilling program's purpose is to collect geologic, geophysical, hydrologic and geochemical data to track the potential movement of contaminated groundwater in the subsurface.

The drilling will not intersect the test cavity or the contaminated zone, and no radioactive contamination is expected to be encountered in the course of drilling operations. Mobilization of the site and drilling of the first well will begin in April. Drilling operations for the second well are scheduled for June, and work on the third well will begin in late summer 2005.

Several years ago, DOE/NSO conducted a hydrogeologic computer modeling study of the area, known as a Flow and Transport Model. This model illustrates three-dimensional images of groundwater flow patterns and potential pathways for contaminants.

The underground nuclear test, named Faultless, was conducted by the U.S. Atomic Energy Commission (predecessor agency to DOE) on January 19, 1968. The test was part of a program aimed at determining the usefulness of the CNTA as a supplemental testing site to conduct high-yield explosive experiments. With a yield of between 200 kilotons and one megaton, Faultless was detonated at 3,200 feet below ground surface. Two other subsurface tests were planned at CNTA but never completed.

DOE/NSO completed the Flow and Transport Model, along with a modeling report, in 2000. The Nevada Division of Environmental Protection accepted the modeling approach the following year. The upcoming drilling and testing effort will help to validate the subsurface Flow and Transport Model for a five-year, proof-of-concept period.

Current activities at CNTA focus on the subsurface environment only. Site characterization for the surface area of the CNTA was completed in 1997, and in 2001, DOE/NSO completed surface closure at the site. During these activities, the CNTA

site surface areas of contamination were closed using a variety of methods: some site called for the construction of engineered covers; others required no further action. The site was reseeded with native vegetation, and the area has been largely reclaimed to a near pre-test condition.

Unlike the NTS, which maintains an ongoing mission for the DOE complex, CNTA is no longer active and will eventually be released back to the U.S. Department of the Interior, Bureau of Land Management (BLM) and the U.S. Department of Agriculture Forest Service (USFS). Current land use for BLM and USFS in the Hot Creek Valley largely entails grazing and seasonal recreation.

DOE will continue long-term stewardship activities for the subsurface contamination. This stewardship entails continued monitoring of the groundwater quality in and near the CNTA, as well as maintaining subsurface drilling restrictions and exclusion zones sufficient to isolate contamination.

Retirements

Lawrence Cohn – Bechtel Nevada
 William Egan – Bechtel Nevada
 Peter Hankinson – Bechtel Nevada
 Claud McKinney – Bechtel Nevada
 Louis Tirella – Bechtel Nevada
 Wayne Olival – Bechtel Nevada

In Memory

John Allison – former contractor employee
 Roland Boggioni – former contractor employee
 David C. Boyd – former contractor employee
 Helen Duclos – former contractor employee
 August Kaneshiro – former contractor employee
 R. Dan Loney – Bechtel Nevada employee
 John C. Ned – former contractor employee
 Herbert Vasknetz – former contractor employee
 Charles Young – former contractor employee

Face-to-Face



Name: Linda Cohn

Company: NNSA Nevada Site Office

Job Title: Cultural Resources Manager

Hometown: Las Vegas, Nevada

Hobbies/
 Interests: Motorcycling, traveling (both together is great) and spending time with my three Airdale terriers

News Briefs

Welcome aboard the CAB!

by Carla Sanda

What do an attorney, a geologist, two engineers, and an urban planner have in common? They are all the newest members of the CAB – the Community Advisory Board (CAB) for Nevada Test Site Programs. The CAB is comprised of volunteer citizens who focus on environmental management activities at the NTS. One of the primary keys to the board's success is its diversity. Members hail from both rural and urban locales throughout Nevada and bring a wealth of experience and perspectives to the group and the issues at hand. This diversity ensures that Nevada stakeholders are represented with a broad array of viewpoints in the CAB's deliberations.

More than 40 citizens responded to the CAB's most recent recruitment campaign. Of those, 24 submitted formal applications. Following in-depth reviews and interviews, the CAB's Diversification Committee selected the following five candidates, all of whom were recently confirmed and appointed by the U.S. Department of Energy:

Robert Gatliff – A long-time participant in CAB activities, Gatliff holds both a Bachelor of Science and Master of Science in petroleum engineering. His background includes extensive experience in petroleum industry drilling activities, as well as time spent as a drilling engineer in the nuclear testing program.

David Hermann – A U.S. Air Force retiree, Hermann recently earned a Juris Doctorate in Law. He has spent a great deal of time in Nevada as part of his Air Force career and has excellent knowledge of the Nevada Test and Training Range. Hermann is currently self-employed as a practicing attorney in Nevada and focuses on innovative technology patents.

Steven Hopkins – Hopkins holds a Bachelor of Science in geology, with a background in mineral exploration and mining as well as time spent at the NTS in the nuclear

weapons testing program. He currently works as a geologist on the Yucca Mountain Project. Hopkins is a 40-year resident of Nevada and has served on rural town boards and planning commissions.

Terry Hixson – Hixson is a recent retiree and transplant to Nevada. During his U.S. Army enlistment, he supported numerous testing projects at the NTS as well as the Marshall Islands. His professional background includes 32 years as an urban planner, with extensive experience as a participant on citizens' committees.

Jackson Ramsey – A licensed professional engineer, Ramsey brings more than 30 years in academia as well as 10 years as a metallurgical engineer to the board. Upon retirement, he moved to Nevada and currently serves as the executive director of a non-profit corporation that provides desert conservation education at the Red Rock Canyon National Conservation area as well as other federal land management locations.

All five newly appointed CAB members have jumped right into the thick of things and have become involved in committee activities focusing on budget prioritization, groundwater, radioactive waste, and transportation issues.

To learn more about the CAB and its activities, visit their Web site at www.ntsCab.com.

What is the CAB?

Formed in 1994, the CAB is one of nine site-specific advisory boards convened by the U.S. Department of Energy at sites located in Washington, Idaho, Colorado, Nevada, New Mexico, Ohio, Kentucky, Tennessee, and South Carolina. Board members are tasked with providing citizen review and recommendations to the DOE's environmental management program.

Coming soon: Take Our Daughters and Sons to Work Day

The NNSA/NSO complex will participate in "Take Our Daughters and Sons to Work Day" on Thursday, April 28, 2005. Children of NNSA/NSO, BN, WSI-NV, Team CNSI, and Defense Threat Reduction Agency employees, within the stated age group, are invited to attend the program.

Children ages 9 to 18 may participate in the North Las Vegas (NLV), RSL-Andrews and STL programs, and children ages 14 to 18 may go on the NTS tour. The age limit was established to comply with DOE/NNSA requirements. Children attending these programs must be U.S. citizens; parents must also provide either written proof (e.g., school identification) or orally confirm the child's identification at the time of badging. Children must be within the age requirements and related to an employee in order to participate in these programs; no exceptions will be made.

Children must participate in the program corresponding to the parent's work location,



except those children ages 14 to 18 who would like to participate in the NTS tour. NTS employees who have children ages 9 to 13 may participate in the NLV program; however, they must make lunch arrangements for the child. If the parent is not able to take the child to lunch, then an adult must be identified on the registration form to pick up the child for lunch. The adult's identification will be checked prior to the child leaving with the adult.

Transportation will be provided for children participating in the NTS program. Because this is a structured tour, parents are NOT allowed to take children onto the NTS themselves. For participants living in Pahrump, transportation will be provided to the NTS.

A registration form MUST be completed to enroll each child in the various programs. If your child has a special need, please let us know on the form. The registration form is available at <http://bnhome/workforce/default.htm>. Once the form is completed, forward it to TODASTWD at the corresponding locations by Tuesday, April 12. Itineraries for all locations will be posted on the Web page soon.

If you have questions about the Take Our Daughters and Sons to Work Day program, contact **Debi Foster** at (702) 295-3986.

Stay alert – and safe

by Jerry Ray

BN recently surpassed three million hours without a lost time injury. This was not an easy plateau to reach without many people integrating their work knowledge, looking out for one another, and immediately mitigating hazards when they are recognized. Have you ever thought about how many variables you must interact with for you to do your job safely? Let's bring safety to the forefront of your consciousness.

How many times during the day do you perform work without thinking? This act is normal and done by all of us everyday. While BN has very detailed work control procedures, often times you will perform your job from a skill based perspective – meaning, you have done it hundreds of times and can do it without thinking. Here is an example. The most dangerous task you do everyday is driving to work and home again. How often have you driven miles without being conscious of every moment during your drive? This process is called highway hypnosis. Even though you are awake and ready to act, something has to stimulate you to react or one mile looks like the next.

The results of working safely have nothing to do with hypnotic trances or day dreaming. Regardless of how routine the job task is, we must all look after one another when we drift into the twilight or unsafe zone. We have all heard our coaches tell us there is no "I" in team. Safety at BN is a team effort. To reach zero accidents and have all our working friends go home free of injury, there has to be a "WE" in our safety team. With that in mind, work safely and watch out for others.

Face-to-Face



Name: Don Wright
Company: Bechtel Nevada
Job Title: Senior Scientist/Classification Officer
Hometown: Glasgow, Scotland
Hobbies/
Interests: Reading science fiction and history, watching science fiction movies, collecting stamps and walking

Beyond the call

Bechtel Nevada earns aviation awards

by Cheryl Oar

On February 23, 2005, representatives from the Federal Aviation Administration (FAA) presented a Diamond Certificate of Excellence to BN and six Maintenance Technician Awards to BN technicians.

Dick Wolf and **Nancy Haugarth** from the FAA presented **Stuart Dean**, **Carl Jackson**, and **Edward Zachman, Jr.** gold awards, and **Joseph Cummings**, **David Krausnick**, and **Greg Shore** ruby awards. Jackson and Shore are stationed at RSL-Andrews and participated in the ceremony via teleconference. **Alan Will**, deputy operations manager, and **John (Tony) Shoemaker**, aviation section manager, accepted the Diamond Certificate of Excellence on behalf of BN. **Joseph Ginnani**, NNSA/NSO aviation manager, and **Robert Hampton**, operations support department, also participated in the ceremony.

"I'm very pleased to have this number of employees engaged in the FAA maintenance award program," said Shoemaker. "The FAA awards are prestigious by themselves, and they are one of the milestones used to apply for the DOE Aviation Unit of the Year award."

The awards received by BN and its employees are considered exceptional for a Federal Aviation Regulations Part 91 operator, according to the FAA. These awards are normally given to larger organizations, such as air carriers and repair stations.

The technician awards are provided to eligible aviation technicians who have met specific training requirements. There are five phases of awards – bronze, silver, gold, ruby and diamond – and each carries an increasing number of training hours. The gold award (Phase III) requires two hours training on FAA regulations and policy and 24 hours of aviation maintenance training. The ruby award requires two hours training on FAA regulations and policy and 58 hours of aviation maintenance training.

The Diamond Certificate of Excellence is the highest honor bestowed by the FAA in

the Maintenance Technician Awards. To be eligible, the employer must be involved full-time in the business of maintaining or repairing aircraft and/or their component parts and must employ at least three full-time technicians. A company is eligible when a specific percentage of employees have received any one of the five phases of awards within the calendar year. BN achieved an 85 percent eligibility rate in 2004.



photo courtesy of Cheryl Oar

(From left to right) **Edward Zachman, Jr.**, **Tony Shoemaker**, **Alan Will**, **David Krausnick**, **Dick Wolf**, **Stuart Dean**, and **Joseph Cummings** proudly display the awards from the Federal Aviation Administration.

Bechtel Nevada Fellow selected

by Shari Morrison

Bob Malone of Los Alamos Operations was recently honored as a BN Fellow in recognition of his sustained level of technical accomplishment over a 27-year career.

Malone is the first recipient of the Fellows honor, which represents the top rung of the Technical Ladder. The BN Fellows and Awards programs were the invention of the BN Leadership Supply Executive Committee and are a key component of BN's leadership supply strategy.

"The driver for the Fellows program was an employee survey in the summer of 2002 regarding development of a technical ladder for BN," said **Tom Tunnell** of Los Alamos Operations, chair of the Fellows nomination and ranking process. "The path to demonstrate this evidence of technical excellence was not easy and started with the original Science and Engineering Review Panel almost two years ago. The panel partnered with senior management to bring the program to fruition last year."

There were five strong nominations, which were reduced to three after the panel completed the pre-screening process. In submitting the ranked slate for the deputy and general managers' consideration, Tunnell wrote, "Malone made a superior presentation to the panel. He has a history of technical excellence, long-term experience, and progressive development in his career. He has enhanced BN with his mentoring efforts and is also well respected by his immediate peers, displays tremendous energy, and has accomplished results through his ability to focus tightly on technical objectives."

Malone is a recognized expert in optics, optical lens design, holography, electro-optics, fiber-optics, and fiber-optic instrumentation, and has been a key player in meeting BN's stockpile stewardship fee-based initiatives. His broad technical experience extends to developing high-speed laser-triggered switches, Mach-Zehnder interferometers, high-speed instrumentation, streak camera recording systems, and radiometric measurements. More recently, his optical designs for the boroscope and pyrometer diagnostics on the KRAKATAU subcritical experiment are earning BN recognition from the Atomic Weapons Establishment in the United Kingdom.

Malone earned a bachelor's degree in engineering physics from Regis College in 1969. He spent seven years in the physics department at the University of Wyoming working

toward a post-doctoral degree (unfinished), where he worked with high power lasers, optics, and fiber optics. He joined EG&G in 1977 and BN in 1996, as part of the new contract.

Malone recently co-chaired the Interferometry and Imaging session of the 26th

International Congress on High-Speed Photography and Photonics Conference. He is the recipient of several awards, including the Lockheed Martin NOVA Award for teamwork, Lockheed Martin Systems Management Premier Award for innovation, BN Science and Engineering Award, LANL Small Team Distinguished Performance Award, NNSA Weapons Recognition of Excellence Award and DOE Defense Programs Award of Excellence for Significant Contribution to the Nuclear Weapons Program. He is the author or co-author of more than 40 papers and has been invited to present papers at several conferences including the 26th International Congress on High-Speed Photography and Photonics Conference, Society of Photo-Optical Instrumentation Engineers Conference, Nuclear Explosive Design Physics Conference, and Institute of Electrical and Electronics Engineers, Inc. International Pulsed Power Conference.

Active in his personal life as well, Malone enjoys playing tennis and duplicate bridge with his wife, Lucy, and the addition of a new grandson is making his work "more joyful."

Malone was surprised and elated when BN President and General Manager **Dr. James E. Powell** called him with the good news. "I am honored to accept this award," said Malone. "I have always enjoyed working with different teams to develop new projects and field them in a campaign

style. Coming from a large family (Malone has 11 brothers and sisters) has taught me to concentrate on the end goals and to simplify the confusion and chaos that could distract."

As a BN Fellow, Malone will be a role model and mentor to other scientists and engineers, lead the BN Fellows Seminar Program, and serve as technical advisor to senior management. Malone will be formally honored at a recognition dinner where he will also receive a cash award.

"Malone's contributions embody the high standards of science and engineering upon which the sustained performance of BN so critically depends," said Powell. "I am proud to honor him as the first BN Fellow."



photo courtesy of Shari Morrison

Bob Malone – the first Bechtel Nevada Fellow

Partnering for Education



Reading is in the air

by Sheril Hamlin

Bill Abrams, the founder of Nevada Reading Week, believed with all his heart in the need to encourage Nevada's children to read for pleasure as well as for information. In 1975, to inspire our communities to celebrate reading, Abrams initiated a statewide week of reading celebration.

The 2005 Nevada Reading Week was held February 28 through March 4 with a theme

of "Reading is the Key." As avid supporters of our future leaders, WSI-NV employees took time from their extremely hectic schedules to read to the students at Quannah McCall Elementary School in support of Nevada Reading Week. The students were very appreciative of the time spent in their classrooms and they heard some very interesting and exciting stories. The employees all had a great time interacting with the students and look forward to next year's program.

WSI-NV is extremely proud and honored to have the opportunity to present a positive influence in the development of today's students, and we encourage everyone from all areas of the NNSA family to get involved.

Tips to save money at the pumps

Gasoline prices are continuing to rise every day. Forecasters predict record prices for gasoline this summer. In an effort to combat rising fuel costs, consumers need to look for ways to reduce fuel consumption. According to DOE and the Environmental Protection Agency, there are steps you can take to reduce the amount of money you spend on gasoline.

- Replace air and fuel filters regularly as instructed in your vehicle's maintenance manual. Change air filters more often if driving in dusty conditions. Replacing a clogged air filter can improve your vehicle's gas mileage by as much as 10 percent. Your vehicle's air filter keeps impurities from damaging your vehicle's engine. Not only will replacing a dirty air filter save gas, it will protect the engine.
- Keep your engine properly tuned. Fixing a car that is noticeably out of tune or has failed an emissions test can improve gas mileage by an average of 4.1 percent, though results vary based on the kind of repair and how well it was done. If your vehicle has a faulty oxygen sensor, your gas mileage may improve as much as 40 percent.
- Keep tires properly inflated and wheels aligned. You can improve your gas mileage by around 3.3 percent by keeping your tires inflated to the proper pressure. Underinflated tires can lower gas mileage by 0.4 percent of every one pound per square inch (psi) in pressure of all four tires. Properly inflated tires are safer and last longer.
- Use the recommended grade of motor oil. You can improve your gas mileage by 1 to 2 percent by using the manufacturer's recommended grade of motor oil. Look for motor oil that indicates "Energy Conserving" on the API performance symbol to be sure it contains friction-reducing additives.
- Drive sensibly. Aggressive driving (speeding, rapid acceleration, and braking) wastes gas. It can lower your gas mileage by 33 percent at highway speeds and by five percent around town. Stay alert and anticipate traffic lights, stop signs, and merges. Use your turn signals. Traffic will move more smoothly, which saves fuel for everyone. Sensible driving is also safer for you and others, so you may save more than gas money.
- Observe the speed limit. Gas mileage decreases rapidly at speeds above 60 miles per hour (mph). Each five mph you drive over 60 mph is like paying an additional 10 cents per gallon for gas. Observing the speed limit is also safer.

- Avoid excessive idling. Idling gets zero miles per gallon. Vehicles with larger engines typically waste more gas at idle than do vehicles with smaller engines. Do not rev the engine before shutting it off; this wastes fuel and can dilute motor oil.
- Use cruise control on highway and interstate trips. Using cruise control on the highway helps you maintain a constant speed and, in most cases, will save gas.
- Remove extra weight from your vehicle. Pack lightly for trips. An extra 100 pounds in the trunk reduces a typical vehicle's fuel economy by 1 to 2 percent.
- A roof rack or carrier provides additional cargo space and may allow you to meet your needs with a smaller vehicle. However, a loaded roof rack can decrease your fuel economy by 5 percent. Reduce aerodynamic drag and improve your fuel economy by placing items inside the trunk whenever possible.
- During warm weather months, reduce the use of your air conditioner when driving at low speeds. When driving more than 40 miles per hour using the air conditioner costs less than having your windows open.
- Participate in carpools or ride-share programs. You can cut your weekly fuel costs in half and save wear on your car if you take turns driving with other commuters when traveling to work or for running errands.
- Combine errands to reduce the number of trips.
- If possible, stagger your work hours to avoid rush hours. You will spend less time sitting in traffic and consume less fuel.
- Try to take one less vehicle trip per week. If you own more than one vehicle, drive the one that gets the best gas mileage whenever possible.
- Consider using public transit. Contact your local public transportation provider for route information.
- Choose a more efficient model when purchasing your next vehicle. There are a tremendous range of miles per gallon (mpg) models to choose within vehicle size classes. Purchasing a vehicle with a higher mpg could save you hundreds of dollars in fuel costs each year.

Which steps you choose to take will depend on your own particular circumstances, but any of them will reduce the amount of money you spend for gasoline.

Lessons Learned

Use caution around UXO

Unexploded ordnance (UXO) at the NTS represents a potential high hazard. On August 26, 2004, the Operations Coordinator Center (OCC) emergency manager received a call advising that suspected UXO was discovered in Area 25 of the NTS. WSI-NV officers responded to the location but were unable to identify the suspected UXO. The OCC then contacted a certified explosives technician (CET) for assistance. The CET responded from offsite and advised the OCC emergency manager that suspected material in Area 25 was in fact UXO. Upon advice from the CET, and concurrence from NNSA/NSO, the area was appropriately secured. Shortly after this time, the CET received approval for a plan to treat the UXO in place. Treatment was completed, and the area reopened for normal operations. There were no personnel injuries or property damage associated with this event.

A similar occurrence took place on February 10, 2005, when unexploded ordnance was found by members of the Yucca Mountain Project in the Reveille Valley of the NTS.

The following guidance should be followed if an employee finds unexploded ordnance:

- Do not touch or move the item.
- Mark the location and note any markings, as well as the shape, size, and color of the ordnance.
- Call the OCC at (702) 295-4015 or (702) 295-0311 and ask to make a report. The OCC will make all notifications of the event.

Further details for reporting a UXO are located in the BN Organization Instruction, OI-2120.084, Unexploded Ordnance Area Responses.

For more information on this and other Lessons Learned, please contact **Doris Burnett** at (702) 295-5580.

This feature highlights various components of the Six Sigma process at the NNSA/NSO complex. A monthly article will detail the Six Sigma process, individual PIPs, the team members associated with Six Sigma, or the anticipated benefits and cost savings associated with implementing the PIPs.

Communicate better, faster and cheaper!

Let Six Sigma show you the way to communicate better, faster and cheaper. The old saying "it's all in the tools," has a lot of truth to it. A recent Six Sigma PIP evaluating the costs of communication links to the NTS demonstrated how BN's Telephone Service Center was able to focus on cost efficient ways of improving the way we communicate. This PIP was identified from the subcontracts component of the all-encompassing PIP for Telephone Services.

It is anticipated that BN will be able to improve the performance of the communication systems by installing new optical Ethernet interfaces – increasing bandwidth nearly three-fold and aggressively reducing costs by \$175,000. This is a five-year financial benefit to our customer, net of equipment and installation costs! For nearly 10 years, our communications links to the NTS seemed sufficient to handle the needs of the enterprise. However, the enterprise now requires substantial additional bandwidth and has considerable configuration demands.

"The BN team provided an extremely reliable, secure and high-bandwidth solution that meets our very stringent security requirements," said **Dave Belangia**, BN Information Services manager. "Of no less consequence was the team's ability to maximize the performance and utilization of our existing communications infrastructure while creating this high-capacity network to provide the applications and network services instantaneously, reliably and securely."

The BN team provided the NTS enterprise with an Optical Ethernet solution based on next-generation SONET platform which provide high-bandwidth, secure and scalable networking capabilities with reliability.

"Working with our subcontractors and vendors on this project has been extremely gratifying," said **Tony Friscia**, BN communications services manager. "Not only have we provided a flexible solution that can accommodate new technologies as they become available, but we are also able to meet the capacity, bandwidth control and other considerations that make this deployment unique. Considering the sheer magnitude of the project – linking the networks of Las Vegas and NTS encompasses hundreds of miles – this represents quite an extensive deployment in particularly unforgiving terrain."

The project demonstrates the commitment of our team and clients in providing the best technologies to further our collective goals.



Who "pays the freight?"

by Jim Przybylski

The Bechtel Nevada Traffic Operations group processes and approves all commercial freight invoices for material shipped to BN. Senior Traffic Specialist **Randy Ferguson** recently completed Six Sigma Yellow Belt training and put the Six Sigma tools to use by mapping this process.

Project task codes and purchase order numbers must be verified for each invoice before submission to Accounts Payable for the payment of validated freight charges. If the freight charges were less than \$200 and the project task codes or purchase order numbers were missing or invalid, the commercial freight invoices were paid from an indirect funding source instead of being charged to the organization receiving the material.

An opportunity for improvement was identified early in the mapping phase; Information Services developed an application to transfer data between the receiving warehouse and Traffic Operations, reducing the number of commercial freight invoices charged to indirect funds and the labor hours used to obtain correct project task codes or purchase order numbers.

This Six Sigma success story illustrates that well-trained and motivated Yellow Belts can effectively select processes for analysis, identify opportunities for improvement and implement process changes that reduce costs.



Bechtel Nevada

40 years Las Vegas – Robert Starbird, Ronald Swegle

30 years Las Vegas – JoAnn Conner; Nevada Test Site – Edwin Takahashi, Willie Virgil

25 years Las Vegas – James Sharpless, Bette Weigand; Nevada Test Site – Johnny Hollimon, Juan Lucero; Livermore Operations – Paul Parker

20 years Las Vegas – John R. Brown, Jr., Mrityunjay Ghosh, Gregory Perryman; Nevada Test Site – Timothy Campbell, Lucille Collins, Donald Cooper, Raymond Kulm, Roman Rajm

15 years Las Vegas – Lynn Sitten

10 years Nevada Test Site – Dennis Hansen

5 years Las Vegas – Cynthia Howell, James Lyons; Nevada Test Site – Donald Bickford, William Possidente, Jr., George Ryndak; Livermore Operations – Jerald Cradick, Leisa Elliott

New Hires Las Vegas – Jason Blair, Paula Ellsworth, Michael Eshleman,

Keith Frandsen, John Halas, Krikor Hovasapian, Mary Johnson Meyer, Michael Lamb, Alexi Rothschild, Chad Stuart, LeAnn Tichenor, Robert Tietz; Nevada Test Site – Paul Cakanic, Yolanda Fuchs, Darrell Goeckner, John Hess, Candice Higgins-Marshall, Steven Johnson, Alexander Lowe, Douglas McBride, Dennis Nichols, Matthew Randolph, Jo Ann Reese, Vincent Shih, Allison Stringer, Sara Weaver, Jon Yonko; Livermore Operations – York Lee, Randall Rampke, Arthur VanProoyen; Los Alamos Operations – Sarah Giandoni; Remote Sensing Laboratory - Andrews – Katalin Hopkins

Desert Research Institute

10 years Charlene Martin

5 years Michael Young

Wackenhut Services Incorporated - Nevada

20 years Richard Davis, Ronald Gaines, David Moulton

5 years Eric Scott

— Compiled by Kirsten Kellogg

In the Next Issue of SiteLines ...

- NNSA/NSO supports Costa Rican science mission
- Stockpile Stewardship's Six Sigma success
- Here comes the sun

CALENDAR OF EVENTS

April 27
 NTS Public Tour, open to interested members of the public. Sedan Crater, Frenchman Flat, Non-Proliferation Test and Evaluation Complex, Bilby Crater, Area 5 Low-level Radioactive Waste Management Site, Apple II houses. Contact **Brenda Carter, BN (702) 295-0944**.

April 28
 Take Our Daughters and Sons to Work Day. Contact **BN Workforce Enhancement (702) 295-0930**.

May 14
 Family Fair. Contact **BN Workforce Enhancement (702) 295-0930**.

May 26
 NTS Public Tour, open to interested members of the public. Sedan Crater, Frenchman Flat, Non-Proliferation Test and Evaluation Complex, Bilby Crater, Area 5 Low-level Radioactive Waste Management Site, Apple II houses. Contact **Brenda Carter, BN (702) 295-0944**.

May 30
 NNSA/NSO and contractor offices closed in observance of Memorial Day.

June 29
 NTS Public Tour, open to interested members of the public. Sedan Crater, Frenchman Flat, Non-Proliferation Test and Evaluation Complex, Bilby Crater, Area 5 Low-level Radioactive Waste Management Site, Apple II houses. Contact **Brenda Carter, BN (702) 295-0944**.

July 4
 NNSA/NSO and contractor offices closed in observance of Independence Day.

Declassified Film Showings
 For information on declassified film showings at NTS CP-1, call **(702) 295-4015**. For information on declassified film showings at NTS Yucca Mountain, contact **Rod Rodriguez (702) 295-5825**.

Upcoming Conferences, Meetings, and Trade Shows

April 20-24

2005 Forensic Engineering Symposium. New York Hilton and Towers, New York, N.Y. For additional information, visit www.asce.org/conferences/forensics05/.

April 25-27
 National Contract Management Association World Congress 2005. Hyatt Regency/Phoenix Civic Plaza, Phoenix, Ariz. For additional information, visit www.ncmahq.org/.

May 21-26
 AIHce 2005 Annual Conference. Anaheim Convention Center, Anaheim, Calif. For additional information, visit www.aiha.org/aihce05/aihce.htm.

June 5-9
 American Nuclear Society Annual Meeting. Town and Country Resort & Convention Center, San Diego, Calif. For additional information, visit www.ans.org/meetings/annual/.

June 12-15
 The American Society of Safety Engineers presents SAFETY 2005. New Orleans, La. For additional information, visit www.asse.org/safety2005.htm.

June 12-15
 6th Annual DOE Small Business Conference. Gaylord Opryland Resort, Nashville, Tenn. For additional information, visit www.smallbizconference.com/.

June 21-24
 Air & Waste Management Association's 98th Annual Conference and Exhibition. Minneapolis Convention Center, Minneapolis, Minn. For additional information, visit www.awma.org/ACE2005/default.asp.

July 10-14
 Health Physics Society's 50th Annual Meeting. Spokane Convention Center, Spokane, Wash. For additional information, visit www.hps.org/newsandevents/meetings/meeting4.html.

May is:

Asian Pacific
 American
 Heritage Month

and

Get Caught
 Reading Month



Face-to-Face



Name: Birgit Geyer
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 Job Title: Security Police Officer II
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