



EM UPDATE

Working Today To Protect Your Future

Fall 2004 edition

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AMEM Corner

by Carl Gertz

As I approach retirement, it is with considerable pride that I reflect on the accomplishments of the past 10 years. During my time with the Environmental Management (EM) Program, we have made significant strides toward achieving numerous goals, including cleaning up countless sites on the Nevada Test Site, making progress toward establishing contaminant boundaries on the UGTA project, and successfully initiating TRU shipments to WIPP. One of our greatest achievements has been to help the entire U.S. Department of Energy complex accelerate clean-up efforts by disposing of unprecedented quantities of low-level waste. All of these accomplishments could not have been realized without the combined efforts of the EM staff, the Community Advisory Board, and key state regulators. I would like to extend my gratitude to all of those involved.



If you wonder whether I'll be bored during retirement... don't. After I retire (and I really am going to retire!), I hope to spend more time with my family- in particular, my four grandchildren. I also hope to play some golf, ski, and accomplish the many things on the "to-do" list that my wife Bea regularly provides me. On a personal note, I want all of you to know that I've thoroughly enjoyed working with you and will miss everyone here. I wish you all the best in your future endeavors. I know I'll be enjoying myself as I keep in mind an old quote: "We don't stop playing because we get old; we get old because we stop playing."

A Busy Summer for TRU Waste Project

by Dona Merritt

The Nevada Test Site Transuranic (TRU) waste project recently stepped up TRU waste characterization efforts and resumed shipments to the Waste Isolation Pilot Plant (WIPP) in New Mexico. Since August 27, 2004, seven TRU waste shipments have safely gone to WIPP.

Following the first seven TRU waste shipments in January 2004, shipments were delayed until additional drums could be characterized and certified by WIPP. To accomplish this, waste personnel working at the Nevada Test Site Waste Examination Facility implemented double shifts in May 2004 to accelerate the characterization of the more than 1,000 remaining drums of TRU waste. Due to their successful efforts, shipments resumed and a total of 25 shipments are expected to be completed by the end of 2004.

The NTS hopes that in 2005, all shippable legacy TRU waste drums will be moved off the Nevada Test Site and safely delivered to WIPP. Through hard work, diligence, and adherence to safety, Nevada Test Site TRU waste project personnel look forward to closing another chapter on legacy waste resulting from the Cold War.



A transuranic waste shipment exiting the Nevada Test Site en route to Waste Isolation Pilot Plant.

What is legacy transuranic waste?

The legacy transuranic waste currently stored at the Nevada Test Site was generated as part of a U.S. nuclear weapons research and development program. The majority of the legacy transuranic waste stored at the Nevada Test Site was generated by Lawrence Livermore National Laboratory located near Oakland, California. This legacy waste, which was shipped to the Nevada Test Site for storage between 1974 and 1990, includes protective clothing and miscellaneous equipment contaminated with transuranic elements.

Please visit http://www.nv.doe.gov/news&pubs/dirpdfs/DOENV_787REV1.pdf for more information on the Transuranic Waste Project at the Nevada Test Site.

What is the Waste Isolation Pilot Plant?

The Waste Isolation Pilot Plant, located near Carlsbad, New Mexico, is licensed for the disposal of transuranic waste resulting from the research and production of nuclear weapons. Facility operators place the transuranic waste in disposal rooms mined 2,150 feet underground in a 2,000-foot thick salt formation. Scientific studies conducted prior to the facility's opening in 1999 determined that the salt formation has been stable for more than 200 million years.

Please visit <http://www.wipp.ws/> for more information on the Waste Isolation Pilot Plant.

Test Cell A Deactivation & Decommissioning

by Nick Duhe

The Industrial Sites Project is gearing up for the first of two Test Cell remediation efforts with the deactivation and decommissioning (D&D) of Test Cell A facility at the Nevada Test Site. This fiscal year, crews working at Test Cell A will begin the complex task of removing a variety of contamination from the facility to accomplish clean closure. D&D techniques and technologies used at this facility will streamline the remediation work at the much larger Test Cell C facility, scheduled for D&D in fiscal year 2006.

Test Cell A is a compound constructed in 1959 to test the Nerva, Kiwi, and Phoebus series of rockets developed under the Nuclear Rocket Development Station program. When operations ceased in 1966, Test Cell A remained inactive for more than a decade.

In 1978, work crews launched remediation activities and removed much of the radiological contamination from the facility. Test Cell A was then identified in 1993 as a surplus facility and transferred to the Nevada Site Office D&D source group.

Remediation activities will begin this year and focus on the following contaminants of concern: Asbestos Containing Materials (ACM), used as insulation around exterior and interior pipes; Polychlorinated Biphenyls (PCBs) in light ballasts and equipment lubricants; radionuclides; mercury used in instruments; and lead used in paint and as construction components of the buildings.

Closure activities to remove these contaminants and demolish the facility will begin March 2005 and scheduled completion is September 30, 2005.

The following five-phase cleanup approach will be used to remediate Test Cell A:

- Mitigate safety hazards by installing portable lighting and cleaning up Hantavirus
- Remove hazardous materials which include: ACM, lead, mercury, radiological impacted materials, and PCB's
- Characterize and decontaminate reactor concrete pad and impacted concrete surfaces.
- Demolish and properly dispose of building material, including exterior piping and exhaust stack
- Perform final radiological survey to free-release remaining concrete slab

One of the technologies employed in the demolition of Test Cell A will be the hydraulic processor, which is mounted on a track hoe and is capable of demolishing both concrete and metal.

For more information on the historic rocket programs, check out the NNSA website at <http://www.nv.doe.gov> . Click on the "news and publications" icon, then on "Nevada Test Site Office Fact Sheets."

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 Nevada Test Site (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 the 40, twenty-four 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, Mr. Gatliff holds both a B.S. and M.S. 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 recent U.S. Air Force retiree, Mr. 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. Mr. Hermann is currently self-employed as a practicing attorney in Nevada and focuses on innovative technology patents.

Steven Hopkins – Mr. Hopkins holds a B.S. 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. Mr. Hopkins is a 40-year resident of Nevada and has served on rural town boards and planning commissions.

Terry Hixson – Mr. 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, Mr. Ramsey brings more than 30 years in academia as well as ten 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, check out their website at <http://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 U. S. Department of Energy's environmental management program.

Summer 2004 field activities at Gasbuggy Site

by Rosemary Rehfeldt

The U.S. Department of Energy's National Nuclear Security Administration Nevada Site Office (NSO) was on location in northwestern New Mexico this summer to conduct environmental cleanup activities at a former nuclear test site known as Gasbuggy. The site, situated 55 miles east of Farmington, New Mexico, is one of eight underground nuclear test sites located outside of the Nevada Test Site boundary that is managed by the NSO's Environmental Management Program Offsites Project. This project is responsible for addressing possible contamination associated with underground nuclear tests conducted in Mississippi, Nevada, Alaska, Colorado, and New Mexico, and carrying out appropriate corrective actions at these sites.

The Atomic Energy Commission (predecessor agency to the U.S. Department of Energy [DOE]) performed an initial site cleanup in 1975 and 1977. The site was then officially closed in 1978. Since that time, the DOE has conducted various surveys and radiological sampling efforts to monitor the surrounding environment. Characterization work performed in the summer of 2002 verified previous results, and identified areas where petroleum hydrocarbons, used to support test activities, were mixed into surrounding soils.

Excavation and remediation activities performed this summer removed diesel-contaminated soils from the site. The contaminated soils were a result of the drilling operations conducted prior to the test itself and were restricted to mud pits, which were designed and built to contain drilling fluids. Any waste that is generated from the current surface remediation activities will be disposed of at a permitted off-site location.

Previous surveys of the area have indicated that there is no surface risk to the public; therefore, the site surface is currently open for unrestricted use. Once all objectives for surface characterization and restoration have been achieved, the NSO intends to release the surface area to the U.S. Department of Agriculture Forest Service.



Soil sampling at Gasbuggy site.

Conducted in 1967, the Gasbuggy test was part of the U.S. Atomic Energy Commission's Plowshare Program. The Plowshare Program sought to develop peaceful applications for nuclear explosives. Gasbuggy was a 29 kiloton test detonated at a depth of 4,240 feet below ground surface. The purpose of Gasbuggy was to increase natural gas production using a nuclear explosion to stimulate natural gas recovery by fracturing gas-bearing formations in tight underground reservoirs.

Proposed closure of New Mexico site through Voluntary Remediation Program

by Rosemary Rehfeldt

After performing a series of investigations and surface cleanup at a former nuclear test site in New Mexico, the U.S. Department of Energy National Nuclear Security Administration Nevada Site Office (NSO) proposes to recommend what is called a *no further action for closure* under New Mexico's Voluntary Remediation Program (VRP). The New Mexico Environment Department (NMED) introduced the VRP in July 1999, to promote voluntary cleanup of contaminated properties throughout the state.

The VRP is intended to encourage redevelopment of these properties, also known as "Brownfields," by providing a streamlined, non-punitive remediation process.

The Gnome-Coach site is the first "Brownfield" for New Mexico to be considered for the VRP process, as well as the first VRP application submission for the NSO.

In 1961, the Gnome-Coach site was the location of a three-kiloton underground nuclear detonation at a depth of 1,200 feet below the earth's surface. In early 2002, the NSO performed a corrective action investigation at the site, with additional activities performed in 2003, which included testing the surface and shallow subsurface soil. During the 2003 field activities, diesel-contaminated soils exceeding cleanup levels were excavated, removed from the site, and disposed of at a permitted offsite location. Based on the corrective action investigations and subsequent surface cleanup, the NSO proposes, through the VRP, to close the site surface with no further action necessary.

Participants in the VRP receive benefits that are not available under traditional enforcement programs, such as:

- an enforcement shield from the NMED, allowing participants and the State to work in a cooperative partnership to successfully remediate a site;
- entitlement to a Certificate of Completion or a Conditional Certificate of Completion once voluntary remediation has been successfully completed;
- a Covenant Not to Sue from the NMED upon successful completion of a voluntary remediation project; this applies to prospective purchasers, new property owners, or operators who did not contribute to the contamination at the site; and



Monument and plaque at ground zero.

The U.S. Environmental Protection Agency defines "Brownfields" as abandoned, idled, or under-utilized industrial or commercial sites where expansion or reuse is complicated by real or perceived environmental contamination.

As part of the Plowshare program, Gnome was designed to determine the seismic signals, effects, and products of a nuclear detonation in a bedded salt medium. A second test, designated *Coach*, was planned for the site but was never carried out, though preparatory drilling activities were performed. Today the site is known as the Gnome-Coach Site.

-protection, for lending institutions, from any liability associated with sites participating in the VRP.

Prior to the approval of any proposed Voluntary Remediation Agreement, the applicant is required to post a notice at the site, and publish a public notice in two newspapers. The NSO published notices in the Albuquerque Journal and the Carlsbad Current-Argus on August 25, 2004. A 30-day public comment period followed. The agreement can be viewed by interested parties at the WIPP Information Center in Carlsbad, New Mexico and NMED's Santa Fe office. For more information, you may contact the Voluntary Remediation Program of the New Mexico Environment Department at (505) 476-3658.

Low-Level Waste Disposal at NTS Means *Cleanup* for DOE Complex

by Dona Merritt

Fiscal year 2004 was another record-setting year at the Nevada Test Site (NTS), with disposal operations accepting 3.7 million cubic feet of low-level waste—enough to fill a football field more than 6 stories high! And the 150,000 man-hours it took to dispose the waste were logged without any lost-time accidents. Quite an accomplishment!

What does this mean for the dozens of U.S. Department of Energy (DOE) approved waste generators who ship to the NTS? It means that sites, such as Rocky Flats in Colorado, are that much closer to their cleanup goals. Environmental restoration activities across the DOE complex, in fact, are on the fast track to cleanup thanks to the safe, efficient low-level waste disposal operations provided at the NTS.

While receiving record volumes is a significant accomplishment, the NTS' number one priority continues to be the protection of workers, the public, and the environment. Scientists and engineers study the radioactive waste management sites to ensure that disposal cells safely perform as planned. These studies include developing computer models of the long-term performance of the disposal facilities and gathering information through monitoring activities on and around the NTS. Annually, the results of these monitoring activities are published in the *Nevada Test Site Environmental Report* which can be found on-line at <http://www.nv.doe.gov> under News and Publications.



Low-level waste positioned for disposal in a trench at the Area 5 Radioactive Waste Management Site.

Visit http://www.nv.doe.gov/news&pubs/dirpdfs/DOENV657_REV2.pdf for more information on Low-Level Waste Disposal at the Nevada Test Site.

The safe disposal of low-level waste at the Nevada Test Site can be primarily attributed to the site's ideal environmental conditions and location. Characteristics such as the extremely dry climate, the deep groundwater, and the "sponge-like" soil severely limit the likelihood of any water migrating into the disposal cells, surface water, or subsurface water. In addition, the remoteness and the security of the radioactive waste management facilities provide protection to distant population centers and against unwanted intruders.

Coming Soon... Atomic Testing Museum

by Michelle Meade

Construction on the long-awaited and much anticipated Atomic Testing Museum is near completion—with a scheduled opening of February 2005. The 8,000 square-foot museum, which is a project of the Nevada Test Site (NTS) History Foundation (NTSHF) and an affiliate of the Smithsonian, will provide an extensive visual tour of past and present NTS activities, as well as an overview of the area's geologic and archaeological features.

Audiovisual presentations, environmental recreations, films, and astonishing graphic displays will all be part of the museum experience. Guests will literally be “moved” inside an interactive movie theatre that simulates an atmospheric nuclear detonation with shaking benches, hot air blasts, and rumbling surround sound. Descriptions of current Environmental Management projects, including groundwater studies, industrial sites cleanup, low-level waste disposal, etc., will also be featured.

The museum was literally constructed around several large NTS artifacts, including a grain silo from the Environmental Protection Agency farm, a one-fifth-scale down-hole canister donated by Los Alamos National Laboratory, and a 15-foot diameter section from a pipe used in a tunnel on the NTS.

It is estimated that as many as 800,000 people will visit the museum annually. For additional information on the Atomic Testing Museum or the NTSHF log on to <http://www.ntshf.org/>.



Desert Research Institute: The Atomic Testing Museum and gift shop are located on the first floor of the Frank H. Rogers Science and Technology Building.



The ticket booth at the entrance of the museum: A replica of an old security station on the Nevada Test Site.

The NTSHF depends upon its volunteers and encourages any individual or organization interested in preserving the history of the NTS to become involved in this ambitious museum project.

Nuclear Testing Archive Brings History to the Public

by Michelle Meade

Visitors to the Nuclear Testing Archive can explore the complete, compelling history of nuclear testing in the United States in the facility's brand new Public Reading Facility.

The Public Reading Facility, located in the Frank H. Rogers Science and Technology Building, offers a remarkable array of testing-related resources including: more than 380,000 documents; over 100 movies; countless photographs; newspaper clippings; and artifacts like radiation detectors, air samplers, and goggles used to witness nuclear explosions. Reports, correspondence, radiation exposure histories, fallout measurements, and other materials are housed in the Archive's collection as well.

The Reading Facility is also the distribution center for the U.S. Department of Energy's (DOE) film declassification project, which boasts an impressive collection of raw footage that has been used in broadcasts on the Discovery Channel, the History Channel and the Learning Channel.

The Archive is located at 755C East Flamingo Road, Las Vegas, Nevada in the Frank H. Rogers Science and Technology Building and adjoins the Atomic Testing Museum. Hours of operation are 7:30 am – 4:30 pm, Monday through Friday with special hours by appointment.

In addition to display items in the Public Reading Facility, the Nuclear Testing Archive, housed upstairs in the Frank H. Rogers Science and Technology Building, maintains original documents that can be scanned electronically and provided to the public upon request. These documents are cataloged on the DOE's OpenNet database and can be accessed on the Internet at <http://www.osti.gov/opennet>.

Safety First

by Angela Ramsey

Safety continues to be a top priority at the Nevada Site Office. At a recent annual safety briefing, Environmental Management (EM) reinforced what it calls an “integrated” approach to safety—an approach that is embraced throughout the U.S. Department of Energy (DOE) complex. According to presenters, the Integrated Safety Management Systems (ISMS) is not simply a tool for management to control work practices, but a mechanism that empowers all employees to be responsible for maintaining a safe work environment. Under ISMS, *each* and *every* employee is responsible for identifying, reporting, and possibly even determining ways to mitigate safety hazards—whether the hazard is a faulty electrical line at a work site or an unsafe chair in the office.

Mike Kinney of Stoller-Navarro Joint Venture Program Performance and Support (EM contractor) provided the program overview, describing the ISMS philosophy as “holistic.” Safety is all-encompassing, according to Kinney, and must be considered at all phases of work. “We’ve made it a priority at all of our pre-field briefings to focus on identifying potential hazards that may be encountered at the work site,” said Kinney. “Evaluation of the hazards and selection of appropriate controls are considered well before any work begins. We also conduct post-job briefings to identify lessons learned, noteworthy practices, and opportunities for improvement.”

Safety must also be a focus during day-to-day activities, added other presenters, who gave specifics on how to implement ISMS in the office environment and off of the clock. “We pay attention,” Kinney explained, “to a whole slew of issues like *heavy lifting, slip and fall hazards, driving at night...* and readily provide information on how to safely go about these activities.”

The presentation’s concluding message: the success of ISMS depends on a strong safety culture that integrates safety into planning, performance, self assessment, and feedback processes. “The bottom line,” says Kinney, “is that ISMS isn’t just the flavor of the month. It’s here to stay and has proven to enhance the overall safety of our work environment.”

Gertz Retires

by Rosemary Rehfeldt

After many years of dedicated service to the U.S. Department of Energy (DOE), Carl P. Gertz, Assistant Manager for Environmental Management, will retire as of January 1, 2005. Mr. Gertz is responsible for implementation of the \$100 million annual environmental restoration and waste management program at the Nevada Test Site.

Prior to this appointment, Gertz served as Acting Assistant Manager for Environmental Restoration and Waste Management. He also served as Director for the Waste Management Division.

In 1987, Gertz was named DOE's Project Manager of the Yucca Mountain Site Characterization Project. He managed DOE's evaluation of Yucca Mountain as a potential site for the nation's first repository for commercial spent fuel and high-level radioactive waste.

Prior to 1987, Mr. Gertz was manager of the Isotope Separation Project Office at DOE's Idaho National Engineering Environmental Laboratory (INEEL). He headed the effort to design, develop, and operate a facility which uses lasers to separate isotopes of plutonium. He also served as Deputy Assistant Manager for Nuclear Programs, involved with the management of spent nuclear fuel and high-level radioactive waste from Defense Programs at DOE's INEEL.

For 16 years, before joining DOE, Gertz worked in the inter-mountain states for the Boeing Company in missile site development, installation and construction management.

Mr. Gertz will use his retirement wisely - by traveling and spending quality time with his wife, children, and grandchildren. Golfing and skiing will continue to be a part of his regular itinerary as well as officiating both high school football and basketball. He looks forward to retirement and plans to enjoy every minute of it!

From all of us at EM...
Good Luck, Carl. We'll miss you.

Employee Of The Month

March.....Sabine Curtis

April.....Gary Pyles

May.....Kelly Snyder

June.....Renee Thomas

Marla Libidinsky

July.....Bob Bangerter

August.....Patti Hall

September.....Christine Baker

Nevada Test Site Public Tours

2004-2005 Schedule

October 20, 2004

November 23, 2004

December 14, 2004

February 17, 2005

March 22, 2005

April 27, 2005

May 26, 2005

June 29, 2005

September 20, 2005

October 26, 2005

November 22, 2005



Low Level Radioactive
Waste Management Site



Sedan Crater



Rail Road Bridge



Apple II House

Tour participants will visit historic nuclear test locations, such as Sedan Crater, as well as observe areas where work activities are currently taking place, like the Low-Level Radioactive Waste Management Sites. The tour covers approximately 250 miles. Call (702) 295-0944 for more information.



Questions should be directed to:
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To request information on Environmental Management activities, including the CAB, e-mail your request to the address below.

Include in the e-mail your name, address, phone number and request information.

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