ENVIRONMENTAL MANAGEMENT

EM UPDATE

Working Today To Protect Your Future

Transuranic Waste Leaves NTS for WIPP

"...it's good to see our hard work finally paying off."

On January 7, 2004, the Nevada Test Site (NTS) made its first shipment of transuranic waste to the Waste Isolation Pilot Plant (WIPP) in Carlsbad, New Mexico. Throughout the remainder of 2004, approximately 60 shipments are planned to be made from Nevada to this underground repository for permanent disposal.

"The successful shipping of the NTS legacy transuranic waste to WIPP is due to the efforts of many individuals involved in the project over the years," said Angela Colarusso, transuranic waste project manager. "As we begin our shipping campaign, it is good to see our hard work finally paying off."

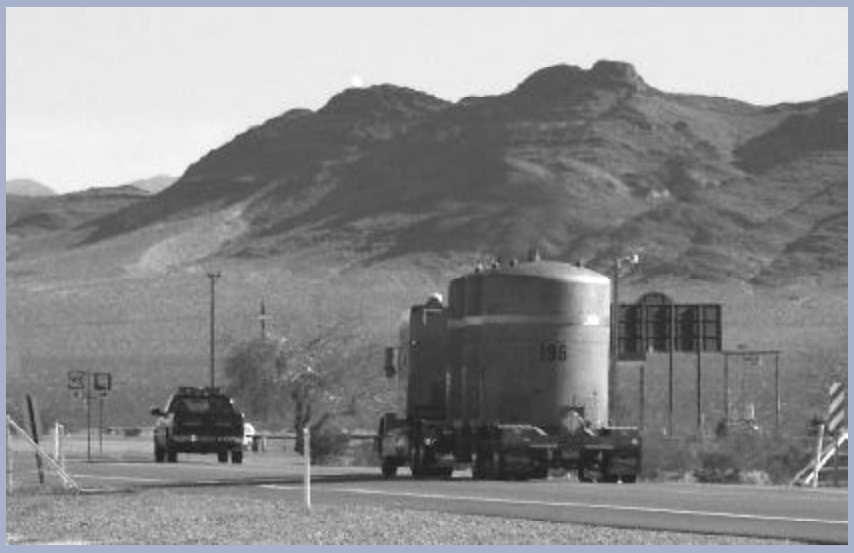
Shipments were originally scheduled to leave the NTS in July of 2003 but were suspended when routing negotiations with the state of California stalled. NTS waste personnel, who had spent months – even years- preparing for shipment, were eager and ready to ship when the Western Governors' Association, the state of California, and the Secretary of Energy negotiated to allow shipments to proceed on California State Route 127.

Before shipments could proceed, waste personnel were charged with the arduous task of incorporating extensive safety measures and formal certifications into the program. "Our goal is to work safely and be as efficient as possible. At the end of December 2003, more than 123,000 hours were worked without a lost-time accident," said Colarusso. "This statistic is significant considering what goes into preparing for a shipment and overall waste management operations."

Prior to Shipment, How is the Waste Screened?

For transuranic waste to be eligible for shipment to WIPP, each 55-gallon drum must undergo an extensive screening process. The Central Characterization Project (CCP), which is deployed from WIPP to the Nevada Test Site, conducts a three part-analysis which includes:

(continued on page 5)

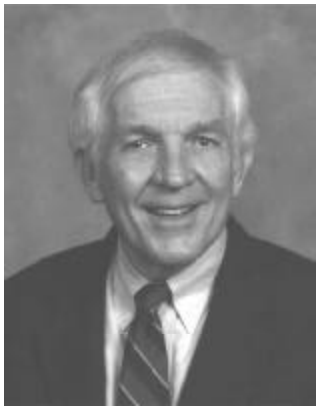


Nevada Highway Patrol escorts transuranic waste shipment to Nevada border.

Approximately 23,700 cubic feet of transuranic waste was received at the Nevada Test Site (NTS) between 1974 and 1990. The waste is contained in metal drums and boxes and is housed in a steel-framed, fabric-covered building at the NTS's Area 5 Radioactive Waste Management Complex awaiting shipment to WIPP. Most of the waste was generated as part of a United States nuclear weapons research and development program at the Lawrence Livermore National Laboratory near Oakland, California.

AMEM Corner

by Carl Gertz



Carl Gertz is the Assistant Manager of Environmental Management (AMEM)

It certainly doesn't seem possible — but we are already several months into fiscal year (FY) 2004 Environmental Management activities. Headquarters is still in the process of determining budgets for the individual EM offices because of a delay in funding approval by Congress. We anticipate that our budget will be close to the FY 2003 allocation of $90 million. Needless to say, our project work plans are in place and our waste management and environmental restoration activities are well underway.

However, before FY 2003 fades too far into the past, I want to take a moment to recap some of the phenomenal milestones achieved with the help of our contractors, customers, and stakeholders:

In terms of national impacts, *low-level radioactive waste management* remained at the forefront of our services to 25 generators throughout the Department of Energy complex. In fact, more than 3.2 million cubic feet of waste was received and disposed at the Nevada Test Site without incident. More than 2,000 shipments safely arrived at our gate in total compliance with state of Nevada routing agreements. It's likely that FY 2004 shipments will also approach the same number, so we are committed to maintain that level of excellence to ensure that Department of Energy sites throughout the country can continue down the road of accelerated cleanup and closure. A tremendous amount of work has also taken place on our low-level mixed waste permit application with the Nevada Division of Environmental Protection. In the months ahead, it's likely that the State will sponsor a public information meeting to seek out comments to the permit application, so I encourage you to become involved in that process. We're also pleased with the progress of our transuranic waste program. In early January, the Nevada Test Site sent its first transuranic waste shipment to the Waste Isolation Pilot Plant in New Mexico. I commend the team for continuing to work diligently and safely throughout this process and encourage them to keep up the good work as they prepare approximately 60 more shipments to go out over the course of this year.

Not to be outdone by the waste management side of the house, *Environmental Restoration* activities continued along at a quick clip in 2003:

- The *Underground Test Area (UGTA)* project completed drilling five wells in Yucca Flat – followed by development and testing efforts. In addition, we began work on the groundwater flow model for Pahute Mesa – this effort will provide much-needed information to better understand groundwater flow paths in the Pahute Mesa region.
- As most of you know, the *Industrial Sites* project has always "chalked up" some phenomenal accomplishments – and this year was no exception. The project team completed 126 assessments – 110 remediations – and the deactivation and decommissioning of the Reactor Maintenance Assembly and Disassembly facility.
- A key initiative in the *Offsites* project was ongoing stakeholder involvement on the Amchitka Island, Alaska project – sev

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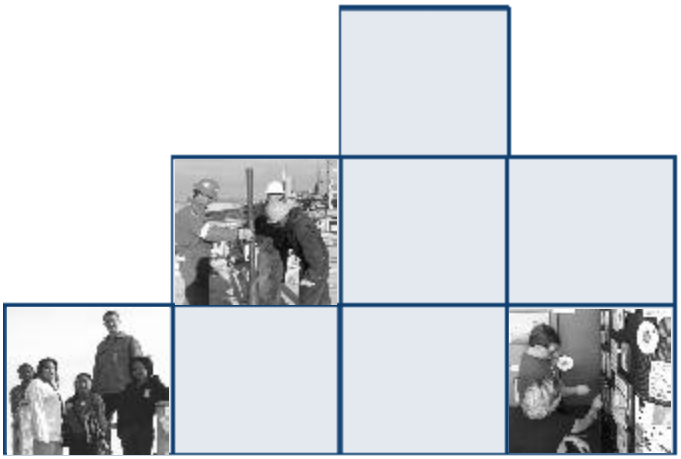
Also Inside this Issue...



Industrial Sites Project Cleans Up for Less

Throughout the past year the Environmental Management's (EM) Industrial Sites group has continuously implemented ways to safely and successfully carry out cleanup activities while saving taxpayer's money. The cost savings on the following two recent projects amounts to a staggering $1.15 million.

Heavy equipment known as Hydraulic Shears were used at the R-MAD decontamination facility to safely dismantle the structure.

R-MAD

In April of 2003, the Industrial Sites team successfully deactivated and decommissioned the Reactor Maintenance, Assembly, and Disassembly (R-MAD) facility at the Nevada Test Site in preparation for future demolition or reuse. Built in 1961, the massive three-story facility was originally used for the development of nuclear rocket technology. Once deactivation and decommissioning was complete, the Industrial Sites team enlisted the help of the Waste Minimization group to recycle more than 90,000 pounds of lead, primarily in the form of solid shielding, bricks, and shielding doors. If not recycled, the material would have required costly handling and disposal. In total, the recycling effort saved the project $250,000. Also recycled were several observation windows containing leaded glass as well as fifteen, 55-gallon drums of mineral oil.

Waste Disposal Trenches at the Tonopah Test Range

Ordnance found in waste disposal trenches at the Tonopah Test Range had to be removed.

In September 2003, the Industrial Sites group completed a challenging project that involved the remediation of several waste disposal trenches at the Tonopah Test Range, 235 miles north of the Nevada Test Site. Working alongside the U.S. Air Force, who maintains oversight of the range, the Industrial Sites group found innovative ways to save time and money—$900,000 to be exact. Here are some ways the Industrial Sites group achieved this dramatic savings:

- Streamlining the stages of remediation and related documents (i.e., one report was developed instead of three);
- Utilizing on-site Air Force resources and personnel at no cost to remove and dispose of all ordnance rather than bringing in costly labor;
- Disposing sanitary waste at the Air Force landfill versus shipping the waste to the Nevada Test Site for disposal;
- Using the Air Force construction landfill to dispose hundreds of cubic yards of excavated soil that contained construction debris and remnants from burn pits (the cost to ship this soil to the Nevada Test Site was considerable); and finally
- Utilizing Sandia National Laboratories existing contractor (Westinghouse) facilities at the range at almost no cost rather than paying to bring in trailers and office equipment. Westinghouse also supplied heavy equipment and other services at minimal or no charge.

Clearly, the cooperation of the U.S Air Force played a significant role in the success of this effort, and the Industrial Sites team would like to thank them again for their assistance. The team also thanks Sandia and Westinghouse for their continued support. Their cooperation over the past ten years has helped make the TTR Industrial Sites program a definitive success. ■

(AMEM Corner... continued from page 2)

"the Industrial Sites project has always 'chalked up' some phenomenal accomplishments – and this year was no exception."

eral stakeholder meetings were conducted to update the community on accomplishments and the path forward. In fact, we are making excellent progress on completion of the Record of Decision related to closure of the surface at Amchitka.

In closing, on behalf of the entire Environmental Management program, I'd like to express my appreciation for the months of volunteer work provided by members of the Community Advisory Board for Nevada Test Site Programs (CAB). The CAB reached a milestone with its ten years of operation – and when I look at where we started versus where we've come, I credit the support and input of the CAB for our ability to move the Environmental Management program forward. The CAB Newsletter is enclosed here, and I encourage you to take a few minutes to read it and become familiar with this valued team of volunteers. In FY 2003, the CAB has worked tirelessly to provide some focused feedback on future UGTA activities, they have represented our site at several national events, and they have untiringly supported our budget prioritization and waste management activities. Please join me in expressing our appreciation to the CAB for their ten years of work – and extend our best wishes to them as we move into 2004 and beyond.

UGTA Project Makes Plans for the Coming Year

Members of the Underground Test Area (UGTA) Project met in late October of 2003 to discuss findings from the previous year and outline plans for the coming year. From month to month, project members work on a variety of separate tasks relating to the project (e.g., groundwater modeling, well development, sampling, etc.). October's meeting gave members the opportunity to meet in one location and provide a detailed year-end status to the entire group.

Under the U.S. Department of Energy's lead, the UGTA team combines the talents of experts from a variety of entities, such as the Desert Research Institute, the U.S. Geological Survey, Lawrence Livermore National Laboratory, Los Alamos National Laboratory, Bechtel Nevada, and Stoller-Navarro. These groups work toward the common goal of understanding the complex behavior of groundwater at the Nevada Test Site.

The meeting, held at the National Atomic Testing History Institute, began with a Technical Working Group Poster Session. At this time poster stations were established to visually demonstrate progress and/or new findings. Formal presentations followed detailing planned activities for 2004 and how these activities fit into the overall UGTA approach.

In addition to members of the UGTA team, representatives from the Nevada Division of Environmental Protection and several members from the volunteer-based Community Advisory Board were also in attendance.

UGTA gets to work in the field: crew runs submersible pump in a well.

Nevada Test Site Public Tours

2004 Schedule

2/18/2004	9/28/2004
3/23/2004	10/20/2004
4/07/2004	11/23/2004
5/26/2004	12/14/2004
6/22/2004	

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.

THE LATEST... IN WASTE

NTS Helps Accelerate Cleanup by Disposing Record Levels of Low-Level Waste

The numbers for fiscal year 2003 are in, and records indicate that the Nevada Test Site (NTS) disposed an unprecedented amount of low-level waste for the year. Waste management personnel report that from October 2002 to October 2003, NTS accepted more than 3.2 million cubic feet of low-level waste – making it the largest quantity in NTS history.

Over the past several years, waste management personnel have seen steady increases in low-level waste disposal volumes. From 2000 to 2001, volumes nearly doubled from 645 thousand cubic feet to over 1.2 million cubic feet. And in 2002, those totals jumped significantly to 2.3 million cubic feet.

> Fifty cents per square foot of the generator's disposal fee goes toward emergency preparedness training for Nevada counties through which waste shipments travel. Although there have never been any reports of radioactive releases associated with shipments, the NTS believes this money is an important aspect of its *Good Neighbor Policy.*

This is good news for the 25 waste generators across the U.S. Department of Energy complex who rely on the NTS to dispose of the low-level waste that is generated through their environmental cleanup efforts. For approximately 20 years, the NTS' state-of-the-art radioactive waste management facility has provided a safe, reliable disposal option for these generators. Recent increases in disposal activity are evidence that sites across the complex are moving closer to their cleanup goals.

In order to accommodate increasing waste volumes, the NTS continues to expand its disposal operations. Waste personnel are in the process of constructing a new disposal cell for low-level waste drums. Plans are also underway to build three additional disposal cells in the future. ■

(Waste to WIPP... continued from page 1)

- a visual examination by x-ray (non-destructive examination) to ensure the drum does not contain any prohibited items such as free liquids;
- a measurement of the radiological isotopes to assure that no drum exceeds established maximum levels (non-destructive assay); and
- a screening of the gas in the drum to determine the presence or levels of volatile organic compounds (headspace gas sampling).

In addition to this three step non-invasive analysis, Bechtel Nevada conducts visual examination on a percentage of drums to confirm the results of the non-invasive analysis. Also, if any of the drums characterized by CCP are found to have prohibited items, Bechtel Nevada removes the items inside a designated contained area and repackages the remainder of the contents in a new drum.

How is the Waste Packed and Loaded for Shipment?

Preparing the transuranic waste for shipment is the next step in the process. Bechtel Nevada and CCP personnel must load the transuranic waste drums into special large, cylindrical containers known as *TRUPACT-IIs.* These containers, which are approved and certified by the U.S. Nuclear Regulatory Commission, can hold up to fourteen 55-gallon drums or two standard waste boxes. Packing these containers can be time-consuming and requires focused attention on safety: loading one container can take approximately three hours, and one trailer can hold up to three containers. Prior to loading the *TRUPACT-II* container, personnel build the 14 drum payload and shrink wrap the drums. Protection within the container is provided by honeycomb impact limiters and 10 inch-thick interior foam. Before securing the *TRUPACT-II* lid, a leak inspection is conducted.

TRUPACT-IIs are loaded for shipment.

Prior to leaving the NTS, the Nevada State Health Division, Nevada Highway Patrol (NHP), and California Highway Patrol (CHP) conduct radiological surveys and mechanical inspections on the semi-truck, trailer, and TRUPACT-IIs. NHP and CHP then escort the shipment to their respective state borders.

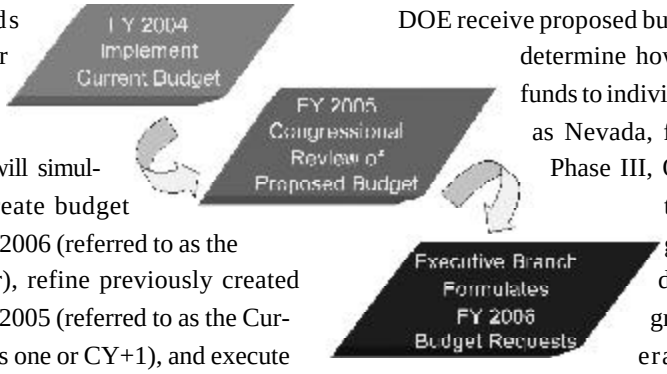
For further information on transuranic waste please visit our website at http://www.nv.doe.gov. ■

The Federal Budget Process

... In a Nutshell

Description

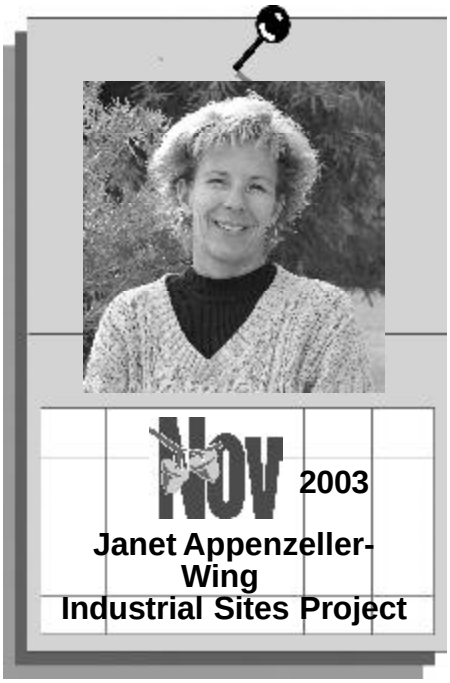
Federal budget planning is a multi-year process conducted in several phases. At any given time the U.S. Department of Energy is creating, reviewing, or implementing budgets for three different fiscal years (FY). The fiscal year begins October 1st and ends September 30th. For example, in FY 2004, DOE will simultaneously create budget plans for FY 2006 (referred to as the Budget Year), refine previously created plans for FY 2005 (referred to as the Current Year plus one or CY+1), and execute the approved budget plan for FY 2004 (referred to as the Current Year).



Three Phases of the Budget Process

In Phase I of budget planning, the Office of Management and Budget (OMB) assists the President in preparing budget directions for each federal agency for the Current Year. In Phase II, agencies like DOE receive proposed budgets and must determine how to distribute funds to individual sites, such as Nevada, for CY+1. In Phase III, OMB forwards the final budget recommendations to Congress for consideration—a process that often involves months of hearings prior to approval—for the Budget Year. ■

EM Employees of the Month



Nov 2003

Janet Appenzeller-Wing
Industrial Sites Project

Oct **2003**
Bill Wilborn
Underground Test Area Project

Sept **2003**
John Jones
Technology Division

Aug **2003**
Sabine Curtis
Industrial Sites Project

Jul **2003**
Angela Colarusso &
Joni Norton
Transuranic Waste Project

Jun **2003**
Chris Baker
Program Integration

A New Student Forum Gets to Work

The Environmental Management (EM) project is happy to welcome the new members of this year's Student Forum. While the six new high school members—all students from Advanced Technologies Academy—represent a variety of disciplines, including engineering, computer science, graphics, and law, the Student Forum gives them the opportunity to pool their talents and work as a team on a common project.

Two years ago, EM created the Student Forum to have continuous access to the perspectives of creative students concerning its communications products, like fact sheets, posters, videos, etc. The questions students were asked included: are the messages in these products clear? are the images appealing? is this product the best way to express the messages? Student responses have been candid and insightful, sometimes resulting in significant changes in the direction of products.

This year, the Forum has been tasked to create a multi-media CD-ROM that focuses on EM's Environmental Restoration program. In addition to other activities, CD users may be able to take a tour of actual sites that are currently being studied and/or remediated at the Nevada Test Site. A similar product featuring EM's waste management sites is already available.

This year's Student Forum is following in the talented footsteps of last year's group, who are credited with developing EM's highly acclaimed Kids Display. This mammoth effort involved designing all of the child-friendly graphics and text for an 11 X 9-foot display. EM is already looking forward to see what this year's forum has in store. ■

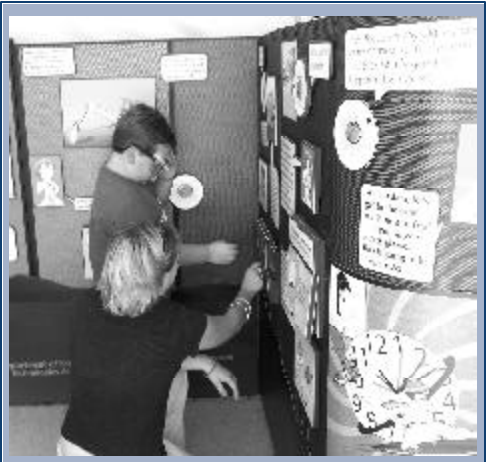
In December 2003, several members of the Student Forum toured the Nevada Test Site. Shown here are (from left to right) Getachew Abebe, Lindsey Alipio, Kitty Lee, Seth Erwin, and Rycel Uy.

EM Welcomed Fall at the Pahrump Fall Festival

To kick off the fall season, folks from all over Nye and Clark counties came together to celebrate the 38th Annual Pahrump Fall Festival in Pahrump, Nevada. The three-day event, held October 4 through 6, featured a variety of arts and crafts booths and information exhibits as well as entertainment, games, competitions, and all the food one could possible eat.

Festival-goers had their work cut out for them as they made their way to the more than 200 booths. One stop was the U.S. Department of Energy's Environmental Management's (EM) Kid's Display, which features whimsical, easy-to-understand visuals that describe the components of environmental management projects. Each year EM takes time to participate in the festival to talk to individuals who are interested in the environmental cleanup and low-level waste disposal activities that are safely taking place every day at the Nevada Test Site, some 40 miles north of Pahrump. The Kid's Display was designed so that children as well as adults can understand and appreciate all of the work that is being accomplished.

Other attractions of the festival included the annual rodeo, a pie eating contest, a mule shoe-throwing contest, and a carnival. The festival's down-home flavor would not be complete, of course, without the highly anticipated annual parade featuring floats, clowns, equestrian units, and marching bands. 2004 here we come! ■



Festival-goers used special glasses to find solutions to questions located inside the EM Kid's Display.

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- ☐ Environmental Restoration
- ☐ Waste Management

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