

# TRU TeamWorks

January 13, 2005

## Tools

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## Feedback

Contact us with [feedback](#) or submit your e-mail address for updates.

## By the Numbers

### Shipments

Scheduled to arrive  
01/16/05 - 01/22/05:

Hanford - 2  
INEEL - 2  
RFETS - 15

(subject to change)

3,259 total shipments  
received as of 01/12/05

### Disposal

Waste disposed as of  
01/12/05:

4,157 standard waste  
boxes  
1,277 ten-drum  
overpacks  
58,893 waste drums  
25,929 cubic meters



### The Big Story:

## Information dissemination

All eyes turn to Santa Fe for the WIPP quarterly update ...



### Operations:

## Drum roll, please

Spotlight on RTR operators ...



### Operations:

## Limitless possibilities...

Two LANL scientists explore advantages of underground nuclear parks ...



### Working Smart:

## Floppy on endangered list

Time to transfer your data ...



### Safety & Security:

## Safety kudos

A look at 2004 WIPP safety accomplishments ...



### Our Team:

## Workplace happenings

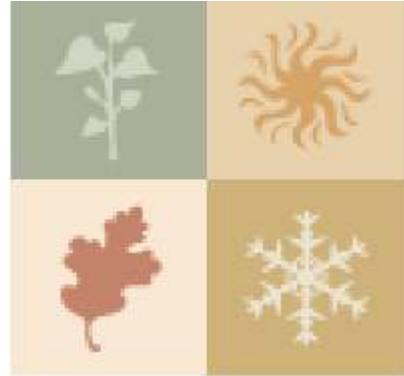
Catch the latest employee news ...



## WIPP quarterly update meeting held in Santa Fe

**T**he WIPP quarterly update meeting, attended by project regulators and interested stakeholders takes place today in Santa Fe. The “Quarterly Meeting,” as it is known, is mandated to occur on a periodic basis by the DOE and state of New Mexico's Consultation and Cooperation Agreement. Since its inception, the update has been an important line of open communication between WIPP and its stakeholders and regulators.

CBFO Chief Scientist Roger Nelson, CBFO RCRA Program Manager Jody Plum and WRES Manager Dale Bignell will represent WIPP during discussions today. The group will respond to information requests from state officials on specific WIPP topics and also discuss the status of characterization, transportation and disposal operations. In particular, Nelson, Plum and



Bignell will recap WIPP's Fiscal Year 2004 accomplishments, discuss the TRUPACT-II SARP 21, Panel 3 certification and the status of central characterization and waste retrieval operations at Idaho.

**A**nother important topic of discussion will be the new location for the third quarter update meeting, which in the past was held in Albuquerque at the former Environmental Evaluation Group's offices.

“The WIPP update is held at different locations around the state each quarter,” Nelson explains. “Normally, the first meeting of the year is held at the NMED offices in Santa Fe. The spring meeting was held in Carlsbad, the summer meeting in EEG's Offices in Albuquerque, and the fall meeting was scheduled in Santa Fe at the New Mexico Energy Minerals and Natural Resources Department.”

Because EEG disbanded last year, CBFO proposes that the fall meeting be hosted by the recently formed NMED Oversight Bureau offices in Carlsbad. If approved, this change would call for two of the quarterly meetings to be held in Santa Fe and the remaining two to be held in Carlsbad.

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## As the drum turns



### Mining begins

Mining activities for Panel 4 will begin on or about January 25 to accommodate the increased shipping schedule planned for 2005.

This will provide WIPP with adequate time to complete and certify Panel 4 to meet disposal needs.

**F**rom radiographic shadows, an experienced inspector can tell the difference between a glass and plastic bottle. RTR inspectors are trained to scan TRU waste containers in search of items prohibited from disposal at WIPP. One method used to examine TRU wastes is real-time radiography, or RTR, a non-destructive process, so-called because the container remains unopened.

The inspector's job is to X-ray waste-filled containers to determine if free liquids, pressurized containers, PCB-containing items, sharp objects, reactive or ignitable materials, and even non-TRU waste items (a typewriter, for example, which would not correspond to the waste stream) are inside. WIPP's RCRA permit excludes such items from disposal.

RTR is a specialized X-ray system with a turntable, X-ray, imager and video equipment. Using a joystick, the operator can raise, lower or rotate the container, allowing the "eye" to scan the container's contents in 6-inch segments from the top down (see video clip).

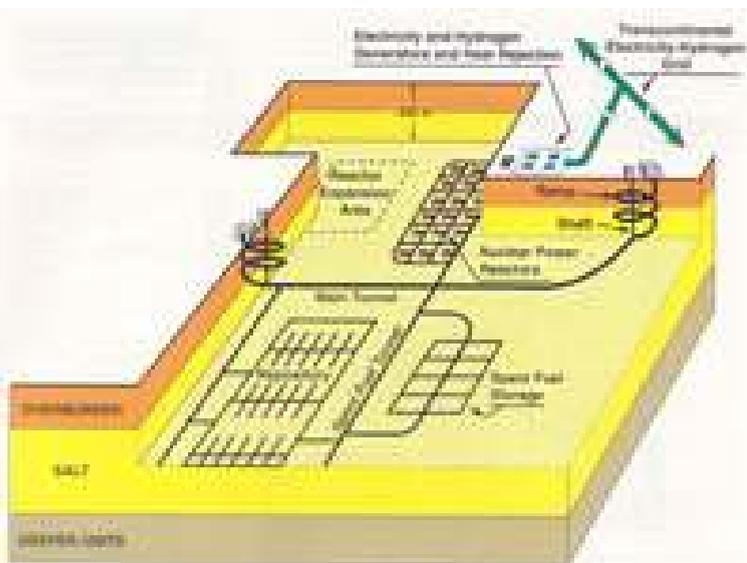
If an item of interest is encountered, the operator can stop, zoom in and clarify the image by increasing voltage to the eye. The entire 360-degree inspection is videotaped with an audio track of the operator's narrative description of the contents. Inspectors may view as many as 25 drums in a 12-hour shift.

Jim Johnson, WTS senior quality analyst, gave this analogy of RTR: "Imagine going to the doctor for a chest X-ray. You stand on a slowly revolving platform with an X-ray tube on one side and a camcorder. While you turn, the X-rayed images are recorded on video tape."

**I**n addition to the real-time video/audiotapes, a data sheet is filled out for each container, breaking identified items out by material parameters for entry into the WWIS. On occasion, the waste may contain an "impenetrable," calling on the inspector's interpretive skills. If an item contains no hidden objects, such as an electric motor, operators identify it and move on. If, however, the item is a sealed, opaque can (of less than 4 liters), the drum may be set aside for visual examination (VE) and possible remediation.

According to Johnson, who holds top-level non-destructive examination (NDE) certification, it takes time to be a good NDE radiographic inspector: "The inspector completes 80-hours of classroom instruction followed by at least one year of supervised on-the-job training."

Beyond real-time inspection, one percent of the RTR videotapes are re-viewed by QA radiographic inspectors each quarter and compared with correlating data sheets to verify accuracy.



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## A vision for tomorrow's nuclear energy

**T**hink nuclear power plant, and most envision a multi-acre site with convex cooling towers rising to the skyline. Scientists, Ned Elkins, group leader for LANL's Carlsbad Operations, Earth and Environmental Sciences Division and Wes Myers, acting deputy division leader of the Nuclear Nonproliferation Division at LANL, share a different vision.

The two co-authored "Siting nuclear power plants underground: Old idea, new circumstances," in December's issue of *Nuclear News*, a publication of the American Nuclear Society. In it, they propose taking a new look at siting nuclear reactors underground, based on new technologies and vast gains in geologic data since the concept was first proposed 40 years ago.

They suggest that an underground nuclear park harnessed to a high-capacity SuperGrid would not only be efficient, but safer than aboveground power plants. "This is not a new concept," says Elkins. "In the late 1950s, the former Soviet Union had three underground power plants. One is still operational."

**E**lkins and Myers became interested in the idea about two years ago. "Our backgrounds are very similar," notes Elkins. "We both have been involved in energy waste disposal for many years and have an extensive history in mining." The two met a number of years ago while working on the Yucca Mountain Project and stayed in touch.

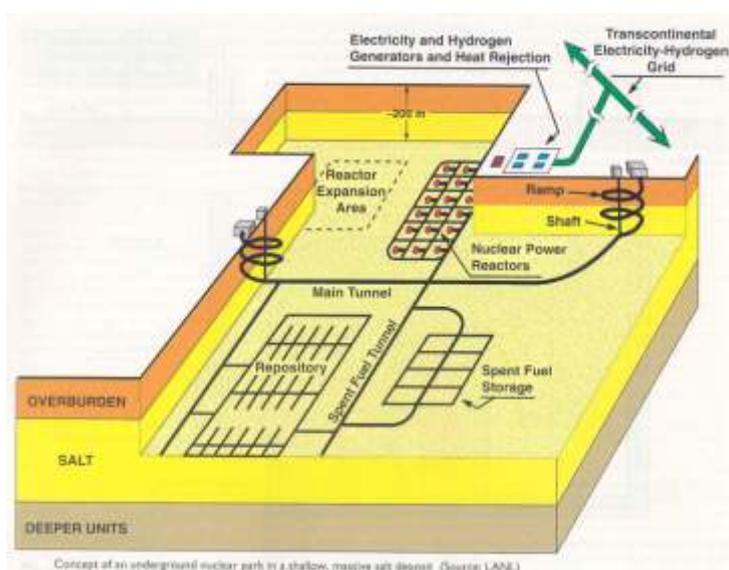
"The advantages of siting a nuclear power plant underground are tremendous," Elkins continues. "One of the greatest advantages is that nuclear wastes could be stored and disposed of in the same basic area, thus never having the radioactive material come in contact with the outside environment."

He says the safety and security that comes with an underground facility are numerous: "There are a limited number of ways to gain access to an underground facility, not to mention its isolation from the outside environment. Underground facilities also afford the opportunity of expansion."

According to Elkins, determining the type of geology best suited to host an underground park is still in question. Nuclear reactors produce an extreme amount of heat and due to the vast cavity that would be required to site a nuclear reactor, support systems would also have to be examined.

Elkins concludes, "While the idea has been explored in the past, the technology of the '50's was not what it is today. With some additional research, the concept is much more feasible now."

The December edition of *Nuclear News* is available in the WIPP Technical Library.



Concept of an underground nuclear park in a shallow, massive salt deposit (source LANL).



Ned Elkins is manager of LANL's Carlsbad Operations office.

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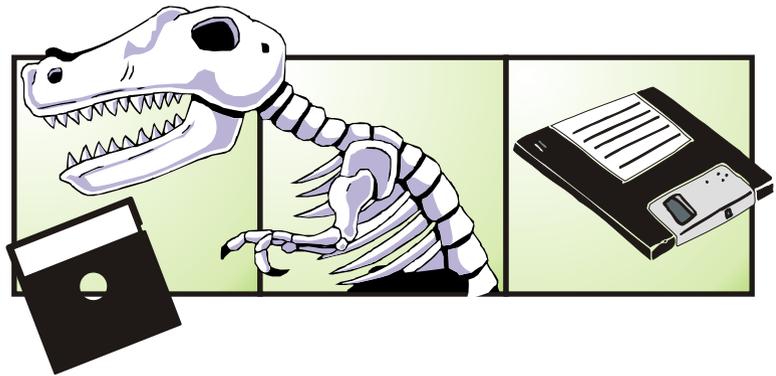
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## Dinosaurs in our midst?

**W**ith little fanfare, 3 ½" floppy drives and disks are quickly following the path of the T-Rex down the road to extinction. No meteors or global catastrophes this time, but rather death by technological advancement.

Remember the 5 1/4" floppy drives? What about the 8"? It seems that the 1.44 MB-capacity 3 ½" drive is merely following the way of its predecessors, bowing to the newer compact disc technology and USB drives, the size of a key chain, that hold more than 100 MB.



### Why we care at WIPP

No one will be picketing to save the endangered floppy drives, but users at WIPP need to take action now to make sure data stored on them doesn't become extinct, too. "Most computers these days do not automatically come equipped with a 3 ½" floppy disk drive," says Al Tornabene, Team Lead of Computer Support and Scanning Operations, L&M Technologies. "If you have records on 3 ½" disks, now is the time to move them to different media. We have a chance to be proactive before the floppies have gone the way of the 5 1/4" media."

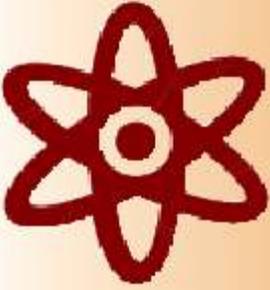
All records in electronic format must be retrievable. You can either copy the data to compact discs or some other current media, or you can print it out. This needs to be done before the data is no longer readable on commonly available equipment.

If you can not retrieve the information you have on any of your disks due to hardware or software problems, please contact Al Tornabene at Ext. 3000.

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## WWIS Trivia

How many different radioisotopes have been reported to be in the waste shipped to WIPP?"

According to the WWIS, the current answer is 63.

## Celebrating WIPP's safety achievements in 2004

With all the hoopla of 2005's first moments behind us, let's take a look back at a few of WIPP's significant safety achievements in 2004.

### A decade of star safety

WIPP became the first DOE site to maintain 10-year Star Status in the DOE's Voluntary Protection Program (VPP). In addition, WTS was awarded DOE's Star of Stars award and the VPP Participants Association Super Star Among Stars award for maintaining recordable injury rates more than 75 percent below the industry average.

### Lowest recordable case rate

Total recordable case rate is a safety measure based on the number of injuries in a year per 100 employees. WTS accomplished its lowest rate since WIPP opened with a score of 0.9, fifty percent less than the previous year. Overall, WIPP achieved an even lower rate of 0.8. The current industry average is 8.2.

### Safety milestones reached

WTS set a new record of 208 days without a recordable injury. The average number of days without a WTS recordable injury over the last four years is 34 days. The record for the combination of all WIPP organizations is 111 days, with a four-year average of 30 days between recordable injuries.

The National Safety Council recognized WTS for working 2 million hours without an injury

causing days away from work. WIPP participants also accomplished a daily goal of zero injuries on 98 percent of the days worked in 2004.

### National champion all-around team

WIPP's mine rescue capability shined last year, as the Silver Team won National Champion All-Around Team at the National Mine Rescue Contest in July. Over the years, both WIPP's Blue and Silver teams have demonstrated the highest degree of training and professionalism at regional and national competitions.

### 18<sup>th</sup> consecutive mine operator of the year award

WTS was named Mine Operator of the Year by the New Mexico Mining Association for the 18<sup>th</sup> year in a row. Subhash Sethi, WTS repository development project manager, accepted the 2004 award on behalf of WTS employees.

Congratulations to all WIPP-related employees on their safety accomplishments as we all look forward to a safe 2005.



**2004 WIPP Silver Mine Rescue team members standing left to right are David Ripley, Deena Cantrell, Curtis Sanders, III, Mike Proctor, Andy Cooper. Kneeling left to right are Buddy Webb, Greg Sensibaugh, Jamey Smith.**

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## Looking for a few good ... engineers

In association with National Engineering Week (February 20-26), Public Outreach is coordinating presentations to local schools to be given by engineers associated with WIPP. If you are an engineer who is interested in this opportunity to inspire young students to pursue a career in an engineering field, please contact Joanne Marshall at Ext. 7524.

Engineers from all WIPP project participant organizations are encouraged to participate.



## Birthdays

**Leslie Aragon (WTS)** - January 12  
**John Jackson (WTS)** - January 13  
**Doris Rodriguez (L&M)** - January 14  
**Candace Nance (WTS)** January 16  
**Parrish Roush (WRES)** - January 18  
**Amy Fierro (WTS)** - January 20  
**Ernest Preciado (CBFO)** - January 21  
**Rose Scott (WTS)** - January 23  
**Miriam Whatley (WRES)** - January 23  
**Jim Hollen (WTS)** - January 25



## WTS January service awards

<u>Five year</u>	<u>15 year</u>	<u>20 year</u>	<u>25 year</u>
Alfred Hinojos	Jim Walker	Jerry Golden	Hardy Bellows
Robert Hayes	Herman Valdez	Tom Long	
Ginny Whiteford		Dave Kump	
Danny Contreras			
Raeburn Josey			
Bob Nieman			



## Community service

**WRES Manager Dale Bignell** was nominated and approved to serve on the United Way Board of Directors at their meeting of December 16th. Dale is looking forward to his service to Carlsbad's United Way program.



## Congratulations

Congratulations to **Candace Nance (WTS)** for completing her bachelor's degree in Business Administration (General Business) on December 11, 2004 from NMSU in Las Cruces.

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