High HOPES for science education

All teachers hope for their students’ success and thank the Southeastern New Mexico Educational Resource Center’s (SNMERC) Hands-On Program for Elementary Science (HOPES), those hopes are being realized in science education.

SNMERC supplies HOPES science education kits to participating teachers in SNMERC - member school districts. “The kits, available for grades K-7, come in a variety of science topics. They allow students to experience hands-on science and enable teachers to deliver an effective lesson in the process,” says Carol Streber, Sandia National Laboratories-Carlsbad Program Group (SNL-CPG).

“HOPES make teaching science as effective as possible,” agrees Dr. Kris Baca, SNMERC director. “The kits were developed in partnership with area teachers and businesses. The topics are age-appropriate and meet state standards for science curriculums.”

Because science is important to the SNL-CPG mission, the laboratories are a major supporter of SNMERC and HOPES. SNL-CPG provides the organization with office and warehouse space, equipment and a full-time employee dedicated to SNMERC.

SNL-CPG Manager Paul Shoemaker explains, “HOPES is a way to demystify science for students at an early age. We hope the kits will influence students to think seriously about science as a career. The program has been a small investment with a huge payback in terms of affecting the thinking of children exposed to the kits, the teachers who may be searching for new methods of exploring science and in goodwill in southeastern New Mexico. Affiliation and support of SNMERC and HOPES has created immeasurable amounts of corporate goodwill for WIPP.”

“SNMERC is well known to New Mexico education circles for the excellent services it provides to member school districts,” continues Shoemaker. “The three-person staff works tirelessly with very low overhead and has been held as a benchmark for other educational consortiums to model.”

SNMERC is a consortium of three corporate sponsors: SNL-CPG, DOE, WTS and 12 school districts: Artesia, Carlsbad, Dexter, Eunice, Hagerman, Hobbs, Jal, Lake Arthur, Loving, Lovington, Tatum and Roswell. SNMERC supports the goals of member schools through HOPES, career and technology education, and encourages communication between member school districts.
Prohibited? You decide

The Waste Analysis Plan (WAP) offers detailed requirements on the characteristics and properties of waste that can be disposed at WIPP. The WAP also lists wastes that are prohibited from disposal. A quick look at the list includes items such as liquid waste, reactive materials, explosives and compressed gases.

After looking at the items on this page, test your WAP knowledge. Which items can be accepted for disposal at WIPP, and which can’t?

Please note that these items are not representative of actual WIPP waste. The items are listed for entertainment purposes only. Detailed information on WIPP WAP prohibited items can be found here.

Ready?

**Item 1: computer central processing unit (CPU)**

Answer: Acceptable

Reason: The CPU does not contain any prohibited items. On the other hand, the cathode ray tube in the monitor could be a pressurized container and/or a sealed rigid container greater than four liters - both of which are prohibited.

**Item 2: food waste**

Answer: Acceptable

Reason: Acceptable as long as the food is part of the defense related TRU waste stream and contains no excess liquids.

**Item 3: aerosol cans**

Answer: Acceptable

Reason: Aerosol cans are acceptable if they have been punctured so that they do not contain compressed gas. Also, the container must contain as little residual liquid as is reasonably achievable.

**Item 4: corrosives**

Answer: Unacceptable

Reason: Wastes exhibiting the characteristics of ignitability, corrosivity or reactivity are specifically prohibited from disposal at WIPP.

**Item 5: coin or paper money**

Answer: Acceptable

Reason: Does not display any prohibited characteristics. Of course, the money would have to be a part of a defense-related TRU waste stream.

**Item 6: radio**

Answer: Acceptable

Reason: Does not display any prohibited characteristics. However, if the batteries inside are lithium, they would be considered reactive and prohibited.

**Item 7: fiberglass insulation**

Answer: Acceptable

Reason: Does not display any prohibited characteristics.

**Item 8: spent fuel rods**

Answer: Unacceptable

Reason: Spent nuclear fuel or high level wastes are prohibited by law from disposal at WIPP.
TRUPACT-III, a multi-use package

As reported earlier this year, DOE is looking at a new shipping package known as the TRUPACT-III. The Nuclear Regulatory Commission is now reviewing the Safety Analysis Report (SARP) for TRUPACT-III and is expected to render a decision on the new package within a year of the SARP submittal. Packaging Technology, Inc., of Tacoma, WA, submitted the SARP on March 12. For more information regarding the NRC SARP, see the March 26 issue of TRU TeamWorks.

TRUPACT-III was designed to transport large waste containers now stored at a number of TRU waste facilities across the country. These containers are too large to fit inside WIPP’s existing TRUPACT-II shipping package and would require repackaging into smaller Type A containers for shipment. Additionally, much of the large-item waste inside would have to be resized.

Clearly, TRUPACT-III’s capacity for handling a variety of container configurations would boost WIPP’s shipping efficiency. Though primarily designed to accommodate large waste containers, TRUPACT-III could be used to ship containers already in use at WIPP. For example, one Standard Large Box (SLB) and fourteen 55-gallon drums or two Standard Waste Boxes (SWBs) will fit inside a TRUPACT-III.

Packaging configuration including 55-gallon drums or SWBs

Packaging configuration for one SLB
Anyone who has escorted a visitor to the WIPP site has probably answered one of the following frequently asked questions (FAQs). For those of us familiar with plant operations, the answers may seem self-evident. Not so, to the WIPP observer.

Q: **What are the umbrella-like things on top of the buildings?**

A: This question clearly refers to WIPP’s lightning protection system atop mission-essential hoists and structures. This “dissipation array” system prevents a localized point charge for drawing lightning.

Q: **Why doesn’t DOE or a commercial business use the salt extracted from the mine?**

A: (1) Selling the salt would require the mine to be re-categorized as a commercial mine; (2) We do not produce commercial grade salt – the salt contains clay and other impurities that make it undesirable for commercial use; (3) As a federal agency, DOE cannot compete with private industry, and (4) Much of the salt will be used for engineered barriers and the permanent marker. The LWA states that DOE must dispose of leftover salt tailings after WIPP closes.

Q: **Why are brass tags issued to people who go underground?**

A: Accountability.

Issuing tags or tallies is a decades-old practice that evolved in coal mining. Typically, a miner was issued two tags: one to hang on a surface accountability board and one to retain while working in the mine. Before MSHA was created, accountability systems varied from mine to mine. Due in part to Idaho's 1972 Sunshine Mine fire that killed 91, the agency codified regulations regarding “check-in” and “check-out” systems for U.S. mines. Brass doesn’t readily burn.

Q: **Why do we remove gum, tobacco products, chapstick, etc., from our pockets before entering controlled radiological areas?**

A: This conservative measure ensures that in the unlikely event of a radiological release, those potentially exposed are less likely to ingest radioactive particles.

Q: **How many TRUPACT-IIs are disposed underground?**

A: Zero. There is a misperception that it is the Type B TRUPACT-II shipping container that is emplaced underground. In fact, it is the Type A containers (55-gallon drums, standard waste boxes, and ten-drum overpacks) inside the TRUPACT-II that are removed and disposed underground.

Q: **How much radiation will I be exposed to in the underground [where waste is emplaced]?**

A: Less than on the surface. Aboveground we are all subject to natural radiation sources such as cosmic rays, sun and indoor radon – in addition to manufactured sources such as televisions and computer screens. WIPP’s deep underground repository is relatively free of such sources. As to radioactivity from the waste stack itself, only authorized personnel can enter posted radiological areas. Continuous air monitors, located near the waste disposal area, are designed to alarm if airborne radiation is detected.
A new twist on tornadoes

Tornado alley, a large area identified by meteorologists for repeated, severe tornadoes, stretches from North Dakota to Texas, and east to west from Ohio to Wyoming. But just because New Mexico isn’t part of tornado alley doesn’t mean we don’t have an occasional tornado. In fact, New Mexico averages nine tornadoes a year, and now’s the time to keep an eye out for them.

Local meteorologist and severe storm specialist Tony Pastorello says that this time of year he and other forecasters are faced with the responsibility of out-thinking Mother Nature. “Here, we have two seasons of potentially severe weather. Now, with the change from cool to hot conditions and again in the fall when we return from hot to cool conditions.”

So, do you know enough about tornadoes to separate fact from fiction? One myth about tornadoes is that you should open all the windows of your house to equalize the pressure and prevent your house from being destroyed. This is untrue. Not only will it not protect your house, but it puts you at greater risk from flying debris. And the activity may rob you of precious time to take shelter.

Another myth is that in a basement you are more protected in the southwest corner. This also is not true. Debris can fly in any direction in a tornado, so it is most important to be underneath heavy furniture, such as a desk, and to provide as much protection to your head as possible from flying objects.

And finally, another myth is that there’s no difference between a tornado watch and a tornado warning. This is false. A tornado watch means there is a chance of dangerous weather with damaging winds. You should be on the lookout for danger signs and be ready to move quickly as conditions warrant. A tornado warning is more severe; it means that a tornado has been seen or detected on radar and you should seek shelter immediately. See the Tornado Safety Tips below for guidelines.

Tornado Safety Tips

**At home:** Take cover in the center part of the house, on the lowest floor, in a small room such as a closet or bathroom, or under sturdy furniture. Keep away from windows.

**In a restaurant or retail store:** Go to the designated shelter area, not to your parked car.

**In office buildings:** Go to an interior hallway on the lowest floor, or to the designated shelter area.

**At work:** Go to a designated shelter area, usually an interior hallway on the lowest floor. You should know in advance the location of your assembly area. In the case of employees stationed in trailers, hard buildings have been designated for shelter.

**In your car:** Leave your car and seek shelter in a substantial nearby building, or lie flat in a nearby ditch or ravine.

**In the open country:** Lie flat in the nearest ditch or ravine. If in a group, spread out several yards apart.

**In a mobile home:** Evacuate. Trailer parks should have a community storm shelter and a warden to monitor broadcasts throughout the severe storm emergency. If there is no shelter nearby, leave the mobile home and take cover on low, protected ground.
The spyware that loved me

James Bond’s maniacal foes have names and faces that are unmistakably that of a bad guy. We don’t have that luxury. In fact, we often give shady characters sensitive information about ourselves without a second thought. The information drop doesn’t happen in a dark alley or out by the docks – typically, it happens in the warm and cozy comfort of our own homes.

The villain is Spyware and it may be on your computer at this very moment. Spyware is software that uses your Internet connection to send information about you to a third party.

“Companies can target you based on what they learn from your own computer,” explains Paul DeVito, WTS Information Systems Site Security Manager. “All of this can be done in the background without your knowledge.”

Think you don’t have to worry about it? Think again. Spyware has been around for at least a year, and it started out as a useful tool. When visiting Web sites that use Spyware, a program is downloaded onto your computer. Such programs originally would note the products you looked at and provide a more customized shopping experience. It sounds quite helpful, but more recently the programs’ use is more menacing.

Today’s covert use of Spyware is decidedly more intrusive. It can steal personal information (including your e-mail address), monitor your online purchases and even track which Web sites you visit. Personal data collected can be sold to unknown and numerous marketers and used to target products and services to you, which you may or may not want.

Two of the clues that you may be in the crosshairs of Spyware are an increase in spam in your inbox and an increased number of pop-up windows when browsing the Internet. Spyware can significantly slow down your machine and even cause it to crash. At WIPP, many downloads from the Internet are blocked, but an upcoming upgrade to WIPP’s computer security software will provide added protection.

At home, even Q’s expensive gadgetry probably won’t help you. What you can do, however, is install software on your home computer that recognizes and removes Spyware. Numerous consumer products are available, most notably those associated with McAfee or Norton antivirus software. Miss Moneypenny and others that don’t want to spend a lot of money can download anti-spyware programs from the Internet for free. DeVito recommends performing a Google search on your home computer for free programs, such as ADWARE and SPYBOT.

Keeping up with Spyware will ensure that your personal information is kept … For Your Eyes Only.
WIPP Mine Rescue teams excel in Louisiana competition

The Southern Regional Mine Rescue competition was held in New Iberia, LA, on Friday, April 30, and Saturday, May 1. Sixteen teams competed for top honors from the states of Ohio, Missouri, Montana, Texas and New Mexico. The WIPP Blue and Silver teams placed well in three of the four categories, with WIPP Silver taking home the honors for best overall team. Here is a summary of the results:

Field Competition
1st: Morton Salt, Grand Saline, TX
2nd: WIPP Silver
3rd: WIPP Blue

Benchman’s Contest
1st: Morton Salt, New Iberia, LA
2nd: WIPP Silver (Curtis Sanders III)
3rd: LaFarge, Kansas City, MO

First Aid Contest
1st: WIPP Blue
2nd: Cargill Deicing Technology, New Iberia, LA
3rd: Morton Salt, Grand Island, OH

WIPP Silver Team members are: Captain – Greg Sensibaugh, Robert Rhoades, David Ripley, Mike Proctor, Andy Cooper, Jamie Smith, Curtis Sanders, III. First aid team members are: Mike Proctor, Jamey Smith, Deena Cantrell.

WIPP Blue Team members are: Captain - Gary Kessler, Joel Howard, David Sjomeling, Ben Zimmerly, Edgar Keyser, Joe Baca. First Aid Team members are: Nadine Kuhn, Ty Zimmerly, David Sjomeling

Congratulations to both teams on their excellent performances!

Fire school heats up for WIPP ERT

Emergency responders from WIPP recently completed two days of live fire training at the State Fire Academy in Socorro, New Mexico. Watch for fiery coverage of the training in an upcoming issue of TRU TeamWorks!

May safety audio gram focuses on heat stress

The Safety, Security, and Technical Support Department presents the May safety audio gram. This month’s focus is heat stress.

The audio gram is also available by dialing SAFE (7233) inside the WIPP telephone system or (505) BE-4-SAFEty (234-7233) externally.

The safety audio gram was produced by WIPP personnel exercising their “employee involvement” responsibilities to the Voluntary Protection Program.

WIPP Intranet users may access the safety audio gram on the ISH web page.
Birthdays

Mario Carrasco (WTS) - May 8
Andy Stanley (CTAC) - May 9
John Gray (CTAC) - May 23
Dondee Groves (L&M) - May 25

WIPP employees earn degree honors

Congratulations to the following WIPP employees for completing their college degrees:

Preston Harvey (WTS) earned his associate’s degree in Business from Northwood University in April.

Helen Pettus (WTS) graduated in April with a bachelor’s degree in Business Management from Northwood University.

Sue Bradley (WTS) graduated May 8, 2004, with a bachelor’s degree in Business Administration (BBA) from the College of the Southwest.

Rick Whiteley (WTS) graduated in April with a bachelor’s degree in Environmental Management from Columbia Southern University.

Know of other WIPP graduates? Let TRU TeamWorks know!

WIPP phone directory assistance

WIPP employees wishing to add an internal phonebook listing or to make changes should:

• Access the WIPP phonebook from the Intranet homepage.

• Click on the button at the top of the page that says “Send directory changes.”

• A button reading “Changes” will appear. Click on it.

• A new e-mail message box will appear for you to note your changes/ additions. After typing in your information, click on “send” to send the message.

If you require further assistance, contact the WIPP reception desk at 234-7200.