

Tank cleanup crawler put to the test

Geoff Tyree, CH2M HILL

The Department of Energy Office of River Protection and CH2M HILL Hanford Group are taking a clue from the petroleum industry in the effort to clean up an estimated 53 million gallons of radioactive and hazardous waste stored in Hanford's 177 large underground tanks.

Demonstrations of a new remote-controlled cleanup machine are under way in a simulated waste tank at the Cold Test Facility. Called the tank crawler, the machine is a sturdy and agile 1,300-pound system that looks like a small bulldozer with treads and a folding blade. With the push of a button, hydraulics fold the crawler to just 27 inches wide, narrow enough to enter an underground Hanford waste tank through a riser. Once inside the tank, the crawler will push the thick sludge to a central pump that will transfer the contents out of the tank.

The crawler is an adaptation of commercially available technology used extensively in the petroleum and mining industries. A Welsh company, Non Entry Systems, Ltd., which has been making similar machines for the petroleum industry since the mid-1980s, manufactured the crawler. The petroleum industry uses the machines to remove sludge from product tanks. Non Entry Systems' first machine was one that an operator can ride and maneuver inside the tank. It continues to make this model, but it also makes models like the Hanford version that can be operated remotely from a control panel.

The relatively inexpensive adaptation for use in the Hanford waste tanks focused primarily on the construction materials and specific features for application in a radioactive environment. Unlike the models used in the petroleum industry, the Hanford crawler parts are mostly stainless steel, which makes it easier to decontaminate.

ORP and CH2M HILL are conducting crawler demonstrations using simulated sludge waste in the large, to-scale simulated waste tank at Hanford's Cold Test Facility. The first series of tests is being conducted with simulants, which are similar in particle size and viscosity to radioactive and hazardous sludge waste stored in several Hanford tanks. Preliminary tests on each subsystem have been successfully completed, and integrated system testing is under way.

"We are working toward accelerating the retrieval of waste from Hanford's older tanks with innovations such as the tank crawler," said Jim Thompson, manager of ORP's Single-Shell Tank Project. "We will put the crawler through the paces and evaluate its potential for real tank cleanup work."

Working with ORP, CH2M HILL is developing methods for removing solid waste from Hanford's 149 single-shell tanks. Most of the liquid waste has been moved from these older tanks to 28 newer, safer double-shell tanks.



The remote-controlled tank crawler dives into a tank of simulated waste at Hanford's Cold Test Facility. The crawler will help the tank-farm contractor remove sludge from the single-shell tanks.

Tank cleanup crawler put to the test. cont.

Methods are being developed to remove the remaining solid waste — more than 31 million gallons by volume — from the single-shell tanks. That waste consists of sludge that looks like fine mud and dries very hard, and saltcake, which is somewhat like wet beach sand but can dry to an almost rock-like consistency.

The challenge is to mobilize the sludge and saltcake with enough liquid to move it through pipes to newer tanks, while using as little liquid as possible to reduce the possibility of a tank leak.

That's where the tank crawler comes in.

The crawler must be small enough to fit through a relatively narrow opening on top of the tank, agile enough to maneuver over an uneven waste surface and around obstacles in the tank, and durable enough to withstand the highly radioactive environment and a rigorous decontamination process. Remotely operated, the crawler will be lowered into a tank, where it will push the sludge toward a specially designed vacuum pump. An operator will sit at a bank of monitors in a mobile facility outside the tank farm and use multiple camera views to maneuver the machine. A pump-and-spray mechanism on the crawler will help move the waste to the central pump.

The central pump vacuums up the thick waste, which is expected to contain 30 percent to 80 percent solids, and moves it approximately 50 feet to a holding tank on the surface. During testing, the central pump has been removing about 25 gallons of simulated waste — kaolin clay — per minute.

As the crawler is removed from a tank, it goes through a vigorous decontamination process. First it is hit with a low-pressure spray, then a high-pressure spray to loosen and wash off most of the material. Finally, the crawler enters an ultrasonic decontamination chamber with several banks of ultrasonic generators that create strong vibrations, and a final wash removes the smaller particles of waste.

“The crawler is designed to be sturdy enough to handle the challenging environment of a real Hanford waste tank,” said Joel Eacker, CH2M HILL Hanford Group vice president of Projects. “We think it shows promise for accelerating the removal of waste from several of Hanford’s tanks.”

Single-shell Tank C-104 is currently scheduled for the first deployment of the crawler; however, ongoing evaluations may support accelerated deployments in other waste tanks. ■

The tank crawler's vital role

The tank crawler is being evaluated for retrieving sludge waste from as many as 60 Hanford single-shell tanks for transfer to newer, safer double-shell tanks.

How does it work?

- The tank crawler will be lowered through a narrow opening in the top of a tank.
- An umbilical line that connects the crawler with equipment above the ground will allow controllers to operate the crawler.
- The crawler will use its bulldozer-like blade to push the sludge waste toward a central vacuum pump.
- The central vacuum pump will dilute and transfer the waste through pipes to a holding tank and then to a newer, safer double-shell tank.

What is sludge waste?

- Sludge waste looks like fine mud and dries very hard.
- Sludge tends to have small pore spaces, so liquids can't be easily drained or pumped.

Picture Pages



WINTER ISN'T OVER: On a recent morning when drizzle turned Hanford roadways icy, a Hanford commuter was involved in a rollover accident and a second vehicle went off the road in the same area just minutes later (above). On another day, both fog and ice contributed to the accident at right. Dave Penfield, Fluor Hanford traffic engineer for Hanford Site Operations, said the accidents occurred even though all three vehicles were well-equipped for winter driving.



Fluor Hanford Safety and HEHF to present heart health fairs

Throughout the month of February, Fluor Hanford Safety and the Hanford Environmental Health Foundation will present a series of health fairs for Fluor Hanford employees that will offer information on preventing heart disease. The topics to be covered include heart attacks, stroke, cholesterol, blood pressure, nutrition and exercise.

The fairs will include a presentation, "Heart Smart: Healthy Choices for a Healthy Heart," as well as blood-pressure checks and body-fat testing. A health professional will be available to answer questions regarding heart health and other health topics.

You can meet the requirement for attending a monthly safety meeting by attending one of the 15-minute "Heart Smart" presentations at the health fair. Health-fair sessions are from 10 to 11 a.m. and 11 a.m. to noon. The locations are listed below. Employees in the 300 Area are invited to attend the health fair in the 4706 Building. Contact Carol Powe of Fluor Hanford Safety at 376-8886 or Judi Staley of HEHF at 372-0097 for further information. ■

Heart Health Fairs

Thursday, Feb. 13	200 West	MO-278
Wednesday, Feb. 19	100K	MO-293
Tuesday, Feb. 25	400 Area	4706
Wednesday, Feb. 26	200 East	2751-E

Sludge/water system installed in K Basins

Michele Gerber, *Fluor Hanford*

By installing the sludge/water system in the K East Basin, Fluor Hanford's Spent Nuclear Fuel Project has taken an important step in reducing the risk posed by radioactive sludge. Fluor Hanford, supported by Fluor Federal Services and COGEMA Engineering, installed the equipment inside the basin and began acceptance testing last month. In addition, the project received, inspected and began testing two systems for transporting sludge, each consisting of a transport trailer, a shielded cask and three canisters that will hold the sludge.

The sludge/water system will remove sludge and transfer it to compliant, safe storage at T Plant, according to the plan approved by the Department of Energy Richland Operations Office and its regulators in 2000. That agreement provided that sludge from the K Basins would be transported to T Plant and managed as remote-handled transuranic (TRU) waste. The system will begin moving sludge to T Plant in about two months.

"It's especially good news that the SWS equipment is installed and ready for testing," said Norm Boyter, Fluor Hanford vice president for the SNF Project. "Sludge has been difficult to manage and its disposition hard to plan for, so we are pleased that we're successfully into the next phase of this important work."

Sludge is defined as the combination of corrosion products and small fragments of degrading fuel elements, rusting storage racks, concrete from pool walls and particulates resulting from the storage of spent nuclear fuel under water over many years. Sludge is commonly found on the floors of both K Basins, in fuel canisters and in the basin pits. However, more than 90 percent of it is located in the K East Basin.

When the sludge is separated from the spent fuel and removed from the basins, it will be managed as a remote-handled TRU waste. For the purposes of differentiating fuel and debris from sludge, any material that is about a quarter of an inch in diameter or smaller is defined as sludge.

Large, complex system

Five contractors or vendors have contributed to designing, building and fabricating sludge/water-system equipment. The system consists of two major subsystems — the retrieval system and the transfer system. The retrieval system will remove sludge from the K East Basin and adjoining pits over the two-year period of the project by pumping floor, pit and fuel-canister sludge to a stainless-steel container mounted inside a shielded cask for safe transport.

The cask containing a filled canister will then be transported to T Plant on a specially designed transport trailer. Resulting debris and fuel pieces in the sludge slurry streams will be captured by strainer baskets and transferred via the fuel transfer system to the K West Basin for final disposition.



Workers at Fluor Hanford's Spent Nuclear Fuel Project test the interface of the large-diameter container as it fits into the cask on the transport vehicle that will move it to T Plant.

Continued on page 6.

Sludge/water system installed in K Basins, cont.

Transporting the sludge

The system includes equipment designed to transfer casks loaded with sludge from the K Basins to T Plant. The stainless-steel-and-lead sludge transportation cask is cylindrical and approximately 5 feet wide and 10 feet high. It shields personnel during operations and meets all safety requirements, exceeding the U.S. Nuclear Regulatory Commission requirements for transfer.

As sludge is being retrieved, the sludge transportation cask will be staged in the north transfer bay of the K East Basin. An empty container called a large-diameter container, or LDC, inside the cask will be filled with about two cubic meters of sludge. After the LDC is filled, the water cover level will be adjusted and the lid will be placed on the cask. The transportation cask will then be purged with helium and transported to T Plant on the transfer trailer.

The transfer trailer is specially designed so that, when fully loaded, it meets the physical size and weight requirements for entering the T Plant tunnel. From there, the large-diameter container will be unloaded from the cask and moved into one of four storage cells.

T Plant will be ready

During the past two years, T Plant has cleaned nuclear debris out of below-grade shielded concrete cells designated for storing sludge. Fluor Hanford has partnered with construction personnel from Fluor Federal Services to move in huge frames and cell-liner assemblies, complete with pumps and leak-detection equipment. Together, Fluor workers also have installed video cameras for monitoring the sludge and have completed many other readiness tasks. T Plant's contractor readiness assessment for receiving sludge is planned for this month.

Tony Umek, Fluor Hanford SNF deputy project director for the sludge project, said installing the sludge/water system and readying T Plant took teamwork. "Fluor Hanford teamed with FFS and COGEMA to address a number of difficult technical and fabrication issues facing the project," Umek said. "Our client, the DOE Richland Operations Office, has been actively involved, providing key input and approvals when needed to allow us to continue to move forward."

SNF Project bustling

K East Basin, currently one of the busiest facilities at Hanford, recently started fuel transfers to K West Basin and is preparing for both contractor and DOE operational readiness reviews on the sludge/water system in the next few months.

All of the spent fuel that was stored in the K West Basin at the beginning of the SNF Project — nearly 1,000 tons of irradiated uranium and more than 25 million curies of radioactivity — has been moved to safe storage. ■

Hanford Fire Department seeks firefighter applicants

The Hanford Fire Department is seeking qualified applicants to fill anticipated openings in the firefighter apprenticeship program. Duties include fire suppression, hazardous-materials response, testing and inspection of fire-suppression and detection systems, development of pre-fire plans and building walk-downs to identify hazards.

Successful applicants must become active participants in the HFD's Washington State Firefighter Apprenticeship Program. Applicants must be at least 18 years old, have a valid Washington state driver's license, and be able to obtain and maintain a Department of Energy "Q" level clearance. Applicants must pass a written exam and a physical-ability test.

The physical-ability test is designed to evaluate an applicant's strength and endurance and includes both timed and untimed events. It is intended to simulate situations a firefighter might find himself or herself facing in emergency conditions.

A walk-through preview of the physical-ability test will take place on March 1 at the Volpentest HAMMER Training and Education Center. Space is limited and interested individuals need to register by calling Bronyn Bardessono, Fluor Hanford Industrial Relations, at 376-1749. Individuals interested in applying for the firefighter apprenticeship openings are strongly encouraged to view a walk-through.

The actual written exams and physical-ability tests will take place on May 17 at HAMMER. Individuals who pass the written exam and physical-ability test will participate in an oral interview. Successful candidates will then be placed on an eligibility list for future openings. ■



Two Hanford firefighters demonstrate the correct way to open a hydrant.

Hanford Patrol helps when you need roadside assistance

Most of us don't like to think about how we would respond in a difficult situation, like car trouble on the commute to Hanford work sites, but our response does affect our safety and the safety of others on the road. Recently, a commuter was in need of roadside assistance while traveling on Hanford Site roads. Several cars passed before someone stopped to help.

To help you if you find yourself in this situation, Hanford Patrol would like to clarify its procedures and answer some pertinent questions regarding patrolling and roadside assistance on the site.

Q: Does Hanford Patrol have a set roving patrol pattern or times?

A: No, there are no specific times or places you can count on a roving Hanford Patrol or a Benton County Sheriff Deputy driving by.

Q: Will Hanford Patrol or the Benton County Sheriff's Deputy stop to help if I'm parked along the roadway?

A: Nearly always. Should they be responding to an emergency, they may be unable to stop right then. If they do not stop, they will call the vehicle location into the Patrol Operations Center for follow-up.

Q: What if I really need help and I don't have a phone?

A: Open the hood or the trunk of your vehicle — that will indicate to all passersby that you need assistance. If you are near the traffic flow, turn on your hazard warning lights. If it is really foggy, try to get the vehicle as far from the traffic flow as possible. If visibility is poor, move further away from the roadway. Be careful about driving on the shoulders of the Hanford roadways; many are not paved and it is easy to get stuck. Put out warning devices if you have them.

If you have a cell phone, you can call the Patrol Operations Center at 373-3800, and they will dispatch a deputy or a Hanford Patrol rover to assist you. If you see a vehicle with its hood and or trunk open and you have a cell phone, you can notify the Patrol Operations Center to make sure that someone has been dispatched. If you do stop to render aid, please be careful that you do not create an additional traffic hazard. Stay clear of the traffic flow and set out warning markers if needed.

Q: What if I have already summoned help via my cell phone and am just waiting for them to arrive?

A: Call the Patrol Operations Center and notify them of your location and situation. Do not open the hood or trunk. A deputy or Patrol rover may still stop and inquire about your status. Position the vehicle so as not to create an additional traffic hazard. If your help is coming from off-site and does not have a badge, you must call the Patrol Operations Center to request temporary site access for the tow truck or mechanic.

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Hanford Patrol helps when you need roadside assistance, cont.

Q: Why don't people stop and help out?

A: Here on site there are many places where there is no safe place to park or move around a disabled vehicle. Some folks are worried about their personal security. Others feel incapable of helping. However, here at Hanford, if there is traffic, it is unusual for a stranded driver to wait very long for help.

Here are the points to remember if you need roadside assistance or observe another driver who needs assistance:

- Open hoods or trunks indicate that the vehicle occupants need assistance.
- If phones are available, notify the Patrol Operations Center of the situation.
- Stay as far from the traffic flow as possible.
- Use your hazard warning lights.
- Render aid if you are capable.
- Be especially careful and mindful of the traffic flow in foggy or icy conditions and anytime visibility is reduced.
- If you are driving and see a vehicle parked along the road, please slow down. Prepare for an "incident." Be extra observant, attentive and cautious.
- If you call the Patrol Operations Center to report, consider pulling over first so your attention is not distracted.

For more information, contact the Patrol Operations Center at 373-3800. ■

PNNL exploring implications of global warming

Western states face a significant drop in rain and snowpack runoff, allegedly because of global warming, which could reduce water supplies as much as 30 percent over the next 50 years, according to a recent *USA Today* article.

Scientists at Pacific Northwest National Laboratory have developed models to estimate the impact of global warming on water resources in the western United States. "Water-resource managers are looking toward more scientifically based solutions to address increased demands on their agencies," said Mark Wigmosta, chief scientist with PNNL's hydrology group. "Our modeling techniques can help them make better decisions by illuminating potential tradeoffs between cost and risk."

Researchers have developed a modeling system that links regional climate models with distributed watershed models. Applying the models to the Yakima River Basin, scientists created an historic climate simulation based on observed carbon-dioxide emissions from fossil-fuel combustion. They compared the results with three future climate simulations based on likely increases in global population, economic growth and energy production.

All three simulations indicated more rain than snow falling in fall and winter, causing increased winter runoff and decreased winter snowpack, primarily as a result of higher air temperatures. With more precipitation falling as rain in fall and winter, the Pacific Northwest will lose a lot of natural water storage in the snowpack. Less winter snowpack would mean an earlier runoff.

This change may significantly affect fish populations in the Yakima River. For example, adult fall Chinook salmon begin their upstream migration in the Yakima in the fall, and the resulting salmon smolt begin migrating downstream the following spring. But under future climate scenarios, stream temperatures remain high later in the fall, which may delay upstream migration of adult salmon.

In addition, spring snowmelt occurs more than a month earlier, further compressing the time available for spawning, incubation and rearing before the smolt migrate downstream. Other fish species — even other Chinook-salmon runs — will be affected differently.

Storing increased runoff in the fall and winter and releasing it during the historical spring snowmelt may be one solution. However, when considering changes in operating procedures, water-resource managers must also consider other, often conflicting, water uses such as irrigation.

"We believe the research we're doing will help water-resource managers make increasingly difficult decisions about how to use water resources in the future," Wigmosta said.

To read the entire *USA Today* article, see http://www.usatoday.com/weather/news/2002-11-21-western-snowpack_x.htm. ■

Library industry standards, vendor catalogs updated

The Hanford Technical Library recently negotiated a new contract with Information Handling Services for electronic access to industry standards and vendor catalogs contained in the TextAdvantage Plus, CatalogXpress and Specs & Standards databases. With this new contract, a new user name and password are required for access to these databases. To obtain the user name and password information, contact the Hanford Technical Library at 372-7430 or at pnl.techlib@pnl.gov and put "IHS user name and password" in the subject line. Access is restricted to Pacific Northwest National Laboratory, Department of Energy, Fluor Hanford, Fluor Federal Services and CH2M HILL Hanford Group staff members.

As before, the IHS subscription includes full-text 1998 and 2001 American Society of Mechanical Engineers Boiler and Pressure Vessel Codes from the TextAdvantage Plus database and vendor catalog information from the CatalogXpress database. In addition, a number of standards packages have been added to the existing Specs & Standards database subscription. Visit <http://library.pnl.gov/database.htm> to get the list of standards packages.

The Institute of Electrical and Electronics Engineers standards are no longer available from the Specs & Standards database. Instead, the current full-text IEEE standards as well as IEEE and Institution of Electrical Engineers journals and conference proceedings are accessible from the desktop through the IEEE/IEE Electronic Library at <http://library.pnl.gov/database.htm#iel>. This database is available to all PNNL and Hanford Site employees with PNNL LAN or HLAN connections.

For more information or assistance with these products, contact Karen Buxton at 372-7451 or at karen.buxton@pnl.gov or the Hanford Technical Library Reference Desk at 372-7430 or at pnl.techlib@pnl.gov. ■

Behavioral Health Services helps through times of change

Dan Lowe, *Hanford Environmental Health Foundation*

Despite the popularity of the fictional television psychiatrist Dr. Frasier Crane, or of the media psychologist Dr. Phil of Oprah fame, people frequently feel a stigma when thinking about asking for help with emotional or social problems. People will grapple with seeking counseling because it feels more uncomfortable to reveal problems than it does to continue to have the problem. Major changes at work or in the family can push a person beyond his or her ability to cope.

Many workers and their families can benefit from counseling services. The goal of the services offered through Behavioral Health Services at the Hanford Environmental Health Foundation is to help Hanford workers and their families recognize emotional and behavioral problems early, so they can develop adaptive and caring ways to resolve the problems.

People who do well with changes have developed skills that build self-assurance every day, and these same skills carry them through very difficult times. Many people developed a strong sense of who they are because they were raised by parents who nurtured that confidence by providing praise and accountability. These people feel confident that mistakes are allowed, learn from their mistakes and can reach beyond themselves in most things they do. Confident people know their strengths and weaknesses, and are comfortable asking for help. They are not focused on perfection and are not excessively self-reliant. They value working with others while accepting responsibility for their own actions. They react to someone's poor treatment by engaging in conversation to resolve the bad feelings.

We can learn to be self-confident by developing effective emotional and social skills. Here are some suggestions for activities that will help you feel good about yourself:

- Take each day as it comes.
- Be realistic about what you can and cannot do. Break large tasks into manageable parts and allow success for completing each.

- Listen to your self-talk, write it down if necessary, and try restating a negative point of view in a positive or more realistic way.
- Learn to laugh at yourself to reduce humiliation. Laugh at yourself before you laugh at someone else.
- Ask for and accept constructive criticism. Picture destructive and hurtful criticism rolling off your back.
- Seek out people who build mutual respect. Avoid people who repeatedly provoke you or make you feel less of a person.
- Build your own "community" of people with shared interests and values.
- Give yourself the same encouragement you'd give to a friend. Ask yourself, "Am I talking to myself the same way I would talk to a close friend?"
- Change your black-and-white thinking to gray. Things are usually somewhere in between good and bad.

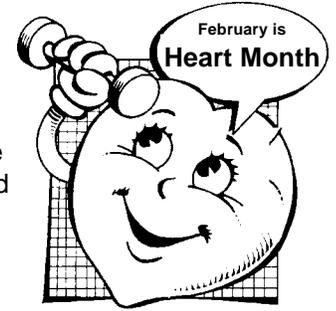
Hanford workers and their dependent family members may schedule a visit with an HEHF psychologist or counselor. If you need assistance with learning to manage any life distress, please call us at 376-4418 to schedule an appointment at no cost to you or your family members.

All employees of Hanford contractors who have Hanford identification and who engage in Hanford work are eligible to use the HEHF Employee Assistance Program. This includes the staff of the Department of Energy, Fluor Hanford, Fluor Federal Services, Duratek, CH2M HILL Hanford Group, Pacific Northwest National Laboratory and Bechtel Hanford. This service is paid for by the Department of Energy through its contract with HEHF. Call with questions, including those about eligibility for services, particular services and confidentiality. ■

February is Heart Month

Heart disease is a common health concern for many people because it is the number-one killer in the United States. Today, we know a lot about what causes heart disease and what we can do for ourselves to help prevent it.

There are several health and lifestyle factors associated with heart disease. Luckily, these factors can be controlled with a commitment to personal health and a positive attitude toward daily life.



A person who wants to prevent heart disease should follow these guidelines:

- Quit or don't start smoking.
- Reduce the amount of fat in your diet, especially saturated fat, which is primarily found in animal foods. Some vegetable fats such as palm oil and coconut milk or oil are also saturated, as are hydrogenated fats. Try to limit the percentage of daily calories from fat to no more than 30 percent of your total calories.
- Limit your cholesterol intake to less than 300 milligrams a day. Cholesterol is found in animal foods including butter, egg yolks, whole-milk dairy products, meat, poultry and fish.
- Eat a varied diet that emphasizes whole grains, vegetables, fruits and whole-grain breads and pastas.
- Cut down on saturated fat and sugary foods.
- Exercise regularly.
- Maintain a healthy weight.
- Learn to manage stress.
- Watch your blood pressure.

A person's gender, age, family history, medical history and other health factors can also affect the tendency to develop heart disease. The best way to start protecting against heart disease is to know your personal risk factors and tailor your lifestyle changes to suit your particular medical needs.

If you would like more information on heart health, or to request information for safety meetings, call HEHF Health Education Services at 373-3729 or send an e-mail message to *HEHF Health Education Services. ■



Security Ed Challenge of the week

Take the Security Ed Challenge by completing the following sentence:

Safeguards and security information that pertains to the Hanford Site has a high potential of being

- A. Export-controlled information
- B. Intellectual property
- C. Classified as National Security Information
- D. Proprietary

Do you know the answer? Circle the answer that will correctly complete the sentence above and then clip this article, add your name and HID number, and send it to Chet Braswell at L4-09, or send him an e-mail message and in the subject line include "Ed's Security Operations Challenge" and your answer. Prizes will be awarded to randomly drawn correct entries. The names of prizewinners and the correct answer will appear in a future *Hanford Reach* article.

For additional information on security, please contact your security representative or visit the SAS Intranet links at <http://apweb02.rl.gov/phmc/phmcweb/index.cfm?PageNum=37> or view the SAS Classification Desk Top Reference at <http://apweb02.rl.gov/rapidweb/phmc/sas/index.cfm?PageNum=102>.



Congratulation to Eileen White of Fluor Hanford, the winner of the Jan. 20 Security Ed Challenge. White won a Mini MagLight for correctly answering that the preferred number to contact Project Hanford security and emergency services when using a personal cellular telephone is 373-3800.

Gene Luczynski of Pacific Northwest National Laboratory gets a special recognition for explaining the answer. Luczynski wrote: "With cell phones, dialing 9-1-1 for site-related emergencies has the potential to connect a caller with an emergency dispatch center that may not be related to the jurisdiction (e.g., Hanford Site/Benton Country) that the caller desires. Cell-phone calls I have made to 9-1-1 from within Benton County have been received by the Franklin County Emergency Dispatch Center, and the reverse has also happened. This could cause added confusion for both the caller and the incorrect dispatch center, thus delaying what might be valuable response time in an emergency." Luczynski also received a Mini MagLight for taking the time to explain why cell-phone users should call 373-3800 to contact Hanford security and emergency services.



Regular Features

CALENDAR

Valentine's event benefits AAAS

The third annual Valentine Sweetheart Dinner and Dance will be held Saturday, Feb. 8, at the Red Lion Hotel in Richland. Proceeds from the event will benefit the Afro-Americans for an Academic Society, an advocate for children's academic achievement since 1976. The event will raise funds for special projects, student activities and scholarships. The social time begins at 6:30 p.m. and dinner will be served at 7. Da Blues Funk Party band will provide entertainment. The event also features romantic gifts, door prizes and dancing until midnight. Tickets are \$45 per person and may be purchased at the Bon Marché gift-wrapping department or at Fantastic Sam's. For more information, call Vanessa Moore at 376-8141 or Debra Wright at 373-7004.

Order doughnuts for JA dollars fund-raiser

The Fluor Hanford Community Programs Junior Achievement bowling team is accepting orders for Krispy Kreme doughnuts until noon Monday, Feb. 10. The fund-raiser will support Junior Achievement. The price is \$6.50 per dozen. You may get an order form by contacting Lynn Tegeler at 376-4625 or at lynn_e_tegeler@rl.gov, or at ^Community Programs. Send your completed order form and your check payable to "Junior Achievement/Krispy Kreme Fund-Raiser" to Lynn Tegeler, c/o Fluor Hanford, mailstop H8-65, P.O. Box 1000, Richland, WA 99352. Pick up your order between 6 and 8 a.m. on Thursday, Feb. 13, in the lobby of 2420 Stevens Center.

Donate blood at the Federal Building on Feb. 11

The bi-monthly American Red Cross blood drawing in the Federal Building will be held Tuesday, Feb. 11, from 10 a.m. to 3 p.m. Registration will take place in the Federal Building lobby. Blood will be drawn in the Bloodmobile located in the parking lot on the north side of the building. To make an appointment, contact Carolyn McCain at carolyn_s_mccain@rl.gov or at 372-3580.

Software engineering discussed at Feb. 11 meeting

"Software Engineering and Quality Assurance" will

be the topic at the Feb. 11 Association for Quality and Participation and American Society for Quality dinner presentation at Tri-Tech, at 5929 West Metaline in Kennewick. Presenter Steve Hans will help you gain understanding of the practices, process and language of software. Check-in and networking start at 5:30 p.m., with dinner catered by Tri-Tech at 6 and the presentation at 7. The cost is \$16 for AQP and ASQ members, \$18 for non-members or \$5 for the presentation only. Make your reservation by Feb. 6 by calling 372-1442, sending an e-mail message to lynn_1_gates@rl.gov, or registering via the AQP chapter's Web site at <http://www.3-cities.com/~gates/AQPQuest.htm>. Click on "What's Next" for additional information about the program, speakers and dinner menu.

'How to Survive Challenges' at Feb. NMA meeting

The Hanford Chapter of the National Management Association will hold its monthly dinner meeting on Feb. 12 at the Red Lion Hotel in Richland. The meeting theme will be "How to Survive Challenges." Dan Miller, author and motivational speaker from Yakima, will present "Living, Laughing and Loving Life!" The social hour begins at 5 p.m. A mini-seminar examining personal ability to deal with adversity also begins at 5 p.m. The business meeting begins at 6, and dinner will be at 6:30. There is no charge for chapter members, and the cost for guests is \$20. Make a reservation by calling Lisa Hart at 376-3484.

Observance for congenital heart defects awareness

The public is invited to the Congenital Heart Defect Awareness Day observance on Feb. 13 from 4 to 6 p.m. at the Hampton Inn at 486 Bradley Blvd. in Richland. The event is hosted by Cardiac Kids' Club. Congenital heart defects are the most common birth defects in the United States. Activities include the presentation of Washington State's CHD day proclamation signed by Governor Gary Locke; a celebration and memorial to honor and remember children affected by CHDs and the

Calendar continued on next page.



Regular Features

CALENDAR continued

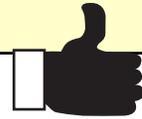
health professionals that care for them; a silent auction and fund-raiser to benefit Cardiac Kids, a local support group for families with children born with heart defects, and Congenital Heart Information Network, a national support group; juggling by Tapteal Elementary School's Circus Club members; and fun activities for children. Contact Cathy Manderbach, Washington's CHD Day coordinator, at 967-5738 or 531-0864, or at Cienna88@aol.com for more information.

National Engineers' Week Competition Feb. 19

To commemorate National Engineers Week, Feb. 16-22, the Hanford Site will hold its "Friendly Competition" on Feb. 19 at 1200 Jadwin in Richland. Start forming your team of two to four people for the competition, which will be Junkyard Wars-style with the theme "Hold Your Water." Rules and supplies will be handed out at the start of the competition. Teams will build a small device out of office supplies. Scoring is based on cost, schedule, safety and function. The competition is open to all Hanford Site personnel. For more information, contact Lori Weidner at 376-4585 or at lori_b_weidner@rl.gov before Feb. 7.

Variété raises funds for Neurological Center

Tri-Cities Variété, a cabaret-style event featuring music, dance, art, comedy, magic, an auction and door prizes will be held from 7 to 10 p.m. on Feb. 28 at Bingo Boulevard, 6222 W. John Day Ave. in Kennewick. Tickets are available from the Neurological Center, 712 Swift Blvd. in Richland, or the Bookworm in Richland and Kennewick. The event will raise funds for the Neurological Center, a non-profit United Way agency that provides information, education and support to Tri-City residents and their families on more than 25 chronic neurological disorders. For more information on the Neurological Center, call 943-8455, send e-mail to TNCfingers@aol.com or visit www.tcfn.org/neurocenter/index.html. ♦



BRAVO

CH2M HILL Hanford Group announces award winners

The CH2M HILL Hanford Group Employee Recognition Council honored November and December performance award winners during a luncheon held Jan. 29 in the 200 East Area.

For the month of November, the team of **Chris Woehle, Tad Miers, William McFee** and **Don Craig** was the winner in the safety category. Winners in the individual category were **David Barger, Mike Crockett, Bobbi Bennett, Loren Martin, Peter Diaz, Ray Meredith** and **James Thorne**. Winning in the team category was the team of **Ken Anderson, Joe Bewick, Mark Brown, Stuart Hildreth, David Klug, Lawrence Rouse** and **Rick Thompson**.

For the month of December, the team of **Tom Hein, Clyde Saunders, Ben Wutzke** and **Dave Patrick** won in the safety category. Other individual winners were **Doug Zellars, Coll (CB) Porter** and **George Stanton**. The team of **Dennis Lien, Harry Schmidt** and **Bob Hickman** were winners in the team category.

Nomination forms are available on Site Forms: A-6001-358.

Stewart named FFTF Employee of the Quarter

For his efforts to prepare for the Fast Flux Test Facility's secondary sodium drain to support plant deactivation, Rory Stewart was named FFTF Employee of the Quarter for the quarter ending Dec. 31.

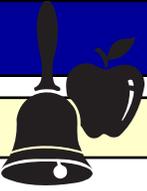
According to Tom Gregory, maintenance manager for FFTF, Stewart did an outstanding job pulling the immersion heater package and installation together on schedule.

Over the past four months, he worked almost full-time on the heater package and several trace heat packages to support the secondary sodium drain activities and schedule. Stewart performed all this extra work as he continued to function as the Fix-It-Now Team operations engineer, making sure that critical plant needs were met in a timely manner. He worked extra hours at FFTF and on weekends at home, all without compensation, getting the packages written and approved for fieldwork.

After the immersion heater package was approved, he was asked to be the person-in-charge for fieldwork on the electrical and mechanical portions of the immersion heater installation. ♦

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Regular Features



CLASSES

Brush up your grammar at the Skills Lab

This month, the Skills Lab will offer its popular half-day presentations on grammar and punctuation in room 31 of the Administration Building at the Volpentest HAMMER Training and Education Center.

- **Painless Punctuation** will be offered Thursday, Feb. 20, from 7:30 to 11:30 a.m. Participants will learn to cure comma-itis; use colons and semi-colons properly; handle exhausted apostrophes; tackle the lowly hyphen; review fragments, comma splices and run-ons; and review must-know key rules.
- **Goof-Proofing your Grammar** will be offered Thursday, Feb. 27, from 7:30 to 11:30 a.m. Participants will learn to recognize and deal with the most frequent grammatical goofs: pronoun problems; mangled modifiers; easily confused, misused and abused words; proper use of who/whom, lie/lay, bring/take, who/which/that; pronoun-antecedent agreement; subject-verb agreement; parallel phrasing; and must-know key rules.

The Skills Enhancement Lab is a partnership of the Department of Energy, Columbia Basin College and HAMMER, operated by Fluor Hanford. The Skills Lab helps workers improve their basic reading, writing, math and spelling skills. There is no charge for the classes, but they are popular, so reserve a seat now by calling the Skills Lab at 376-3250.

PROTRAIN offers the following software classes:

- **Network Defense and Countermeasures** — March 17-21
 - **Primavera Project Planning**
P-3 604 — March 19
 - **Crystal Reports 8**
Introduction — Feb. 5; March 10
Advanced — Feb. 6; March 11
- Office XP classes are now available. For more information or to register, call 375-0414.

Training for administrative professionals

The Volpentest HAMMER Training and Education Center will host two training classes conducted by

the American Management Association for administrative professionals in March. The training is targeted to enhance and support skill sets required by administrative professionals. Class size is limited to 25. The following classes will be conducted at HAMMER:

- **Management Skills for Administrative Professionals, Course No. 2294** — March 17, 18 and 19. The cost is \$645 and students earn 1.8 continuing education units.
 - **Managing Chaos: Dynamic Time Management, Recall, Reading & Stress Management for Administrative Professionals, Course No. 002194** — March 20 and 21. The cost is \$510 and students earn 1.2 continuing education units.
- Register by e-mail to Libby Sickler.

HAMMER sponsors RCRA seminar

Volpentest HAMMER Training and Education Center will sponsor a three-day Resource Conservation and Recovery Act seminar from McCoy and Associates on March 18, 19 and 20 at the Red Lion Hotel in Richland. Attendees will receive McCoy's *RCRA Reference*, 2003 edition, McCoy's *RCRA Unraveled*, 2003 edition and RCRA remediation options and case studies. Site personnel may register for the seminar with their training schedulers or through PeopleSoft. The cost is \$550. Course agenda or additional information may be obtained by contacting your training scheduler or Don Brock via e-mail.

ASME B31.3 Process Piping presented March 24-27

The Columbia Basin Section of the American Society of Mechanical Engineers will present the professional development course, ASME B31.3 Process Piping, March 24-27 at Washington State University Tri-Cities. The instructor is Glynn Woods, and the cost is \$1,195 (\$1,395 after Feb. 3) for ASME members and \$1,345 (\$1,545 after Feb. 3) for non-members. This course demonstrates how the B31.3 Code has been correctly and incorrectly applied through examples shown by the instructor. To register, contact Matt Robinson at 371-5858 or at matt@asme.org. For more information, visit http://www.asme.org/sections/cb/B31_3course.html. ♦

Features continued on next page.

Regular Features

NEWS BRIEFS



Applications available for Fluor Scholarship Program

Applications for the Fluor Scholarship Program are now available. The Fluor Scholarship Program is intended to encourage Fluor employees' children to further their education after completing secondary school, to honor them for achievements and to assist them in financing that education. The Citizens' Scholarship Foundation of America, Inc. administers the program. Awards are made on the basis of academic merit and potential to succeed. Applications for the annual Fluor Scholarship Program are available online. The program is described on the Hanford Intranet at <http://www.rl.gov/hr/scolqna.htm>. The application is available at <https://www1.csfa.org/fluor/>. For more information, contact Jackie Bender at 373-6470.

Science Bowl volunteers needed

Volunteers are needed for the Department of Energy Regional Science Bowl on Saturday, Feb. 22, at Washington State University Tri-Cities. Question readers, scorers, timers and judges are required in each of eight competition rooms beginning at 8 a.m. until 5 p.m. Up to 32 teams of high-school students will compete in contests (modeled after the game show Jeopardy!) with math and science topics. For more information or to offer your help, visit <http://www.hanford.gov/doe/sciencebowl/>, or contact Beth Perry, Science Bowl coordinator, at 588-3901 or at bperry@owt.com.

New document numbering system

On Jan. 16, the Hanford Document Numbering System, Version 2.1.2, was released. No action is required for current users. Version 2.1.2 provides two new document types for CH2M HILL Hanford Group, Inc. — engineering change notices and field change notices, or ECN and FCN — and one document type for Fluor Hanford — Central Plateau-Groundwater Protection Program, or CP-GPP.

If you have questions or need additional information, contact Ben Gelhaus at 376-7837 or Helen Burke at 376-8474, or send an e-mail message to ^HDNS/Hanford Document Numbering System

Badging process changed for contracts

Two important changes have been made to the Fluor Hanford and CH2M HILL Hanford Group badging process

for subcontractor access to Hanford Site facilities. Existing contracts will be modified by Sept. 30. Beginning on Jan. 30, any new or modified subcontract will include the following changes:

- Only the Fluor Hanford and CH2M HILL procurement organizations will authorize badges for subcontractor personnel.
- To assure that badges will be returned when the work is complete, subcontractors will be liable for a \$1,000 fee for each badge or dosimeter not returned when work is done.

Subcontractors must return their badges to Central Badging. However, if you receive a badge from a terminating subcontractor, please return it immediately to Central Badging. Promptly returning these badges will assist procurement personnel in determining the final invoice amounts payable to the subcontractors. ♦



SHOEMOBILE

300 Area

along fence east of Wisconsin Street

Feb. 10	1-4 p.m.	Sound Safety
March 3	2-5 p.m.	BC Sales

100K Area

parking lot south of MO-401

March 4	7-10 a.m.	BC Sales
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200 East Area

northeast gravel parking lot of 2101-M

Feb. 11	7 a.m.-12 p.m.	Sound Safety
March 4	11 a.m.-1 p.m.	BC Sales

200 West Area

parking lot east of MO-281

Feb. 11	1 p.m.-4 p.m.	Sound Safety
March 4	2-5 p.m.	BC Sales

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Regular Features



H.anford **E**.mployee **R**.ecreation **O**.rganization

GENERAL INFO & ACTIVITIES

MAIL YOUR TICKET REQUESTS TO THE APPROPRIATE LISTED TICKET SELLER

— It saves the ticket sellers' time and your tickets will be sent to you the same day. Do not combine the charge for tickets to two different events on the same check. If you do, it will be returned.

HRA DISCOUNTS — We are in the process of renewing discounts from 2002 and adding new ones for 2003. Log on to <http://apweb02.rl.gov/hrd/> to find the new discount updates.

HERO POLICY FOR NSF CHECKS — Associated non-sufficient fund bank fees will be passed on to check issuers. HERO will not absorb the cost.

POSITIONS ON THE HERO BOARD — The following positions on the HERO Board are vacant: 100 Area representative, 200E Area representative, Richland area representative and publicity chairman. If you would like to apply and have your manager's consent, please send an e-mail message to Phyllis Roha.

TRI-CITY AMERICANS HOCKEY TICKETS — \$10 for adults, \$7 for students with ASB cards, children ages 3 to 12 and adults 62 and over. Send checks made payable to HERO to Linda Meigs (H3-12).

HARLEM GLOBETROTTERS — Watch this world-famous basketball team perform in their "Reclaiming The Game" show on Thursday, Feb. 13, at 7 p.m. in the Tri-Cities Coliseum. All seats are reserved and tickets are on sale now for the discounted prices of \$8, \$13 and \$16 (under age 2 are free). Send checks (made out to "Tri-Cities Coliseum") to Linda Meigs at H3-12. Sales end Friday, Feb. 7 so buy your tickets now!

SKI BLUEWOOD — Lift ticket vouchers are now on sale! The prices are \$27 for adults, \$23 for students (with valid ASB card), \$20 for children (in first through eighth grade) and seniors (65 years and older). These prices reflect a \$3 discount. Send your check payable HERO to Tricia Poland (T5-04).

DISCOUNTED MOVIE TICKETS — Limit now 10 per purchase. Carmike tickets are \$5 each with restrictions applying only to Sony DDS movies. Regal tickets are \$5.50 each and applicable restrictions are identified in the *Tri-City Herald* with a star. Yakima Mercy tickets are \$5 each with no restric-

tions. Regal and Carmike tickets are valid in Seattle and Spokane as well as the Tri-Cities. For Regal or Carmike tickets, send checks (no cash) made payable to HERO to Linda Meigs (H3-12), Linda Sheehan (T4-40), Nancy Zeuge (X3-74), Michelle Brown-Palmore (A7-51), Ginny Wallace (S7-03) or Patti Boothe (T6-04). Sunnyside Movie Theater is now offering tickets for two admissions for one show, for \$9.50 with no show restrictions. These tickets are also good for Ellensburg and Walla Walla. For Yakima Mercy or Sunnyside tickets, send checks (no cash) to Nancy Zeuge (X3-74), Jim Hopfinger (S7-39) or Tricia Poland (T5-04).

UPCOMING TRIPS

• **Canadian Rockies Train Tour** — May 9-17. The price is \$2,199 pp including round-trip airfare from Pasco. Price includes 14 meals, tours, transfers and taxes. A \$100 deposit is due as soon as possible, with the balance due March 10. Fly to Vancouver, British Columbia, and explore the beautiful Canadian Rockies by train. Visit Kamloops, Jasper, Ice Fields Parkway, Lake Louise, Banff and Calgary. Visit <http://apweb02.rl.gov/hero/activities.cfm> for more information or contact Phyllis Roha at 376-6413 or by e-mail.

• **New Orleans Getaway** — May 19-23. \$1,099 ppdo includes airfare, lodging and six meals during this five-day getaway to the "Jazz Capital of the World." A deposit of \$160 per person will reserve your spot, with final payment due March 20. Contact Linda Meigs for details.

• **French Riviera** — Oct. 6-15. The price is \$2,284 pp for twin, \$2,254 pp for triple and \$2,584 for single. A deposit of \$430 is due March 21 to hold your space, and the balance is due July 23. Credit cards are accepted. Tour the French Riviera, Italian Riviera, Monaco, St. Tropez, Cannes, Grasse and Nice. We will fly round-trip from Pasco. We only have to unpack once as we will be staying in Nice and taking day trips to all the other exciting places. There will be free time also to do your own exploring. Included are seven breakfasts and five dinners. Start saving now for an exciting adventure. E-mail Nancie Simon or call 373-2587 for more information.

• **Disney World/Disney Cruise** — Oct. 19-26. The price ranges from \$1,302 to \$1,852 ppdo, depending on the type of room you want. The price includes round-trip airfare from Pasco, four days in Walt Disney World with entrance into all the parks, a three-day cruise to the Bahamas and Castaway Cay (Disney's private island), taxes and transfers. Don't wait

H.E.R.O. continued on next page.

Regular Features

to send in a \$250 per person deposit to hold your spot. Contact Jim Hopfinger for more information.

• **Reflections of Italy** — Departure date is Nov. 3. \$2,782 ppdo includes airfare, lodging and 13 meals during this 10-day journey to Italy, beginning in Rome, “the Eternal City.” A deposit of \$430 per person will reserve your spot, with final payment due Sept. 4. Contact Linda Meigs for details.

• **Switzerland** — Nov. 3-11. The price is \$1,879 pp including round-trip airfare from Pasco. Price includes 11 meals, tours, transfers and taxes. A \$250 deposit is due May 3 and the balance is due Sept. 4. The medieval city of Bern is our host city. Highlights of the tour include the Swiss Parliament, the famous Bear Pit, the Rose Gardens, Lake Geneva and the medieval Castle of Chillon. Enjoy breathtaking Alpine views with a ride on the Panoramic Express Train to Gstaad. Then on to Interlaken, Grindewald, Zurich, Burgdorf Castle, Lucerne and an optional tour to Germany and the mystical Black Forest. Visit <http://apweb02.rl.gov/hero/activities.cfm> or contact Phyllis Roha at 376-6413 or by e-mail for more information. ♦



Vanpool ads are run for two weeks. Ads must be resubmitted to run in subsequent issues of the *Hanford Reach*. The deadline for submission is Thursday, 10 days prior to publication.

Day and Zimmermann Protection Technology Hanford reminds employees to wear their badges. Vanpool and carpool drivers are responsible for ensuring their passengers are badged. If a passenger forgets his or her security badge, access is denied at the barricade. The individual is required to go to a badging station for a temporary badge or go home to retrieve the badge. For more information visit the Safeguards and Security Web page at <http://apweb02.rl.gov/phmc/sas>.

KENNEWICK

Van No. 205 has an opening for a rider on 8x9s. Leaves Albertson's on Edison at Clearwater with a stop at the Richland airport. Drops off at 222-S Lab, 242-WA and WRAP. Contact **Abe Garza** or **Dave Winstead** at 373-2898. 2/3

Van No. 123 to 200E, needs riders, 8x9s shift. Safe, dependable and friendly. Current stops are 10th and Washington, Huntington Transit Station, Federal Building, 2101-M, B-Plant, 2704-HV and 2701-HV. Call **Eric** at 373-4497 or 735-6755 (home). 1/20

RICHLAND

8x9 vanpool to 200E needs a rider. Rate as low as \$33.50

per month. Leaves former Hanford bus lot (across from 2440 Stevens) at 6:25 a.m. and drops off at 2750-E and MO-276 (behind 2750-E). Arrives at bus lot at 5 p.m. on Mondays through Thursdays and at 4 on Fridays worked. Contact **Dave Hedengren** at 373-5094. 1/20

Vanpool No. 114 has immediate openings for two riders. Vanpool stops at PFP exclusively. Vanpool begins at 1211 Birch in Richland at approximately 6:10 a.m. and picks up along Wright Avenue with the final pickup point at Desert Rock Fellowship on Jadwin. If interested, contact **Gary Anderson** at 373-1304 or **John Faulkner** at 373-2286. 1/20

Vanpool No. 182 is seeking riders, 8x9s, 7 a.m. to 4:30 p.m. Leaves the Stevens Drive bus lot (Next to Hertz Equipment Rental) at 6:15 a.m. Drops off at 2750 at 6:40 a.m., and then 2704-HV. Arrives back at 2440 Stevens at 5:05 p.m. Contact **David Braun** at 376-6510 or **Bill Cowles** at 376-4725. 1/20

Van No. 117 has openings for 8x9 riders within 200W Area. Departs 6 a.m. and returns about 5:10 p.m. on Mondays-Thursday and 4:10 on Fridays just north of Densow's Drugstore (1019 Wright in Richland). Drops off and picks up riders at ERDF trailers, Fab Shop, MO-278, MO-556, 272-WA, and MO-437. E-mail or call **Gary Bush** at 372-2531, (MO-437). 2/3

YAKIMA

Yakima Transit-sponsored Vanpool No. 3156 from Yakima to the 400 and 300 Areas and Richland seeks additional riders. Departs 5 days a week from the Park 'n Ride lot (near the Target Store) in West Yakima at 5:35 a.m. Picks up at East Valley Market (in Moxee), along the beginning of State Highway 24 by 5:45. The driving route continues east along SH-24 to the Hanford Site. Drops off at locations in the 400 and 300 Areas, ending at the Federal Building. Picks up 300 Area riders at 4 p.m. and arrives back in Yakima around 5:30. Contact **Jesse Allen** at (509) 528-0614 or **Doug Chapin** at 373-9396. 1/20.

WEST RICHLAND

Vanpool to 200E, 8x9, is looking for two riders. Leaves Flat Top Park at 6:10 a.m. with drops at 2750, WESF and 2727-E. Contact **Glenn** at 372-0054 or **Curt** at 373-7935. 1/20 ♦