

SRS UPDATE

NEWS FROM THE SAVANNAH RIVER SITE • JAN./FEB. 2004



After almost 40 years of safely receiving, handling and storing spent nuclear fuel, SRS employees celebrate as the last spent fuel cask departs the Receiving Basin for Offsite Fuels for the L-Area basin (see page 3).



WSRC maintains top DOE safety award.

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Updated Tritium facility begins "hot" testing.

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Risk elimination proceeds in F Canyon.

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A message from Bob

*President
Westinghouse
Savannah River Company*

An Outstanding Year for Safety at SRS

Of all the many accomplishments of 2003, the most important was probably the most fundamental.

From a safety standpoint, 2003 was a terrific year. Our Total Recordable Case rate was the lowest we've had since 1989 – a full 56 percent better than we were just five years prior. That means thousands of people went home injury free each day, and were able to enjoy their activities away from work.

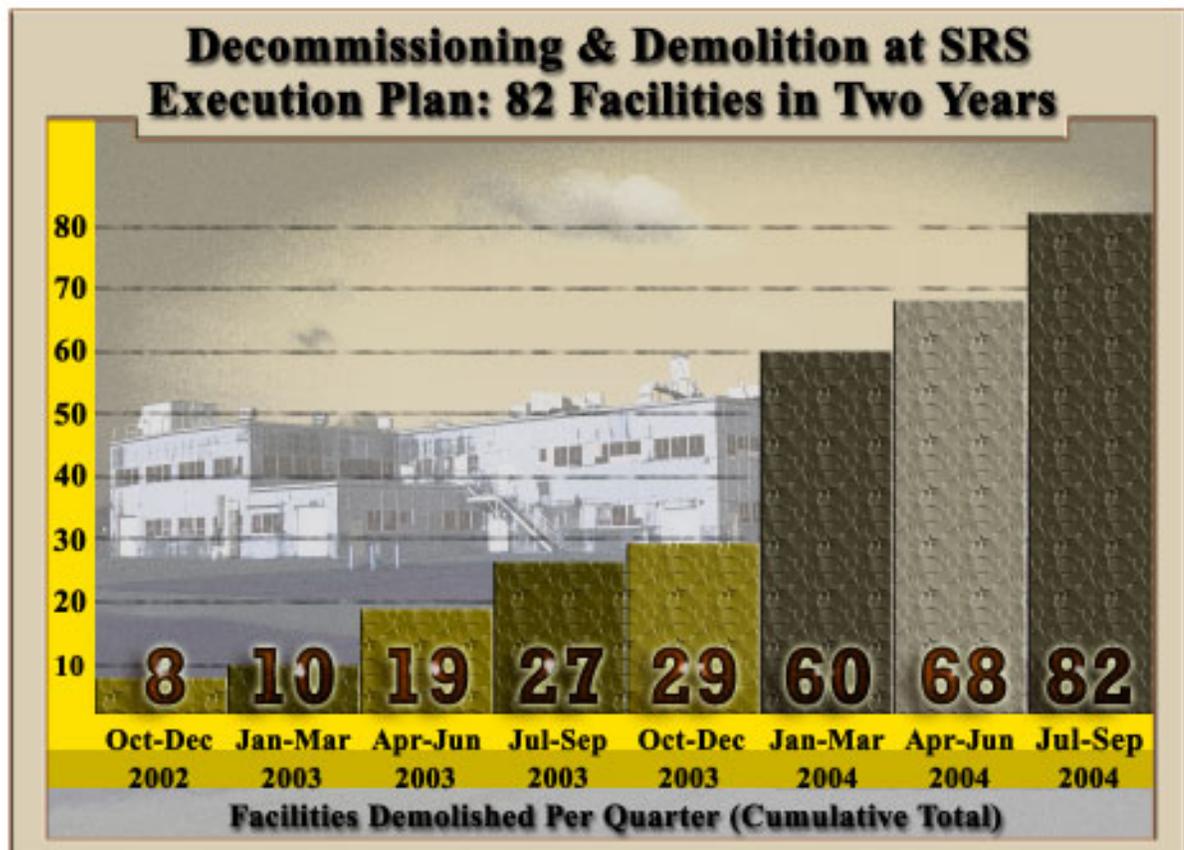
I don't like to focus too much on statistics, because they only tell you where you've been, not where you're going. However, those are good statistics. They tell me our systems – such as Integrated Safety Management and Behavior Based Safety – are sound, and are giving people the tools they need to keep the focus on safe work. Our recertification as a STAR site is one more example, and one more bit of positive recognition for our safety culture and performance.

The year 2003 was good, but the year 2004 needs to be better.

As we get further into accelerated cleanup, we're going to be exposed to more and more activities that are different – different conditions, hazards and risks. It's going to be important that people continue to have a questioning attitude, and a focus on the safe behaviors of everyone on the project site.

Our dedication to safety continues to be one the factors that set this site apart. And, our dedication to safety as a prerequisite for all work can never be compromised, regardless of the task.

SRS MILESTONES



Forty-year era comes to a close



The final load of spent fuel leaves SRS' Receiving Basin for Offsite Fuels.

After almost 40 years of safely receiving, handling and storing spent nuclear fuel, the employees of the Savannah River Site's Receiving Basin for Offsite Fuels removed the last unit of fuel from the basin. On Oct. 28, they shipped the bundle across the site to its new location, in preparation for RBOF's closure.

"This is not just the end of an era," said Westinghouse Savannah River Company President Bob Pedde. "It's an achievement that puts the perfect finishing touch on this facility's proud history. Not too long ago, we thought that completing this task by 2006 would be difficult. Now, here we are, celebrating the completion ahead of that schedule." All of the fuel once stored in RBOF has now been moved to

the site's canyon facilities for processing or to the storage basin in the site's L Area.

RBOF was built in the early 1960s to help the nation fulfill its obligations under the Atoms for Peace plan initiated by President Eisenhower in 1953. Under Atoms for Peace, the United States provided nuclear technology, including uranium fuel, to foreign countries to pursue research into peaceful applications in the fields of medicine, agriculture or industry. For security reasons, the agreement stipulated that the spent fuel would be returned to the U.S. after use by foreign researchers. RBOF also held spent fuel from research reactors at U.S. universities and laboratories and SRS' spent fuel.

To avoid the cost of operating multiple facilities, SRS decided in 1998 to consolidate all of the stored spent fuel at SRS into the much larger, recently refurbished L Basin. Plans called for all the fuel to be moved from RBOF no later than September 2007, with a goal of completing the move by March 2006. In 2002, when the site adopted aggressive new targets for speeding the cleanup of the site, that goal was moved to September 2004. The task was completed nearly a year ahead of that new schedule.

"The deinventory of spent nuclear fuel from RBOF is a major milestone in the accelerated cleanup effort at SRS."

— Jeff Allison, DOE's Savannah River Operations Office Manager.

By safely accelerating the "deinventory" of RBOF, as the removal of all the fuel units is called, the site is saving approximately \$12 million per year in operating costs. These savings will free up funds to support additional accelerated cleanup activities at the site, including operations for the disposition of the site's legacy materials.

"The deinventory of spent nuclear fuel from RBOF is a major milestone in the accelerated cleanup effort at SRS. It was completed a year ahead of schedule, it will save the U.S. taxpayers millions in annual operating costs, and it will reduce risk to our workers and the public," said Jeff Allison, DOE's Savannah River Operations Office Manager.

At right, RBOF employees move spent fuel underwater.



Updated tritium facility begins “hot” testing



The Tritium Facility Modernization and Consolidation project has reached a major milestone with approval to begin “hot” testing in 233-H.

The Tritium Facility Modernization and Consolidation Project (TCON) has passed another major milestone, receiving permission to begin “hot” (radioactive) testing in 233-H, one of two newly modified facilities. “Hot” testing began Dec. 10 and is nearly complete for two of the three gloveboxes.

Receipt of this approval follows years of hard work by the Project Team to design, procure, install and test this new facility, and to train operating personnel. The evaluations in preparation for the startup of 233-H began in September 2002 with an internal Tiger Team review and culminated with completion of the NNSA operation readiness review (ORR) in November 2003.

The NNSA ORR review team praised the Project Team for their good Conduct of Operations culture, excellent fire safety and housekeeping, and knowledgeable and experienced personnel who demonstrated good ownership of the new processes. The only pre-start finding from the ORR was resolved within two days.

The TCON project was undertaken to consolidate tritium processes into fewer buildings, allowing the deactivation of the nearly 50-year-old 232-H building, and to provide the capabilities to process hydrogen isotopes from the new Tritium Extraction Facility, now under construction.

Construction of the Metallography Laboratory, the other major portion of the project, was completed in April 2003, and cold testing has been completed. The evaluation process for hot startup began in January with a Tiger Team review and will complete in March following a Readiness Assessment.

WSRC maintains top DOE safety award

The Savannah River Site’s contractor, Westinghouse Savannah River Company, has achieved STAR Status recertification, the highest level of safety recognition in the U.S. Department of Energy’s Voluntary Protection Program (DOE-VPP).

The DOE-VPP mirrors the Occupational Safety and Health Organization Administration (OSHA) VPP, and the purpose of the program is to recognize contractor organizations, like WSRC, that have excellent safety and health programs. In order to be recognized as a participant in the DOE-VPP, a contractor must demonstrate excellence in the following safety program areas: management leadership, employee involvement, worksite analysis, hazard prevention and control, and safety and health training.

In 2000, WSRC became the single largest employer in the DOE complex to achieve VPP recognition.

In 2003, WSRC demonstrated its strong safety performance by having the lowest injury frequency rates for Operations employees since 1992. The Company also earned its eighth President’s Award by completing 10 million safe work hours and 176 safe days without a lost-time injury. The site’s Construction Department employees achieved five consecutive years without a lost-time injury.

Other significant safety accomplishments for WSRC Team employees include: The South Carolina Chamber of Commerce Annual Commendation of Excellence Safety Award, Safety Performance Award from the South Carolina Department of Labor and Washington Group International Safe Facility of the Year Award.



Tritium Extraction Facility heads toward '05 finish

Recently, construction crews finished assembling and leak testing the second furnace for the Tritium Extraction Facility (TEF). The furnace is one of two that will be used to heat "Tritium Producing Burnable Absorber Rods". The rods are irradiated in a Tennessee Valley Authority nuclear reactor and sent to TEF for tritium extraction. Heating is the key step in extracting the tritium from the rods.

The furnaces will be installed into modules, currently being installed in the remote cell of the Remote Handling Building (RHB). The tritium will be transferred to gloveboxes in the RHB and the Tritium Processing Building (TPB) where impurities will be removed and then transferred to the tritium facility. All nine gloveboxes have been installed in the facility, and the temporary concrete openings on the east end of the TPB have been placed. Eight of 78 turnovers have been made and are undergoing startup testing. Construction physical completion is expected by the end of the second quarter of FY05.

TEF Furnace No.1 being moved to the leak test stand.



Packaging and stabilization work progresses

FB Line's Packaging and Stabilization Project continues full operations with two new furnaces and an outer can welder, both starting up within the last year. Since startup, close to 400 outer 3013 cans and 50 furnace runs have been completed.

Phase I included new racks, a digital radiography system, and an outer can welder to weld 3013 containers packaged with plutonium metals for nuclear material storage. It started up in April, over a month ahead of schedule and significantly under budget.

Phase II, which includes two new high-fire furnaces, started up in October. The furnaces are nec-

essary when packaging oxides. This important effort was also completed ahead of schedule and under budget.



Weld inspection on FB-Line.

With the new equipment, FB Line has the full capability to stabilize and package plutonium metal or oxide to meet a 50-year storage life – the DOE standard.

In June 2001, FB Line assumed the responsibility from 235-F for packaging and stabilizing plutonium. Through effective use of facilities and equipment already in place in FB Line, the project was completed in that facility more than \$100 million cheaper than could have been accomplished in 235-F.

Six millionth pound of radioactive glass poured at DWPF

The site's Defense Waste Processing Facility has poured six million pounds of radioactive glass, and produced the 200th canister with its new melter.

DWPF leads the world in pouring environmentally acceptable borosilicate glassified waste. It is the largest facility of its kind in the world.

The facility converts highly radioactive liquid waste, which is currently stored in 49 underground tanks at SRS, into a solid glass form suitable for long-term storage and disposal. Operations began in March 1996, and are expected to continue until about 2020.

Jeff Barnes, DWPF's facility manager, said employees have safely and efficiently operated the process, and have consistently met or exceeded performance expectations.



DWPF canisters.

WSRC receives national recognition

The WSRC Team, in partnership with the Tri-County Workforce Readiness Partnership (Allendale, SC) has received national recognition for the WSRC School-To-Work Internship Program. At a Nashville, Tenn., awards ceremony, WSRC and the Tri-County Workforce Readiness Partnership were awarded the 2003 Exemplary Worksite Learning Award.

The WSRC School-to-Work Internship Program, which started in 1995 for the Tri-County Workforce Readiness Partnership's educational partners, links internships and employment opportunities to school curricula. It also provides students with marketable skills to make a successful transition from the school environment to the workplace. Since 1995, 203 students have participated in the program.



WSRC employees (from left) Donna Moore Wesby, Barbara Smoak and Bonnie Toole accept the Exemplary Worksite Learning Award.

The Exemplary Worksite Learning Award, a national award sponsored by The Caterpillar Inc., was established in 1994 by The Center For Occupational Research and Development and the National Tech Prep Network. The award recognizes those that have successfully integrated “meaningful worksite learning experiences.”

The School-To-Work Program contributes to the Tech Prep effort by providing students an opportunity to connect what they were learning in the classroom with “real world” applications, while exposing them to state-of-the-art equipment and highly

trained and experienced workplace mentors.

Statistics show that ninety-five percent of the students completing work-based learning at WSRC continue their studies at technical schools or colleges.

U.S. Small Business Administration Award for WSRC



WSRC has been notified that the company will receive the U.S. Small Business Administration Award of Distinction in recognition of WSRC's small business subcontracting program. Less than two percent of large contractors are recipients of this award. WSRC will be recognized during an upcoming formal award ceremony.

HB Line readying for next mission

Cold runs are ongoing in HB Line in preparation to process neptunium in July.

The facility has already finished processing plutonium oxides, and has completed all facility modifications necessary to shift into its next mission.

Neptunium oxide materials produced in HB Line will be sent to Oak Ridge for eventual use in the space program, says HB Line Facility Manager Mike Borders.

“Everything’s on schedule,” he says. “We’re making significant progress to ready HB Line to produce neptunium oxide, and I am confident we will succeed because of our people. Every day, they display extreme dedication, hard work, a strong commitment to teamwork and a strong sense of pride.

“None of our current accomplishments or our future successes would happen if it were not for them.”

A readiness assessment is scheduled for June.



Neptunium oxide.

“Heroes” keep site running despite ice



Days after the ice melted, clearing away fallen trees and limbs continued.

For Transportation’s Tom Sanders, it began about 1 a.m., Jan. 26, with a phone call from his boss. Things were starting to ice up, and he needed to assemble a crew and get to the site. For the next two days, the employees of the Transportation and Site Utilities departments, along with the Forest Service and Wackenhut, were the site’s heroes, working diligently to minimize the impact of the ice storm on the site and its employees.

While the site’s electrical system was largely unaffected by the ice storm because of well-maintained right-of-ways, trouble spots kept the Site Utilities Department’s Electrical Operations Team busy. By mid-morning on Monday, all available personnel were dispersed across the site to handle power outages caused by fallen trees and limbs. With the exception of an outage in A Area, where a tree fell through the power line and snapped two poles, each outage was restored within an hour.

The team worked late into Monday evening, with several staying through the night on standby. By 2 p.m. Tuesday, the site’s electrical system was completely restored.

The first lines of attack for clearing the roads and keeping them clear were the Heavy Equipment and Herbicides/Asphalt Repair teams. The other Transportation groups, however, along with their managers and personnel from the Forest Service and Wackenhut, pitched in as well.

A crew of seven responded to the 1 a.m. call, loading deicer onto trucks and spreading out across the site. About 6 a.m., they began moving fallen trees, location by location, using chain saws and front end loaders.

Some roads had to be closed because trees falling so fast created a danger that someone would get hurt. Crews concentrated on keeping Roads 4, 2, C and 1 clear, because those carry the heaviest traffic. With crews working through the night, they met their goal of opening all roads by 3:30 a.m. Tuesday.

By 9 a.m. Tuesday, the sun had started to melt the ice, and most of the crew members were able to go home at 5 p.m. for some well-deserved rest.

SERVICE ANNIVERSARIES

35 Years: Paul Alderman, Donald Gordon, Louis Reda, Phillip Vormelker, James Yerace, Herbert Wright.

30 Years: Kenneth Byrum, David Capito, Vernon Davis, Gary Driesen, Bruce Garrow, Joseph Glover, James Gray, David Haines, Clinton Hardy, Janet Harrison, John Healy IV, Marion Hawkins, Dale Hooks, William Hull, Benny Judson, Emory Jones Jr., Robert Kitcey, Richard Lopez, Barbara McCarty, Don McLendon, Arthur Meckley, John Naylor, Alfredo Papa, Gary Percival, Arthur Pryor, Robert Rood, Jean Rouse, Harrison Sanders, Nailady Shetty, Ronald Sigafos, Terry Sizemore, Gene Thomas, Gail Walden, Randall Walker, David Whitehead Jr., Joyce Whitaker, David Whittle, Joel Whittle, Alfred Wilson, Jimmy Windham.

25 Years: Gerald Busbee, Gary Clothier, Jerry Cobb, William Creel, Travis Fountain, Mark Gulyban, Dale Hooks, Dennis McCaskill, Nathaniel Miller, Vincent Polito, Chandra Prakash, Lee Schroeder, Steve R. Smith, Charles Strain, Marvin Steward, Ritt Thomas, Randall Walker, David Whitehead Jr., Alfred Wilson, Nora Wimberly.

Retirements: Bobbie Bauserman, Lynn Ferguson, Cheryl Seigler, Dena Sturgis, Sharel Stallings, Wesley Bodie, Kim Byrne, Ervin Medlin, Douglas Messlerli, Mary Moss, Lynn Peeler, K.C. Collins, John Knight, Mike Shaffer, Johnny Williams, Bruce Wilson.



Risk elimination proceeds in F Canyon

Since DOE gave approval to deactivate F Canyon just before Thanksgiving, work has been proceeding quickly.

For about a year, after scheduled processing was completed and before the deactivation order was received, F-Area employees have been working to close old, obsolete systems that haven't been used in decades; empty and flush vessels; demolish excess facilities; and wind up scheduled operations.

Major risk reduction milestones were reached in December and January, with the removal of all solvent from F Canyon in December, and the beginning of depleted uranyl nitrate (DUN) shipments in January.

DUN is being shipped to a Tennessee facility for solidification, with final disposition at the Nevada Test Site. The solvents will be shipped to Solid Waste, where it will be stored until a final disposition path is determined in the next few months, according to F Canyon Facility Manager Mike Logan.

Also, while more than 3,000 drums of depleted uranium oxide were sent to Utah in a pilot program last summer, that number amounts to only 10 percent of the total. The remaining 90 percent is being prepared for shipment to Utah beginning February 2004.

"I am impressed with the effort and progress made by the F Canyon team this past year. Phil Breidenbach did a great job leading this effort for F Area and I am grateful for the chance to return as the Closure Project Manager," Bob McQuinn says. "F-Area personnel made a great team when we restarted F Canyon and FB Line in 1994 and 1995, and together we will show the world what the WSRC team can do with regards to safely and efficiently deactivating the F Area Complex."



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