

ECA Update: October 13, 2015



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Savannah River Remediation uses new pumps for waste work
Aiken Standard
October 8, 2015
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New pumps have been installed in Savannah River Site liquid waste tanks to increase waste disposition efforts.

The technology is known as submersible mixing pumps, and fulfills a cost-saving initiative for Savannah River Remediation, or SRR, the site's liquid waste contractor.

The pumps are being used for the first time as a pilot program in Tank 26, according to the contractor. Two pumps have been installed this year, and two will be installed during the next year.

The cost of the new pumps equals about 20 percent of the cost of

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the old standard ones, which will save the Department of Energy millions of dollars throughout the lifecycle of the liquid waste program, according to SRR.

The contractor worked with another group to purchase the pumps and then adapted them to a structure that enabled workers to lower the pumps into the waste tank.

The pumps will mix the waste solids in Tank 26 before transferring the waste to the Defense Waste Processing Facility. There, the waste will be vitrified into a glass form for safe storage in stainless steel canisters.

Stuart MacVean, president and project manager of SRR, said the innovative work reflects the discipline the contractor has when using taxpayer money.

“The efforts of the Tank 26 Bulk Waste Removal project team have found and customized a pump that saves a significant amount of money in the short and long term,” MacVean said.

SRR is composed of a team of companies led by AECOM with partners Bechtel National, CH2M and BWX Technologies. Critical subcontractors for the contract are AREVA, EnergySolutions and URS Professional Solutions.

Savannah River Nuclear Solutions starts process to exit 'operational pause'

Augusta Chronicle

October 9, 2015

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A Savannah River Site contractor started the process of resuming full operations Friday, almost a month after all nonessential work was suspended for what administrators described as a “significant” safety violation employees committed while storing plutonium.

With the exception of H-Canyon, HB-Line and K-Area Complex, all Savannah River Nuclear Solutions organizations exited an “operational pause” begun on Sept. 11 and are now in a stage known as “deliberate operations,” said Jim Giusti, spokesman for the U.S. Department of Energy.

Giusti said during deliberate operations, only work the facility manager approves may be performed.

Giusti said the K-Area Complex is expected to enter deliberate operations next week, but that there are no established dates for when H-Canyon or HB-Line will follow suit.

The “operational pause” stemmed from a Sept. 3 incident in SRS’ HB-Line, where material for the site’s mixed-oxide fuel fabrication facility is processed.

Carol Johnson, president and CEO of SRNS, said a violation of standard-operating procedure occurred while three operators and a first-line supervisor were extracting three samples of plutonium for placement in critically safe containers that would be transported to a storage vault.

The crew performing the work, she said, made a decision midway through the extraction process to use a non-specified container.

Even When It's Out Of Commission, Everybody Wants A Piece Of WIPP

Los Alamos Daily Post

October 12, 2015

[LINK](#)

Twenty months after a truck fire and a Valentine’s Day radiation release almost half a mile underground, the Waste Isolation Pilot Plant in southeastern New Mexico is still out of business and not expected to reopen before the end of next year.

And that expectation is far from definite considering the mounting complications and competing needs that are becoming more and more apparent across the nuclear enterprise.

Meanwhile, nuclear waste shipments, some planned and others merely wish-listed have been delayed or halted all across the country, including unshipped transuranic waste from Los Alamos National Laboratory's Area G and the waste intended for WIPP that has been sent to Waste Control Specialists (WCS) in Andrews, Texas.

Last week, nuclear watchdogs from the Savannah River Site in South Carolina and Idaho National Laboratory visited Los Alamos and Carlsbad to get a closer look at the repository and waste site immediately responsible for the logjam in the waste stream. Tom Clements of Savannah River Site Watch and Beatrice Brailsford of the Snake River Alliance teamed up for site visits with their New Mexico counterpart, Don Hancock, the director of the Nuclear Waste Safety program at the Southwest Research and Information

Center in Albuquerque.

“We have major contaminations at Los Alamos, Savannah River, Idaho and other places,” Hancock said. “We now have significant contamination at WIPP. If more comes it could become a significant problem.”

Speaking to a group of activists in Santa Fe, Hancock said South Carolina, Idaho and New Mexico were primary contributors to WIPP’s waste inventory. Much of that waste originated at the Cold War nuclear bomb factory at Rocky Flats near Denver that was closed in 1992. In 1993, Rocky Flats weapons grade plutonium began to be distributed to Oak Ridge National Laboratory, Savannah River Site and Los Alamos.

Large quantities of Rocky Flats waste were parked in Idaho, awaiting final disposition, and more than half of the shipments and half the waste in WIPP comes from Idaho. Now all of those nuclear weapons sites and Hanford, Washington have contamination problems, and WIPP, which was supposed to last for many centuries, has now been contaminated as well.

Testifying Oct. 7 in the House Armed Services Strategic Forces subcommittee, Frank Klotz, who heads the National Nuclear Security Administration, reiterated Energy Secretary Ernest Moniz’s expectation that WIPP would be open by the end of next year.

“This is a very important site to the department and the nation because it is where we can store TRUwaste,” Klotz said, using the short term for transuranic waste, miscellaneous materials that have been contaminated by plutonium and other man-made radioactive elements.

“So the secretary and the entire department are seized with the importance of returning WIPP to full operation as soon as we possibly can,” he added.

A complicating factor was that Klotz was not testifying so much about the transuranic waste shipments to WIPP, but rather in support of a different kind of waste for which there is as yet no clear regulatory pathway to WIPP. That would be the 34 metric tons of weapons grade plutonium subject to disposition under an agreement with Russia signed in 2000. The Plutonium Management and Disposition Agreement requires the two countries to get rid of a combined total of 68 metric tons of

plutonium.

Originally both countries planned to convert their plutonium stocks to uranium oxide (mixed oxide fuel, also known as MOX), which would then be used to power nuclear generators, but the Russians found that plan unfeasible and in 2010 were granted an amendment to the agreement. Now DOE finds itself hard pressed to continue with the MOX plan, because of severe budget and schedule overruns and other management problems at the partially completed MOX Fuel Fabrication Facility at the Savannah River Site. What to do?

In last week's hearing, Klotz along with Oak Ridge National Laboratory Director Thomas Mason, director of Oak Ridge National Laboratory and DOE Deputy Associate Director John MacWilliams, described and defended an alternative plan that they believe could fit within the existing budget constraints.

Under the new plan, called "Dilute and Dispose," plutonium pits, the triggering explosives for nuclear weapons, would be extracted at Pantex, near Amarillo in Texas. They would be shipped to Los Alamos National Laboratory and converted to the more stable compound, plutonium oxide, which would then be shipped to SRS to be diluted before forwarding to WIPP for final disposition. (In one version of this process, the plutonium oxide is sprinkled with "stardust" -- an unspecified secret ingredient that makes the nuclear material difficult to purify or re-weaponize.)

In recent months, a rapidly prepared document known as the Red Team Report concluded that the "Dilute and Dispose" process would be a cheaper and simpler technique for neutralizing the plutonium. In order to justify such a major change in direction, the study also had to identify some of the most serious risk factors in taking this approach, one of which has to do with the capacity of WIPP to handle the additional load and the necessity of obtaining legal permissions and regulatory easements that would enable WIPP to accept shipments of neutralized plutonium.

"Ensuring adequate WIPP capacity (and/or enhancing disposal efficiency) would require high level, transparent and cooperative discussions with the State of New Mexico," the Red Team Report states, "but the Red Team believes that the constructive on-going engagement with the State of New Mexico regarding WIPP restart bodes well for such discussions."

Asked on Friday if the New Mexico Environment Department

would be amenable to regulatory changes that would enable WIPP to meet the additional demands, the department responded in a prepared statement that its current focus is on WIPP's recovery and meeting the existing mission.

“Although we are aware of discussions for possible disposal of other types of waste at WIPP, it is premature to discuss any such change to WIPP's mission until the facility resumes operations,” the statement continues. “We do support the Consent-Based approach being used for considering the opinions of all stakeholders, especially the regional community which is most affected.”

Which brings us back to Don Hancock and the visiting activists who have succeeded in their opposition to the MOX project, yet at the same time are aware that WIPP and New Mexico will now begin to face new and potentially unacceptable risks. They see a WIPP in deep trouble, as Hancock put it: "Its mission has been 'To start clean and stay clean,' but that didn't work."

"A lot of officials think it is a given that WIPP is going to open," he added. "We need to be talking about why, if we are going to spend a lot of taxpayer's money and it doesn't have capacity for what it's supposed to do."

“In 2014, DOE estimated that its total liability for environmental cleanup...is almost \$300 billion and continues beyond the year 2089,” according to a Government Accountability Office report on “Hazardous Waste Cleanup,” Sept. 11, 2015.

Although WIPP is expected to be reopened before 2017, the nuclear weapons officials have given themselves five years to get the regulatory framework revised and prepare the supporting facilities for “downblending” plutonium for permanent storage in New Mexico. Meanwhile Congress and DOE and the weapons complex will have to demonstrate that they can responsibly contain a growing and ever more contingent, radioactive mess.

New director of Idaho's federal nuclear facility sees opportunities to advance energy security

Idaho Business Review

October 9, 2015

[LINK](#)

Idaho's federal nuclear facility can become the nation's premier energy security lab while also bolstering the region's economy, the

new director says.

Mark Peters has been on the job for about a week at the Idaho National Laboratory, where he's in charge of about 3,900 workers.

The nation's energy security involves the U.S. being able to produce its own energy in a system protected from attacks, including cyber threats, he said.

"This laboratory has the ability to really solve problems at that nexus," he said Oct. 8 in a phone interview with The Associated Press. "That's what I've been dedicating my entire career to and that's what really attracts me. This is the best place for Mark Peters to work with a team to do that."

Peters, 51, works for Battelle Energy Alliance, the U.S. Department of Energy's research contractor at the 890-square-mile federal facility. The lab is one of 17 national Department of Energy labs, which Peters calls "crown jewels."

"Mark's recognized leadership in all fields of energy research — including energy storage, renewable energy, energy efficiency and nuclear energy — and national security makes him an ideal choice as the next Lab Director of INL," Ron Townsend, Chair of Battelle Energy Alliance's Board of Managers, said in a statement announcing the decision in August.

The Idaho lab is considered the nation's primary lab for nuclear research, with those efforts using about 70 percent of the lab's budget. About 30 percent of the lab's budget is used for clean energy research and homeland security.

Peters said he's optimistic about combining knowledge at the lab in new ways that could bring in additional funding "to create this great ecosystem to make Idaho and the Mountain West a center for research and development."

He said a primary focus over the next five years will be replacing nearly half the current staff that's set to retire. He said he's talking with young scientists at the lab to try to understand "what makes them tick and gets them excited" so he can attract more and keep them motivated to stay.

"This is an opportunity to bring in the next generation of scientists and engineers," he said. "How often do you walk into a situation where you're able to reinvent the staff?"

But Peters faces a number of challenges. A different Department of Energy contractor is handling nuclear waste cleanup at the facility that opened in 1949 and that for a time pumped radioactive waste underground into an aquifer relied on by area cities and farmers. Workers in the Cold War era also put radioactive waste in ponds that seeped into the ground.

Two former governors, concerned the site was becoming a nuclear waste dump, attained in 1995 an agreement with federal authorities limiting nuclear waste shipments.

Currently, the Idaho attorney general is refusing to grant a waiver to that deal allowing in two shipments of spent nuclear fuel weighing about 200 pounds for research until a \$571 million malfunctioning treatment plant starts working.

Peters, while not going into specifics, said he plans to reach out to the former governors and state officials. He said the federal site isn't in danger of becoming a nuclear waste dump.

Peters previously worked at the Argonne National Laboratory in Illinois.

Editorial: DOE should step up WIPP cleanup as waste piles up

Albuquerque Journal

October 11, 2015

[LINK](#)

Mistakes made at Los Alamos National Laboratory that led to a radiation leak last year at the nation's only underground storage dump for mixed radioactive waste continue to come home to roost at the Northern New Mexico lab.

The Waste Isolation Pilot Plant in southeast New Mexico remains shut down. A drum was wrongly packed with combustible materials at LANL, including organic kitty litter, and shipped to WIPP for eternal storage. However, a chemical reaction between waste materials and the litter caused the drum to be breached, contaminating the site and nearly two dozen workers above ground with low levels of radiation.

The U.S. Department of Energy has been working to clean the underground site and had said it might be reopened by March. But safety concerns and equipment issues this summer threatened to delay the reopening indefinitely and push the cost beyond its

original half-billion-dollar estimate.

Energy Secretary Ernest Moniz now says WIPP “is on track to reopen by the end of next year,” according to a report in the Weapons Complex Monitor.

But the bad news is that as more waste is being generated at LANL, space to store it there is running out.

Although a new \$99 million facility at the lab to store transuranic waste – such as gloves, boots and other items from nuclear weapons work – should come on board in February, space is expected to run out sometime in Fiscal 2017, which runs from October 2016 through September 2017.

One of the issues at WIPP was a complacent mind-set that held “a radiation leak is virtually impossible.” And while safety should not be sacrificed as the DOE gets WIPP back in operation, the federal government and its contractors aren’t necessarily known for efficiency or alacrity.

In this case they should consider that time is of the essence.

Think Tank: Market Forces Can Solve Spent Fuel Storage Problem

Nuclear Street News

October 12, 2015

[LINK](#)

Solving the problem of spent fuel storage and management for the United States as a whole requires a market-based approach that provides incentive to drive a solution forward, a highly respected, conservative think tank in Washington has said.

The new study produced at The Heritage Foundation is called “Fooled Again: The Nuclear Waste Administration Act Preserves Futile Status Quo.” The authors, Katie Tubb, a research associate, and Jack Spencer, vice president at the Institute for Economic Freedom and Opportunity, say the Nuclear Waste Administration Act would make it harder to find a rational policy for spent nuclear fuel.

There is approximately 71,000 tons of spent fuel in the country, most of it stored at the country's nuclear power plants, which provide the country with 19 percent of its electricity generation and the bulk of its carbon-free electricity. The Obama administration,

however, directed the Department of Energy to withdraw its application for storage of the spent fuel underground at Yucca Mountain in Nevada. This year, however, the Nuclear Regulatory Commission completed its study of Yucca Mountain, deeming a storage facility there to be safe and secure.

What would solve the problem? Money, says The Heritage Foundation study.

“Given developments in the past several years to get nuclear waste management on track, Congress must seize the opportunity to put forth an approach that takes advantage of market forces and that properly aligns incentives and responsibility for lasting reform,” Spencer and Tubb said in their report.

In other words, if a repository for nuclear waste was a money-maker and the federal government would stop meddling so much, a solution would be found.

“The Nuclear Waste Administration Act does not solve fundamental problems in the current approach; it continues, if not expands, the dysfunction of waste management during the past 30 years,” the study says. “Simply re-assigning responsibility to another federal bureaucracy does nothing to fix the root problem—namely that the federal government is responsible for commercial nuclear waste management and disposal rather than the industry itself.”

The federal government has already backed itself into a corner. By promising a national solution that has failed to materialize, the nation's nuclear power plant owners have sued the government, which has paid out \$4.5 billion in settlements. With no federal solution expected in the next six years, the DOE expects an additional \$22.6 billion in taxpayer money will be handed over to the nuclear power industry by 2021. Industry estimates of settlements between now and 2016 are more than twice that much – around \$50 billion.