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NNSA Issues Record Of Decision on Surplus Plutonium Disposal

Federal Register

On April 5, 2016, NNSA issued a Record of Decision (ROD) in the Federal Register on Surplus Plutonium Disposal (SPD). For more information, please view the Federal Register notice [here](#).

Does WIPP have room for surplus plutonium?

ABQ Journal

April 5, 2016

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Correction: An earlier version of this story incorrectly stated that DOE submitted a permit request for new panels on Feb. 5, 2014, the day of the fire. The request was submitted beforehand.

The Department of Energy last week announced plans to send nearly 7 tons of “weapons-usable” plutonium to WIPP, the nuclear waste repository outside Carlsbad that has been shut down for more than two years.

The federal government has been wringing its hands for years about how best to get rid of its stockpile of “surplus” plutonium so that it can’t be used

Capitol Hill

August 2016

9-10

Third Annual Intermountain Energy Summit
Idaho Falls, ID
[Visit website.](#)

September 2016

14-15

2016 National Cleanup Workshop
Hilton Alexandria Mark Center
Alexandria, VA
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for bombs or fall into the wrong hands. There is 6.6 tons of the stuff at a DOE site in South Carolina that is now earmarked to come to New Mexico.

There are several hurdles that will have to be jumped before a single waste container would be sent our way, starting with DOE successfully reopening the Waste Isolation Pilot Plant after a radiation accident contaminated the facility in 2014. The department expects to start putting small amounts of waste underground later this year.

But is there room at WIPP? Lurking behind the high-level, high-profile decision about what to do with the surplus plutonium is that more practical question.

DOE and Carlsbad leaders say, yes, there is – or there will be in the future. A longtime WIPP observer says he doubts whether WIPP will be able to bring new capacity online or use it efficiently enough.

The WIPP repository consists of storage panels, each containing seven rooms, mined out of salt beds nearly half a mile underground.

The eighth panel hasn't been fully mined; the ninth and 10th panels in the design haven't received permits.

In theory, the 10 panels at WIPP could have a total capacity for nearly 190,000 cubic meters of waste. But the federal Land Withdrawal Act that authorized WIPP to open allows for only about 175,000 cubic meters of waste.

There are currently 91,268 cubic meters of waste in the repository, according to Department of Energy data compiled by the Southwest Research and Information Center. So – including future space in the panels that don't yet exist – the place is theoretically about half-full.

DOE's latest data indicate that waste-generating sites around the country – including the national laboratories at Los Alamos, Idaho and Oak Ridge in Tennessee – have 62,458 cubic meters of transuranic waste waiting to be

sent to WIPP. DOE Carlsbad Field Office Manager Todd Shrader estimates the new 6.6 tons of plutonium, once diluted and packaged, will amount to about 4,000 cubic meters of waste.

Best use of space

But historically, WIPP hasn't used all the space available underground.

WIPP has already filled and sealed six panels and used, on average, 81 percent of the space available, according to the Southwest Research and Information Center. Room 7 of Panel 7 is also sealed and was filled only 14 percent. Shrader said Room 6 of Panel 7 will be filled up with big pieces of radiologically contaminated equipment and waste emplacement will happen only in Rooms 1 to 5.

Don Hancock, a longtime WIPP observer with the Southwest Research and Information Center, says nearly 21,000 cubic meters of space has been "lost" as a result of DOE not using all the area available and because of the contamination and premature sealing of parts of Panel 7.

But Shrader says that is not the case because future panels could be filled more thoroughly. Why hasn't WIPP used all the capacity available? For one, packing waste into the underground isn't like packing your trunk for a road trip, nor is it like working a jigsaw puzzle.

As waste arrives at WIPP, it has to be placed underground relatively quickly and once placed, it can't be (like you might do your trunk) unpacked and repacked until the configuration uses all the available space most efficiently. Once it's in, it's in.

Then, too, the waste containers are packed to suit the needs of the generating site, not WIPP. So the waste comes in different-size containers and packaging and can't be fiddled with at WIPP. Unlike a puzzle, the pieces don't always interlock nicely underground.

Ventilation

In theory, all of the existing inventory (including the new plutonium) could be shipped to WIPP tomorrow and there would still be room to spare. Except a lot of that “room” doesn’t yet exist.

Panel 8 is partly mined, and WIPP workers won’t be able to start mining again underground until ventilation improves. Since the radiation accident, WIPP’s ventilation system has been in filtration mode, reducing airflow to one-seventh of what it was before the shutdown.

The DOE says it will be able to bring ventilation to a level that will allow mining by 2021.

Panels 9 and 10 have not been granted permits by the New Mexico Environment Department and do not yet exist.

NMED was reviewing DOE’s plans for Panels 9 and 10 before the Feb. 5, 2014, underground fire and subsequent (but unrelated) radiation release nine days later. DOE is now reconsidering how it wants to configure Panels 9 and 10, Shrader said, and would have to submit a new permit request.

WIPP supporters believe that it is only a matter of time before the facility will be able to construct those last three panels, and there remains – in theory – about 17,000 cubic meters of unsubscribed volume that could fit and still stay within federal limits.

But in the meantime, the total existing storage space is roughly 12,500 cubic meters underground – that is, the space available in the unfilled rooms of the last mined panel, Panel 7.

Shrader told me, “Panel 7 will last us for a few years before we fill it up.”

UpFront is a daily front-page news and opinion column. Comment directly to Lauren Villagran in Las Cruces at lvillagran@abqjournal.com. Go to www.abqjournal.com/letters/new to submit a letter to the editor.

Registration for limited Hanford cleanup tours starts Tuesday

Tri-City Herald

April 4, 2016

[LINK](#)

Sign-up for 2016 sitewide tours of the Hanford nuclear reservation starts at 9 a.m. April 5.

Just 15 tours are offered this year, so those who want to take them should waste no time in signing up at www.hanford.gov. The bus tours will focus on current environmental cleanup work at the site, where plutonium was produced for the nation's nuclear weapons program.

Participants must be at least 18 years old and U.S. citizens.

The tours are separate from tours of areas included in the new Manhattan Project National Historical Park at Hanford. Registration for those tours, which cover B Reactor or pre-World War II Hanford, is available by calling 509-376-1647.

Feds Spend \$700M On Non-Working Radioactive Waste Plant

The Libertarian Republic

April 5, 2016

[LINK](#)

The Department of Energy spent hundreds of millions of taxpayer dollars on a radioactive waste treatment plant that ended up breaking down because federal officials didn't bother to properly test the facility before construction was completed, according to a recent audit.

Federal auditors also learned DOE officials likely rushed the building of the waste treatment plant because of political pressure from Congress to come in under budget. Poor management, however, means the project could cost more than \$700 million and is more than 4 years behind schedule.

“Specifically, we found that the Department postponed rigorous, comprehensive performance testing; an activity intended to demonstrate the facility’s capability to function as intended and meet mission need, until after construction was declared complete,” reads a recent report by the DOE’s inspector general.

“However, by postponing the comprehensive performance test, the Department failed to perform a rigorous test of the functionality of the facility before construction was declared complete,” according to the IG’s report. “Had the testing been performed prior to declaring the project complete, the Department may have identified the flaws in the original design and corrected them under the discipline of its project management process.”

DOE paid federal contractors in 2008 to start building the Sodium-Bearing Waste Treatment Facility (SBWF) to treat 900,000 gallons of radioactive liquid waste being stored at the Idaho National Laboratory.

DOE has been trying to clean up Idaho’s spent nuclear waste for decades. In 1995, the agency signed an agreement with the state to bring in nuclear waste for research with clean-up provisions — provisions Idahoans familiar with the agreement say the DOE is failing to live up to. DOE wants to use the SBWF to convert radioactive liquids into a powder that’s safer for storage.

The facility was supposed to be completed in 2012, but a “system pressure event” forced the plant to be shut down shortly after being turned on. It has not been reopened, which the IG blamed on mismanagement by federal officials.

Essentially, DOE officials decided not to properly test the facility before it was completed. Simply testing the project before turning it on could have stopped the facility from suffering a “system pressure event” and shutting down.

“Such action deprived the Department of the opportunity to demonstrate with a high level of certainty that the plant would operate as intended, a fundamental expectation of the originally approved project scope,” the IG reported, adding the DOE opted to move project testing until after the construction phase based on “questionable information provided to senior executive management.”

“Specifically, executive management relied on test data and operating experience at other facilities to demonstrate mission readiness of the SBWTF,” the IG noted of those working on the project.

DOE officials and contractors claimed they were under pressure from Congress to complete the project under its projected \$571 million cost. Now, that’s not likely to happen, according to the IG, as DOE officials already underestimated the project’s cost by \$181 million. The treatment plant was originally slated to cost \$461 million.

The DOE estimated project costs rose to \$715 million, the Idaho Statesman reported in May, and in 2015, DOE paid the project’s contractor another \$90 million in cost overruns. Now, the DOE says the project’s cost could be underestimated by \$181 million.

The IG’s office “learned during the course of our audit that multiple project personnel told us there was pressure to declare the facility construction complete without exceeding the Congressionally approved line item construction project amount of \$571 million, also the contractual cost cap for construction.”

“Specifically, we were told that the original comprehensive performance test approach was deemed to be too time-consuming and would jeopardize the schedule and cost limitations for the construction project,” the IG noted.

But the report also noted DOE was trying to hide the true cost of the nuclear waste facility by using funding meant for operating the facility for construction costs. The IG estimates “the total actual construction cost for this facility is likely understated by about \$181 million thus far.”

“Based on expenditures of \$4 million per month, the future costs could exceed \$40 million by the planned startup date of September 2016,” the IG reported. “Recasting these ‘operation costs’ as construction costs would breach the approved limit of \$571 million.

Department officials told us that other cleanup work at the Idaho site that might otherwise have been accelerated was not, because the funding for that work is being used to repair and reconstruct the SBWTF.”

DOE tours offer glimpse into site's 60-year history

Paducah Sun

April 4, 2016

[LINK](#)

For some western Kentucky residents, the U.S. Department of Energy's Paducah Gaseous Diffusion Plant may be "out of sight, out of mind."

Even though the plant ceased uranium enrichment operations three years ago, it remains a large employer and economic development driver for the area.

While the Paducah community has long supported the site and been familiar with its mission of national security and nuclear energy, few people not directly related with its operation have been able to see the facilities up close.

The DOE is planning to change that with tours of the site open to the public beginning later this month.

The PGDP site consists of 3,556 acres in McCracken County, 10 miles west of Paducah. The gaseous diffusion plant, within a 750-acre fenced security area, opened on the site in 1952 as a government-owned and operated facility, supplying enriched uranium for national security and energy production for 60 years. In its initial operation, it was an integral part of the country's production of enriched uranium for national security purposes.

The DOE estimates that in its 60 years of operation, the plant has pumped more than \$5 billion into the regional economy.

The United States Enrichment Corporation had leased the plant from DOE, since it was privatized by the government in 1998, and enriched uranium there for the global nuclear fuel market until ceasing operations in 2013.

In 2014, the site was returned to DOE control and a primary contractor, Fluor Federal Services, was awarded a three-year contract to continue plant cleanup and deactivation.

Fluor is coordinating the site tours to be held one Saturday a month for the next six months.

"Historically, this has been a very closed site for the general public," said Bob Nichols, Fluor Paducah Deactivation Project director of operations. "We think working with DOE is part of being a good citizen to the community."

According to Nichols, 1,500 to 1,600 employees are currently at the site between Fluor and two other contractors, Swift & Staley and B&W Conversion Services.

The PGDP's infrastructure is similar in size to that of a small city with hundreds of facilities, 19 miles of road and nine miles of railroad track. It

operates as a self-sustaining community with its own water treatment, fire department, security force, post office, medical facility and sewage treatment plant.

While much has changed over the years as the plant's mission changed, the employees still maintain a sense of community, according to Nichols.

"We encourage all our employees to participate in whatever they want to do," Nichols said. "We'll have small fundraisers for people who may have a sick family member, like a chili lunch or something of that nature. We want to try to continue to build a sense of community within the fence-line, but we also support activities like the Relay for Life or United Way."

In addition to employment, the deactivation project also contributes to the business economy through the use of local vendors.

"One of our primary focuses was to meet local economic targets for small business utilization," Nichols said. "So far, under our contract I think in the five-county region we've probably spent about \$28 million within the local area. We keep an active vendor list of all the local folks and businesses here and try to utilize them."

Fluor's initial contract will be completed in July 2017.

Under its contract, Fluor has been involved in a variety of activities, Nichols said, including environmental remediation, infrastructure upgrades, roofing at some of the facilities, as well as some demolitions across the site.

Many of the employees laid off when USEC ceased operations were hired back by Fluor.

"I have some 40-year service people on the site today," Nichols said. "Their dedication and focus is a window back in time on the production that went on here. Their skill sets fit directly into where we are going forward."

"We still have a functioning plant in many respects from a utilities and operation perspective," Nichols said. "We're going to be doing some chemical treatment in the cells, which is not unlike the production evolutions, so all the safety parameters have to be in place and the people have to be trained commensurate to that kind of work."

The deactivation is going to take some time to complete.

Just how long "is going to depend on long-term funding," he said.

"We have scenarios in life cycle planning that takes from 40 years to well beyond that. It could take 60 years, possibly, for total site remediation, not just demolition, but restoration of the site. There is a long-term mission still ahead of us here."

Cleanup caucus to focus on DOE's excess facilities

Knox Blogs

April 4, 2016

[LINK](#)

The House Nuclear Cleanup Caucus, which is chaired by U.S. Rep. Chuck Fleischmann, R-Tenn., will participate in an event April 20 to look at the Department of Energy's high-risk excess facilities — a topic that's drawing concern and increasing attention within the federal agency. The Energy Technology and Environmental Business Association, the Energy Facility Contractors Group and the Nuclear Energy Institute are hosting the event in Washington, D.C.

Some of the worst facilities are in Oak Ridge, notably including the deteriorated Alpha-5 Building (pictured) at the Y-12 nuclear weapons plant.

DOE Assistant Secretary Monica Regalbuto is scheduled to be at the meeting to discuss DOE's plans for addressing the problem. The meeting is scheduled to begin at 5:30 p.m. at the Rayburn Office Building, Room B-369.

Sue Cange, DOE's cleanup chief in Oak Ridge, is expected to attend the meeting.

In a statement, Fleischmann said, "The Nuclear Cleanup Caucus serves a very important purpose. The Manhattan Project site, located in my District, is a prime example of how 50 years of government nuclear weapons development can affect communities throughout our nation. We must not neglect these sites, but instead restore them so they can be productive once again."

Tennessee reaches \$2B mark for sick nuclear workers

Knox News

April 4, 2016

[LINK](#)

Residents of Tennessee have received payments and medical care totaling about \$2.1 billion from the government's compensation program for sick nuclear workers.

Most of the claimants once worked at the nuclear facilities in Oak Ridge or are surviving family members of former workers at Y-12, Oak Ridge National Laboratory, K-25 or other sites in the Atomic City.

Tennessee is the first state to pass the \$2 billion milestone.

Nationwide, about \$12 billion has been paid out since the Energy Employees Occupational Illness and Compensation Program Act was enacted in 2000.

That's a lot of money, but that doesn't mean that former workers or their advocates are satisfied with the program, especially those whose claims were denied.

That is why there was a push for the newly created Advisory Board on Toxic Substances and Worker Health, which will advise the Secretary of Labor on technical issues pertaining to the compensation program for those made sick by the Cold War work on nuclear weapons.

Supporters hope the board's expertise and influence will make it easier to collect from the fund and less onerous on the families of sick workers, who often have to collect a mass of documents to help prove their sickness was caused by workplace exposures to radioactive materials and hazardous chemicals.

Garry Whitley, former president of the Atomic Trades and Labor Council in Oak Ridge, has been named a board member representing the claimant community.

The advisory board's first meeting is scheduled for April 26-28 in Washington, D.C., and it will be open to the public.

Terrie Barrie of the Alliance of Nuclear Worker Advocacy Groups, which pushed for formation of the new panel, hailed the announcement.

"What a great selection of highly qualified people," Barrie said in an email message to advocates and stakeholders.

Nuclear Upkeep: If case you haven't noticed, Oak Ridge National Laboratory has received some additional work for its multiple hot cell facilities, where highly radioactive materials are handled remotely inside shielded enclosures.

Among the new projects is ORNL's central role in producing plutonium-238 for the space program. Another involves research on high-burn-up nuclear fuel from the North Anna Reactor in Virginia.

There is \$26 million in the Obama administration's proposed Fiscal Year 2017 budget to be applied to the four hot-cell facilities at ORNL. That would

reportedly be a big step up from the base operating budget for the lab's non-reactor nuclear facilities and would help meet the financial need for refurbishments.

But, as ORNL Deputy Lab Director Jeff Smith rightly noted, it's just a proposal at this stage of the game.

Congress will have the final say-so.

UPF Promises: March is a big time for congressional hearings, and U.S. Sen. Lamar Alexander, R-Tenn., who chairs the Senate Appropriation energy and water subcommittee, held one to take a close look at the budget for the National Nuclear Security Administration.

NNSA Administrator Frank G. Klotz was the key witness, and Alexander asked him specifically about the status of the Uranium Processing Facility — the multibillion-dollar project under development at the Y-12 nuclear weapons plant in Oak Ridge.

Klotz told Alexander that the UPF team is following all of the recommendations made a couple of years ago by a "Red Team" headed by ORNL Director Thom Mason.

He also promised that the project will be completed on schedule and within its budget.

"We are going to deliver that facility at \$6.5 billion by 2025," Klotz told Tennessee's senior senator.

Los Alamos to benefit from settlement funds

AP: KOB

April 4, 2016

[LINK](#)

ALBUQUERQUE, N.M. (AP) - The Latest on cleanup of contamination at Los Alamos National Laboratory (all times local):

10:15 a.m.

Aging water lines and other infrastructure in Los Alamos will be replaced as part of a settlement between New Mexico and U.S.

Department of Energy stemming from a 2014 radiation release at the federal government's underground nuclear waste dump.

Gov. Susana Martinez is visiting Los Alamos on Monday to highlight \$32 million in settlement funds that will be used in the northern New Mexico area.

Aside from water infrastructure improvements, another \$10 million will go toward the construction of storm water control structures at Los Alamos National Laboratory to increase monitoring and sampling for contamination.

The rest of the money will be spent on improving transportation routes for shipping radioactive waste from the lab.

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9:45 a.m.

The tribal community of San Ildefonso Pueblo sits in the shadow of Los Alamos National Laboratory, one of the nation's premier laboratories and the birthplace of the atomic bomb.

The tribe is on the front lines of a battle to rein in contamination left behind by decades of bomb making and nuclear research.

Pueblo Gov. James Mountain says he's encouraged that the New Mexico Environment Department has identified a plume of chromium contamination at the tribe's border with the lab as a priority under a revamped cleanup proposal.

Under the draft proposal, a series of reports would be required and initial pumping and treatment could begin next fiscal year.

Officials would then have to develop a final corrective action plan and implementation could take between four and five years.

