

# ECA UPDATE

## November 23, 2015



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#### **ECA November Bulletin Now Available**

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The November Bulletin is now available and can be read online [here](#).

Stories include:

- Moniz, Jewell Sign MOA Officially Creating the Manhattan Project National Historical Park
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### **Events of Interest**

**November 21- 29**

House and Senate Thanksgiving recess. House

If there are any stories you'd like featured in next month's issue or important news you'd like to share, please feel free to contact [devon@energyca.org](mailto:devon@energyca.org).

### **U.S. government proposes 17-year delay in start of Hanford nuclear tank cleanup -- until 2039**

*Los Angeles Times*

November 20, 2015

[LINK](#)

The Energy Department has proposed a 17-year delay in building a complex waste treatment plant at its radioactively contaminated Hanford site in Washington state, pushing back the full start-up for processing nuclear bomb waste to 2039.

The department submitted the 29-page plan in federal court as part of a suit to amend an agreement with the state that requires the plant to start operating in 2022.

A series of serious technical questions about the plant's design have caused one delay after another. Two of the major facilities at the cleanup site, which resembles a small industrial city, are under a construction halt ordered in 2013 by then-Energy Secretary Steven Chu.

The plant, located on a desert plateau above the Columbia River, is designed to transform 56 million gallons of radioactive sludge, currently stored in underground tanks, into solid glass that could theoretically be stored for thousands of years.

The waste was a byproduct of plutonium production, which started with the Manhattan Project during World War II.

The 586-square-mile Hanford site is widely considered the most contaminated place in the country, requiring 8,000 workers to remediate half a century of careless industrial practices that were done under strict federal secrecy.

The Energy Department filing shows the extent of the problems.

A 2014 review, conducted by a panel of the nation's leading

recess begins Nov. 20.

### **November 30**

Office of Management and Budget returns amended budget requests to federal agencies for FY17, known as budget passbacks (estimate).

Final budgets will be submitted to Congress on Feb. 1

### **December 11**

Continuing Resolution expires, Deadline to pass an Omnibus appropriations bill or extend the CR.

nuclear and chemical engineers, found that the partially built plant had 362 “significant design vulnerabilities,” including seals that could melt and ventilation systems that might not be able to contain radioactive gases.

Construction was stopped before that review when doubts surfaced that the complex technology for mixing of heavy sludge in large tanks would not be vigorous enough to prevent explosive hydrogen gas from forming or clumps of plutonium from starting spontaneous nuclear reactions.

The Energy Department’s legal filing cites those two issues as ongoing concerns.

The latest delay was disclosed Friday, when the Energy Department and Washington state submitted proposals to modify the 2010 agreement for cleaning up the tank waste. Under the Energy Department’s plan, all of the operations at Hanford’s waste treatment plant would be operational by 2039, though parts could start sooner.

Washington regulators have been pushing the Energy Department to comply with the agreement but have acknowledged that a delay is inevitable. The state has proposed a start-up for full operations by 2034, a 12-year delay.

The Hanford plant consists of three main facilities: a high-level melter plant that would convert the most radioactive waste into glass, a low-level melter plant that would vitrify less deadly material, and a pretreatment plant that would separate waste for the melters.

The low-level melter facility is the only plant that is still being built. Under a revised plan, the Energy Department hopes to use that part of the operation early, sending untreated waste into it for vitrification.

In a statement Wednesday, the Energy Department said it “remains committed” to completing the project. Other aspects of the Hanford cleanup, including remediation of contamination buildings, are continuing, they say.

The statement raises the possibility that if the low-level melter can be completed on its current schedule, some wastes could start being vitrified as early as 2022.

The new schedule is certain to affect the cost of the plant, which has been set for years at about \$12 billion. But final cost will be impossible to determine until the technical issues are resolved and a new construction schedule set.

Tom Carpenter, executive director of the watchdog group Hanford Challenge, said the latest delay raises serious cost issues. Carpenter noted that the federal government has been spending \$690 million annually on the waste treatment plant for more than a decade.

“Will Congress go along with funding the WTP at this rate for another 25 years or more, just to get the plant operational?” he said in an email.

Another unknown is how the delay will affect plans to complete the Hanford tank cleanup. Under the original design, the plant was designed to turn out each day 6 metric tons of vitrified high-level waste and 30 tons of vitrified low-level waste. If the plant had started in 2022 and met those production goals, it could have completed the job in about 40 years, or by 2059.

But now, that completion date could be pushed out to late in this century. The waste is being stored largely in single-shell steel tanks, some of which have leaked. The potential for additional leaks grows with time.

The Energy Department filing proposed a plan for removing the waste from some of the single-shell tanks through 2024. The department has built some new double-wall tanks that are considered safer. Under the new plan more would be required.

### **Massive chromium cleanup nearly finished at Hanford river shore**

*Tri-City Herald*

November 19, 2015

[LINK](#)

Hanford workers have finished cleaning up much of the chromium in soil along the Columbia River, removing an estimated 129 tons of concentrated chromium before it

contaminated groundwater that moves toward the river.

“Removing the chromium contamination keeps it from being driven into the groundwater by rain and snow and is a major success for protecting the river and groundwater from future contamination,” said Rob Cantwell, director of closure operations for Washington Closure Hanford, in a statement.

The form of chromium in the soil at the Hanford nuclear reservation can cause cancer in humans and is particularly toxic to fish and other aquatic life, including salmon fry from salmon spawning areas near the D and H reactors.

Sodium dichromate, which was added as a corrosion inhibitor to river water used to cool Hanford reactors, was brought in by rail car in large quantities and then diluted for use in the reactors. It leaked from pipes or spilled to contaminate the soil.

Workers dug massive holes down at least to groundwater 85 feet deep in multiple places in two reactor areas to excavate contaminated soil. Because of their size, the dig sites near C Reactor, which is close to B Reactor, and the D and DR reactors were engineered like open pit mines.

One of the three holes dug near Hanford’s D and DR reactors covered the area of more than seven and a half football fields at the ground surface and about one football field at the bottom.

The hole was designed with gently sloped sides at the top to prevent cave ins, giving way to steeper slopes about halfway down its 85-foot-plus depth. It was built in layers of 15 to 18 feet, each with a safety shelf to catch any falling rocks.

The “mother lode” of chromium was found near the D and DR reactors, Hanford officials have said. The contamination was at the highest concentration there, staining the soil a yellow-green color.

Workers went about 10 feet deeper after hitting groundwater because of the high level of contamination. They were digging up wet sand and rocks.

Last year officials saw the level of contamination in the groundwater near the D and DR reactors start to drop.

“Removing chromium while it is in the soil will significantly reduce the amount of time that our groundwater pump-and-treat facilities are operated,” said Mark French, the Department of Energy project director for Hanford along the Columbia River, in a statement.

The groundwater cleanup facilities pump contaminated water out of the ground, remove the chromium and then return the cleaned water to the ground.

Groundwater in the the area near the D and DR reactors and the nearby H Reactor at the horn of the Columbia River as it flows through Hanford is expected to meet standards to protect fish in the next 10 years, said Dennis Faulk, Hanford program manager for the Environmental Protection Agency. Standards to protect fish from contamination are more stringent than those for humans.

Faulk is cautiously optimistic that because of the chromium dug up near the C and B reactors that a pump and treat system will not be needed for groundwater there.

Chromium cleanup also was done near the F and H reactors, which were among nine reactors that produced plutonium for weapons use during World War II or the Cold War.

Not much contamination was found near F Reactor, possibly because large amounts of water poured into the soil there when it was operating and may have moved flushed the contamination out of the soil.

At H Reactor, concentrations declined as workers dug down, Faulk said. Workers dug to about 40 feet deep at the H and F reactors, stopping when they reached groundwater.

N Reactor, Hanford’s most modern, had a different design and used a closed-loop cooling system.

Chromium near the K West and K East reactors still may need to be addressed. Work there is focused now on getting containers of radioactive sludge out of the K West

Basin and moving it to central Hanford. It eventually will be treated for disposal.

There is a probability of finding chromium in the soil there based on what is known about the groundwater, Faulk said.

The approximately 2 million tons of contaminated soil dug up has been hauled to the Environmental Restoration Disposal Facility, a lined landfill in central Hanford. The most heavily contaminated soil is mixed with cement to contain the chromium before it is added to the landfill.

The excavated areas have been backfilled with clean soil and some native vegetation already has been planted. In November planting will be finished near the F, H, D and DR reactors as part of 280 acres total of excavated waste sites ready for vegetation.

With the exception of the area near the K East and West reactors, the soil cleanup of the other reactor areas along the river at Hanford is “very, very close” to being finished, Faulk said. “We just have to pick up a few straggler sites,” he said.

## **Fake Radiological Release Helps Savannah River Site Prepare for Emergencies**

*Emergency Management*

November 19, 2015

[LINK](#)

(TNS) - Regular Savannah River Site personnel played fake news media Wednesday during an emergency drill that scripted the hypothetical transport of three injured workers to local hospitals.

The media and other staffers were faced with a scenario which involved the release of radioactive materials at the Savannah River National Laboratory, a facility operated by the SRS management and operations contractor, Savannah River Nuclear Solutions.

A severe weather event caused the downing of a power line resulting in damages to a waste drum and a chemical container, according to a mock media release.

Workers suffered injuries during the incident, including one who was transported to Georgia Regents Medical Center with a head laceration. Another employee suffered a broken arm and the final one an injured wrist. Those two were transported to Aiken Regional Medical Centers.

Precautionary measures were taken during the incident, which included closing down a portion of Highway 125, barricading site entrances and restricting rail, river and air traffic in the vicinity of SRS.

In addition, radiation monitoring teams were sent to various locations to provide assessments.

“We always keep the safety of our workers and the public in mind in a situation such as this,” National Lab Deputy Director Dave Elyer said during a mock press conference.

Elyer was joined in the front of the room by two other site personnel and officials from state offices representing the S.C. Department of Health and Environmental Control.

In the end, officials determined there were no other injuries during the incident and that radiological releases were too low to cause any major concerns.

The Savannah River Site Emergency Response Organization provides a formal drill and exercise program established to validate annually all elements of an emergency management program, according to SRNS spokesperson DT Townsend.

The drills and exercises are developed in detail to thoroughly train (Savannah River Site Emergency Response Organization) members to respond quickly and effectively to realistic, simulated emergency events and conditions in a manner that, as nearly as possible, replicates an actual, integrated emergency response,” Townsend said.

### **Savannah River Site CAB votes to use penalty funds for waste cleanup**

*The Aiken Standard*

November 17, 2015

[LINK](#)

NEW ELLENTON — A proposal to take millions of dollars levied from missed waste cleanup milestones at U.S. sites owned by the Department of Energy and use the money for those same cleanup missions was passed Tuesday by the Savannah River Site's Citizens Advisory Board, or CAB.

The vote passed 19-2 and will now head to the larger Environmental Management Site-Specific Advisory Board, or EMSSAB – a board that embodies the interests of eight local boards in DOE communities such as the CAB and also makes recommendations to the Energy Department.

The vote calls for DOE to consider Supplemental Environmental Projects which would fund cleanup missions, rather than an outright fine levied by state agencies such as the S.C. Department of Health and Environmental Control.

The overwhelming approval of the recommendation is a signal that there needs to be accountability for missed milestones, said CAB member Dawn Gillas who voted in favor of the recommendation.

“If there's going to be missed milestones, which we hope there's not, the best way to spend that money is to put it back into making sure something gets done instead of it going to a pile of money we don't know anything about,” Gillas said.

Fellow CAB member Gil Allensworth voted against the recommendation, stating it's better to hold DOE and Congress accountable for getting the necessary funds for the project.

“We don't need to add more layers to this – it just becomes a vicious circle,” Allensworth said.

The local interest in the vote stems from current and upcoming missed milestones at the site including construction of the Salt Waste Processing Facility, which was supposed to be constructed by Oct. 31.

The S.C. Department of Health and Environmental Control could have made a motion to impose more than \$150

million in penalties but vowed not to attempt to levy penalties until Dec. 18. The agency and DOE are currently working out new terms for the a contract.

Tuesday's meeting also included a briefing on the SRS budget outlook. Site officials reported that they are still operating on a continuing resolution that funds programs through Dec. 11.

The President and Congress a budget deal on budget spending for the next two years which is good for the site, said SRS deputy manager Terry Spears. However, the deal still requires Congress to task budget actions to appropriate funds.

"They still have to pass the spending bills underneath the agreement. They're working to do that at this time so we remain under a continuing resolution," Spears said.

### **Consenting to Cleanup**

*Santa Fe Reporter*

November 18, 2015

[LINK](#)

Progress on cleanup of material at the Los Alamos National Laboratory left over from manufacturing the world's first nuclear weapons has been impeded by limited budgets, the discovery of new plumes of contamination and a guiding document that, according to the state, prioritized studying problems over fixing them.

With that document—the 2005 consent order agreed to by the US Department of Energy, LANL and the New Mexico Environment Department—riddled with unmet deadlines and unfulfilled goals and set to expire at the end of the year, the state is beginning discussions on a new approach aimed at producing more results.

"The DOE recognizes the current schedule is not realistic. That's not a surprise to anyone," said New Mexico Environment Department Cabinet Secretary Ryan Flynn. "They have not begun to tackle the most difficult elements of the cleanup."

The initial volley in these talks was a presentation to the Northern New Mexico Citizens' Advisory Board on Thursday, Nov. 12, during which Flynn did not hesitate to explain that he's using the Waste Isolation Pilot Plant near Carlsbad, the nation's only long-term storage site for waste from nuclear projects, as leverage. Flynn publicly released a number he says is the DOE's estimated cost for remaining cleanups at the lab: \$1.2 billion, though the DOE official at the Thursday meeting would not confirm that amount.

Flynn speculated that the price tag is based on the assumption the state will default to the DOE's often preferred remedy—cap-and-cover—and described that expectation as “misplaced.” He also pointed out that \$1.2 billion was the expected cleanup cost 10 years ago and has proved to widely miss the mark, as have the timelines proposed. The cleanup of Area G, where transuranic waste is stored and processed, for instance, was supposed to be done before August, according to the original consent order. The DOE now estimates that area still needs six to eight years of work.

Staying on track hasn't been helped by the late discovery of additional contaminants, like the chromium-6 plume seeping toward a regional aquifer that became evident in 2005, too late to include it in the consent order, though it's one of the more pressing, and expensive, components of the cleanup.

The state could use \$255 million a year for Los Alamos, Flynn said, but his entreaties to Congress for more funding have been met with the response that there won't be more money than the already allocated \$189 million without a realistic plan and a set completion date. The lab is the only DOE project in the country without one, Flynn said, though others are set 25 and even 55 years out, and he concedes those timelines may be about as reliable as a long-range weather forecast.

According to Nuclear Watch New Mexico, 8.4 percent of the \$2.2 billion total budget for the Los Alamos National Laboratory goes to environmental cleanup, while 65 percent goes to weapons activities.

Officials from the New Mexico Environment Department say

the existing cleanup plan's structure, which calls for a series of "deliverables" (the bulk of which are "investigation work plans"), has led to more investigation and suggested remedies than actual application of those remedies.

"Taxpayer time and taxpayer dollars were spent on deliverables that there was no intention to get done," Flynn says. "There's no requirement on DOE to take the next step, and that's what's missing from this process." "There's no requirement on DOE to take the next step, and that's what's missing from this process."

Doug Hintze, head of the DOE's Environmental Management unit in its Los Alamos Field Office, defended the agency's work. He claimed they've made progress on a significant portion of sites marked for cleanup and removed about 36,000 50-gallon drums of waste. Still, he said, "the time we celebrate is when we transfer that last waste off-site or clean up that last groundwater."

The proposed tactic for the next consent order, called "a campaign approach," would define the scope of work from start to finish for a specific area or priority, like groundwater, and would allow for public input on prioritizing projects and proposed remedies, with the state making the final call.

"From the DOE's perspective, it all has to get done," Hintze said.

"My biggest fear is that through this revised consent order, the NMED is basically giving up on being in the driver's seat," Jay Coghlan, executive director of Nuclear Watch New Mexico, said during Thursday's meeting. Annual planning should be in the state's hands, he said. "I want you all dictating that. Not the DOE saying, 'This is what we think we can do.'"

Coghlan pointed to the Department of Energy's presence on the Government Accountability Office's high-risk list for 25 years as justifying the skepticism.

"The department has a record of blown schedules and blown costs," he said.

But none of the revisions will move forward until the DOE and the state environment department have settled on

violations that led to a release of radioactive materials at the WIPP. The federal government pledged millions for improving roadways used to transport that waste, as well as for training, environmental studies and stormwater management at Los Alamos. The holdup now, Flynn said, is the schedule.

The WIPP may further be used as a bargaining chip. Nuclear waste sites in South Carolina and Washington are the “900-pound gorillas,” Hintze said, and those places draw the bulk of the DOE’s cleanup funding each year—amounts measured in the billions, rather than the millions, like for LANL. But those facilities want to send their waste to the WIPP, the nation’s only long-term storage facility for soil, debris, clothing and tools that contain small amounts of radioactive elements.

Two years ago, a request to complete the 3706 campaign, which aimed to remove 3,706 cubic meters of transuranic waste that was stored aboveground at Area G, was “undermined” by the state of Washington, Flynn said. At that point, Washington’s Hanford nuclear waste cleanup was facing a problem that had affected 60 of 177 underground storage tanks and was expected to spread.

“We have zero patience for Washington [state] saying they’re going to send a bunch of waste to New Mexico when not only do they get the lion’s share of the budget, but they also actually kill funding requests that are bound for Los Alamos and then have the audacity to suggest that we should be taking their waste,” Flynn said. “As long as I’m secretary, that will not happen.”