

## ECA Update: November 16, 2015



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*Idaho Statesman*

November 14, 2015

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A first-of-its-kind radioactive waste treatment facility in Idaho is set to undergo another round of testing, but doubts continue to be raised about whether it will ever work properly.

The U.S. Department of Energy will examine alternative treatment methods for the 900,000 gallons of liquid radioactive waste that remain stored in aging steel tanks west of Idaho Falls, said Jack Zimmerman, DOE's deputy manager of the Idaho Cleanup Project.

The Integrated Waste Treatment Unit was supposed to have the job finished in 2012, using steam to transform the liquid into a safer powder form. But the facility has been plagued with clogs and other glitches, and it has been unable to get past the testing phase. It is hundreds of millions of dollars over budget.

"It is prudent for us to look at (treatment) alternatives,"

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### Events of Interest

[2015](#)

[Intergovernmental Meeting](#)

November 18-20  
New Orleans, LA  
Email: [ivana@energyca.org](mailto:ivana@energyca.org)  
for more information

### Calendar

[EMSSAB Savannah River Site Meeting](#)  
November 16-17

[NNMCAB Meeting](#)  
November 18

Zimmerman said at a recent Sun Valley meeting of the INL Site Environmental Management Citizens Advisory Board.

Zimmerman said he was “commissioning a team to look at alternatives.” He said he would ask the team to look at whether significant changes could be made to the current plant to make it work, or what ideal options might be for an entirely different treatment technology and facility.

Zimmerman reiterated, however, that his first priority at this point is still to make the current plant work as originally planned, despite DOE and the contractor facing “a lot” of technical issues.

“Right now, a significant investment has been made in this plant, in this technology,” Zimmerman said.

**WE’RE DEALING WITH A LARGE-SCALE PILOT PLANT THAT WE’RE TRYING TO GET UP AND RUNNING.**

Jack Zimmerman, Idaho Cleanup Project

After fixing several issues with the plant in the first half of the year, operators began testing again in August. About 8,500 gallons of simulant, a material that mimics real radioactive waste, traveled through the system before the plant had to be powered down once again. Issues were discovered with some filters, a DOE PowerPoint presentation said.

The plant is now back up to normal operating temperature and pressure, officials said, with a simulant run expected to commence in the coming days. The first successful simulant run, late last year, included about 60,000 gallons of the fake radioactive material.

The planned simulant run, similar in scope to the 60,000-gallon test, is expected to take a month to complete, DOE spokeswoman Danielle Miller said in an email.

“Once the simulant run is complete, the department will evaluate plant performance and use that information to determine if an alternative treatment option or modifications to the current process are necessary,” Miller said.

The project’s price tag has gone through many revisions, from \$461 million to \$571 million and then up even more — way more. At least \$90 million in cost overruns have been paid by the project’s contractor, CH2M-WG Idaho, or CWI.

[EMSSAB Paducah Meeting](#)  
November 19

Zimmerman said all costs relating to the plant and ongoing repairs has averaged about \$3.5 million to \$4 million per month.

Idaho Attorney General Lawrence Wasden, in an October letter sent to DOE officials, wrote that he had recently heard “growing concern among DOE staff as to whether this technology will ever be deemed safe enough to begin treatment of radioactive waste.”

Issues with the treatment facility have affected Idaho National Laboratory’s ability to bring in two shipments of commercial spent nuclear fuel it needs for research purposes. One of the shipments was recently sent to another facility.

**THE DEPARTMENT OF ENERGY IS FACING A STATE-MANDATED DEADLINE OF SEPT. 30, 2016, TO GET THE PLANT TO A POINT WHERE IT IS TREATING WASTE. A NUMBER OF STATE-MANDATED CLEANUP DEADLINES ALREADY HAVE BEEN MISSED.**

When DOE missed a deadline to have the plant operational by the end of last year, the Idaho Department of Environmental Quality hit DOE with fines. Natalie Clough, DEQ’s hazardous waste compliance manager, said Thursday that DOE has so far paid the state more than \$300,000 in fines.

In addition, Clough said, DOE also is working with DEQ on more than \$300,000 worth of supplemental environmental projects to pay down the remainder of what it owes to the state.

If DOE misses the September deadline, however, more state fines will kick in. And if DOE officials decide operation of the plant isn’t feasible, and the department turns to a different treatment technology, it will owe the state \$2 million.

Herb Bohrer, chairman of the INL Site Environmental Management Citizens Advisory Board, told the Post Register he doesn’t have much confidence that the plant will ultimately succeed in treating the waste.

“If I were a betting man,” he said, “I wouldn’t bet very much money on it.”

**State could impose MOX fines for upcoming missed milestone at SRS**

*Aiken Standard*

November 15, 2015

[LINK](#)

The state of South Carolina may soon have to decide if it will fine the Department of Energy \$1 million a day for missing milestones at the Savannah River Site's MOX facility.

Jan. 1, 2016, was the agreed upon date set by the Department of Energy and former S.C. Gov. Jim Hodges in 2002 for either 1 metric ton of weapons-grade plutonium to be processed through the SRS Mixed Oxide Fuel Fabrication Facility, or for 1 ton to be removed from South Carolina.

The facility is a critical part of the overall MOX program – the nation's current pathway to meet its agreement with Russia which requires each nation to dispose of 34 metric tons of weapons-grade plutonium.

Since neither action is expected to happen by the top of the year, the Palmetto State could impose fines of \$1 million a day with a \$100 million cap.

But Mark Powell, a spokesman for South Carolina Attorney General Alan Wilson, said it's too early to determine if a deal needs to be renegotiated, or if the state will attempt to levy the penalties.

"The state is exploring various options. It would be premature and inappropriate to comment at this time," Powell said.

Ongoing construction of the MOX building falls under the Savannah River Site's work with the National Nuclear Security Administration, or NNSA, a semi-autonomous branch of the Department of Energy.

Francie Israeli, an NNSA press secretary, said the Energy Department is working to meet its commitment to the state and that "per the direction of Congress, the Department is continuing construction of the MOX facility."

However, two studies conducted this year – one mandated by Congress and another commissioned by the DOE – have concluded that a downblending alternative would be cheaper and more viable than MOX.

One of the studies, conducted by Aerospace, states that the life cycle cost of the entire MOX method of plutonium disposition is \$51 billion, compared to a \$17 billion cost for downblending.

Rather than using multiple facilities to transform the plutonium into nuclear fuel, the downblending method would dilute the plutonium and dispose of it at a repository.

Part 2 of the Aerospace was released to Congress last month, but has yet to surface for public consumption. The study will look at several other MOX alternatives.

Once a “preferred alternative” is identified, DOE will announce its preference in a Federal Register notice, Israeli said.

“DOE will then publish a Record of Decision in a Federal Register notice announcing the final decision no sooner than 30 days after its announcement of a Preferred Alternative,” Israeli said.

The MOX project employs about 2,000 workers. Work is more than 70 percent complete, according CB&I MOX Services, the contractor over the project.

### **State official: Feds’ estimate on Los Alamos Lab cleanup too low**

*LA Monitor*

November 16, 2015

[LINK](#)

POJOAQUE — Cleaning up radioactive and hazardous waste at Los Alamos National Laboratory will cost far more than the \$1.2 billion estimate made by the federal Department of Energy, according to a top New Mexico official.

The Department of Energy’s cost projection is “far too low” and “a bare minimum,” state Environment Secretary Ryan Flynn said at a meeting of the Los Alamos National Laboratory citizens advisory board on Thursday.

The laboratory is expected to receive \$181 million for environmental cleanup in the next federal budget, the Albuquerque Journal reported. Flynn called on everyone involved to “have an honest conversation about the extent of the problem” as the state and Department of Energy work on revising a 2005 agreement that said the cleanup should be finished by this year. That didn’t come close to happening.

The cleanup of the 40-square-mile site involves waste that dates back to the 1940s Manhattan Project.

Flynn said he wants to move beyond the investigation and characterization of waste at the Los Alamos lab. Instead, his department wants to see a series of discrete campaigns to attack various cleanup problems, prioritized based on factors like the risk to people or the environment and available funding.

Doug Hintze, the manager of Department of Energy's Environmental Management Los Alamos Field Office, agreed with the campaign approach.

He suggested 14 possible such projects, including "the biggie" - the Area G waste dump where waste has been buried in shafts and pits, where the Department of Energy has already proposed a cap-and-cover plan.

Hintze wouldn't confirm Flynn's \$1.2 billion Department of Energy estimate, but he did say the consent order needs to have realistic assumptions and expectations moving forward.

He said that 1,300 of 2,100 Los Alamos national Laboratory's solid waste management units have been dealt with, 139 ground water monitoring wells have been installed and 1,001 materials such as reports and other milestone documents have been provided.

Flynn also told the Northern New Mexico Citizens' Advisory Board that he won't start new talks with the Department of Energy until they are able to settle a disagreement over a radiation leak at a Carlsbad facility. The state initially levied more than \$54 million in fines against the Department of Energy and its contractors for a 2014 incident in which a radioactive drum at the Waste Isolation Pilot Plant in Carlsbad began to leak. It had been erroneously packed with a combustible mix at Los Alamos.

In an April settlement, the fines were abandoned in favor of money for New Mexico road improvements and environmental projects, but disagreement about the plan's details have prevented it from being finalized.

The state wants to retain that leverage in settlement talks, said Flynn, so it won't move on to other issues until it reaches a final deal about the Waste Isolation Pilot Plant.

## **DOE proposes full start of Hanford vit plant in 2039**

*Tri-City Herald*

November 14, 2015

[LINK](#)

The Department of Energy is proposing having the Hanford vitrification plant fully operating in 2039, a delay of 17 years from the current schedule, after a federal judge pressed it for a concrete deadline proposal.

The state of Washington also appears resigned to the plant needing significantly more time to start full operations, proposing a deadline of September 2034.

DOE has been reluctant to propose new deadlines for the vitrification plant as it works to resolve technical issues at the massive and complex plant. It is being built to turn up to 56 million gallons of radioactive waste into a stable glass form for disposal.

Committing to deadlines when it is unclear what work needs to be done and at what cost leads to missed deadlines, DOE has said.

However, U.S. Judge Rosanna Malouf Peterson ordered DOE and the state of Washington to submit new proposed deadlines by Friday consistent with the work covered in the 2010 consent decree, including a deadline for having all parts of the vit plant operating.

DOE hedged its new proposed deadlines, laying out a plan to extend them if its work falls behind schedule for different reasons. Those would include not having technical issues resolved by a newly announced date of June 30, 2019.

**UNCERTAINTY REFLECTS THE SCARCITY OF  
NECESSARY INFORMATION, BUT NOT THE ABSENCE OF  
ADEQUATE EXPERTISE.**

DOE in federal court documents

DOE's 2039 start-up date is proposed for having all major facilities at the plant operating simultaneously.

But DOE remains committed to starting up part of the plant as soon as 2022 to glassify low-activity radioactive waste. The major unresolved technical issues at the plant, including the remote possibility of an unplanned nuclear reaction or buildup of flammable gases, involve only high-level radioactive waste.

A year ago, the state of Washington had proposed having all parts of the vitrification plant fully operating in September 2031, but revised its proposal to allow three more years, according to documents it submitted Friday. The extra time gives DOE an additional buffer because of the uncertainty related to technical issues, the state said in court documents.

New deadlines are being set by the federal court after court-enforced deadlines agreed to in 2010 to resolve a state lawsuit are at serious risk of being missed. The proposals submitted Friday replace those both parties submitted a year ago. The judge found the initial submissions veered too far from the original consent decree on some matters.

The proposals filed Friday address not only the vitrification plant, but when 12 single-shell tanks must be emptied of waste. They also address what would trigger a requirement that DOE build new double-shell tanks to provide additional stable storage space until the waste can be treated for disposal.

#### Vitrification plant proposals

DOE described its proposal to allow extensions to the deadlines it is proposing for building and operating the vitrification plant as being “narrow modification mechanisms.”

It cannot “reasonably or responsibly” commit to dates for facilities with technical issues without an extension process, it said in court documents.

The deadlines cover steps such as completing construction of parts of the plant and testing its operations.

**THE STATE HAS REASONABLY ACCOUNTED FOR THE UNCERTAINTIES ASSOCIATED WITH TECHNICAL ISSUE RESOLUTION AND FACILITY REDESIGN IN ESTABLISHING THESE DEADLINES.**

#### Washington state in federal court documents

Extensions for the vitrification plant deadlines would be triggered initially by a delay in resolving key technical issues. Further delays in redesign work required because of the technical issues and then work to develop a new cost and schedule and revise contracts also would be covered by the deadline extensions.

The state says allowing DOE until 2034 to have all facilities of the vitrification plant operating together gives DOE a sufficient buffer to deal with uncertainties at the vitrification plant, including delays related to technical issues.

The state significantly scaled back its proposal to the court.

It deleted 64 proposed deadlines related to the vitrification plant after the judge said that she would only consider proposed new deadlines that closely reflected the work covered by the original. The state's new proposal has 35 vitrification plant deadlines covering step-by-step the construction and operation of the plant.

The state and DOE agree that an early start to treating low activity waste is a good idea. The judge has declined to include that in the consent decree, saying it is beyond the scope of the original consent decree.

However, both parties say they remain committed to pursuing treatment of low activity waste as soon as 2022.

Not only would a 2022 start make progress in reducing the stockpile of untreated waste, but it would free up needed space in double-shell tanks. Double-shell tanks are being used to hold waste emptied from leak-prone, single-shell tanks until the waste can be treated for disposal.

Proposals for emptying tanks

DOE and the state disagree on whether DOE should be given more time to empty tanks because of the requirement for workers to wear protective, but cumbersome, supplied air respirators for much of the work.

DOE had until fall 2014 to finish emptying waste from all 16 of the underground tanks in the group called the C Tank Farm. But increased worker protection from chemical vapors and delays in receiving federal money have slowed required tank farm work, according to court documents.

Now DOE says it can have the 14th of those tanks emptied yet this year, with just the paperwork left to go. But it wants until April 2016 to empty the 15th tank, and then would have the last tank in the series emptied no later than 2022. A date would be set between now and 2022 after DOE settles on a plan to empty some difficult

waste from that tank.

The consent decree also covers the next group of nine tanks to be emptied, from the total remaining 132 single-shell tanks that still will have waste after C Farm work is completed.

DOE says it can complete that work by March 2024, which includes an extension because of issues related to chemical vapors from the tanks. Tank farm workers are wearing supplied air respirators now for much of the work in the tank farms until better ways are implemented to protect them from breathing the vapors.

If workers are still using supplied air respirators after September 2016, DOE will want that proposed 2024 deadline extended at the rate of one extra year for each two years workers wear the respirators.

**THE STATE IS WHOLLY COMMITTED TO WORKER SAFETY AT THE HANFORD SITE AND FULLY SUPPORTS THE USE OF SUPPLIED AIR OR OTHER MEASURES TO MINIMIZE TANK VAPOR EXPOSURES.**

Washington state in federal court documents

The state, which has a separate lawsuit in federal court over chemical vapor protection, argues that DOE has produced no convincing information to show the need for the delay.

It wants all C Farm tanks emptied by September 2017 and the next nine tanks emptied by September 2022, the date currently in the consent decree.

Proposals for new storage tanks

The state is proposing that DOE be required to start planning and permitting work now to build new double-shell tanks, in case they are needed.

DOE has adamantly opposed building additional waste storage tanks, saying money could better be used toward the end goal of getting waste treated for disposal. It puts the cost of each 1-million gallon tank at \$85 million to \$150 million.

“New double-shell tanks would shatter the bargain agreed to by the parties,” DOE said in court documents.

## NEW DOUBLE-SHELL TANKS WOULD SHATTER THE BARGAIN AGREED TO BY THE PARTIES.

DOE in federal court documents

The state has proposed that DOE build up to 12 new double-shell tanks to hold more of the waste from older leak-prone tanks until it can be treated for disposal because of delays in getting the vitrification plant operating.

Malouf Peterson said she would consider requirements that would trigger up to four new 1 million-gallon tanks initially.

DOE has said it would have enough remaining space in its 27 usable double-shell tanks to continue waste retrieval from single-shell tanks on schedule by using its evaporator plant to reduce the liquid volume of the waste.

However, as instructed by the judge, it proposed a set of annual requirements for the amount of waste that must be evaporated. If those goals are missed, the issue should be first addressed by steps such as increasing evaporation operations rather than building new tanks, it said.

The state wants construction of new storage tanks to be triggered if DOE falls 2 million gallons behind on a proposed schedule to reduce waste volumes through operation of the evaporator. But because work from planning to building the tanks could take a decade, it wants DOE to be ready to start construction. Construction would take four years, according to the state.

### **Savannah River Site CAB to vote on redirecting funds for waste cleanup**

*Aiken Standard*

November 13, 2015

[LINK](#)

The Department of Energy should use the money levied from missed waste cleanup milestones to benefit those same cleanup missions, according to a recommendation drafted by a board that monitors cleanup missions at the Savannah River Site and other DOE sites.

The SRS Citizens Advisory Board, or CAB, will discuss the issue and possibly put it to a vote during its two-day, bimonthly meeting next week.

The CAB is one of eight advisory boards under the larger Environmental Management Site-Specific Advisory Board, or EMSSAB, which also makes recommendations to the Energy Department.

Though the local CAB usually votes on its own recommendations, the waste cleanup recommendation is coming from the larger board because of projected missed deadlines across the DOE complex that would break agreements.

The recommendation states that instead of paying multimillion dollar penalties, the Energy Department should consider Supplemental Environmental Projects “as a beneficial and amenable means to help accomplish the legally mandated cleanup goals at DOE facilities.”

A Supplemental Environmental Project is defined as an environmentally beneficial project which a violator voluntarily agrees to undertake in settlement of an enforcement action but which is not legally required by law.

If the CAB approves the recommendation during its meeting, the results will then be passed up to the larger board.

Local examples of missed deadlines include construction of the SRS Salt Waste Processing Facility, which was supposed to be constructed by Oct. 31.

The Department of Energy is currently in talks with the S.C. Department of Health and Environmental Control, to renegotiate deadlines and timetables. The state agency has vowed not to attempt to levy penalties until Dec. 18.

In addition, waste cleanup and tank closures at SRS are scheduled to begin missing deadlines after the renegotiated scheduled closure of Tank 12, which is slated to be closed by May, 31 2016.

Other recommendations, scheduled presentations and updates are also on the CAB meeting agenda.

The meeting will be held Monday to Tuesday at the New Ellenton Community Center, 212 Pine Hill Ave. in New Ellenton. Day 1 of the meeting will start at 1 to 5:30 p.m.; day 2 will begin at 8:30 a.m. to 4:30 p.m.

