

governments, as well as employees of nonprofit organizations, community groups, environmental justice (EJ) organizations and academic institutions. The deadline for applications is June 1. For more information, see [here](#).

[Meeting](#)
May 13

Nuclear weapons lab worker seriously burned in accident

The Washington Post
May 4, 2015

[LINK](#)

LOS ALAMOS, N.M. — A Los Alamos National Laboratory employee was in critical condition Monday after being burned in an accident that also sent eight other workers at the nuclear weapons research facility to the hospital.

Lab spokesman Kevin Roark confirmed the accident happened Sunday while the employees were doing preventative maintenance at an electrical substation that provides power to the lab's Neutron Science Center.

It was not immediately clear what happened, but Roark said an accident investigation board will review the incident. He did not identify the worker who was badly burned.

Lab Director Charlie McMillian issued a statement Monday, saying the worker's family had the support and sympathy of the entire workforce at the lab.

"Nothing is more important at this time than his well-being," McMillian said.

Nine workers were sent to the Los Alamos Medical Center and seven were treated and released the same day, said medical center spokeswoman Mary Beth Maasan.

One patient was transported to the burn unit at University of New Mexico Hospital and another was admitted to the Los Alamos Medical Center in stable condition, she said.

A memo sent to lab employees stated that portions of the Neutron Science Center are without power and employees have been urged to work at home or contact their supervisors regarding their plans.

Los Alamos is one of the nation's premiere nuclear weapons research labs, and it's where J. Robert Oppenheimer worked on the

atomic bomb in the 1940s.

Built in the late 1960s, the Neutron Science Center contains a linear accelerator that's used for everything from national security-related projects to health and materials science.

The center has been cited in several federal safety audits, including for a 2012 incident in which a worker unknowingly opened a canister containing uncontrolled radioactive material.

Operations there were shut down in early 1999 after a series of safety accidents.

Roark said the electrical substation where Sunday's accident happened is adjacent to the center and that the accelerator facility wasn't involved.

GAO: DOE should consider halting more vit plant construction, questions technical approach and cost estimates

Tri-City Herald
May 7, 2015

[LINK](#)

The Government Accountability Office says the Department of Energy needs to consider further slowing construction at the vitrification plant, shown in an aerial photo this spring.

The Department of Energy should consider further limiting construction at Hanford's vitrification plant until it has aggressive strategies to address risk developed and in place, the Government Accountability Office said in a report released Thursday.

It also recommended that DOE take a broader look to make sure it has found the best alternatives to address technical and schedule problems at the plant under construction.

The report was prepared at the request of the Senate Armed Services Committee after DOE proposed building a Low Activity Waste Pretreatment System and a Tank Waste Characterization and Staging Facility to address schedule and technical issues at the plant.

DOE has estimated the two facilities to be built outside the plant could add as much as \$1 billion to costs to clean up Hanford, but the GAO indicated the costs for those facilities and other changes at the vit plant could be higher.

Construction on the vitrification plant began in 2002 with building being done just ahead of completion of ongoing design of the plant to get it operating sooner. It is a strategy that DOE no longer uses for such large, complex projects.

The plant is intended to turn up to 56 million gallons of radioactive waste into a stable glass form for disposal. The waste, now held in aging underground tanks, is left from the past production of plutonium for the nation's nuclear weapons program.

Because of unresolved technical issues, including the possibility of an unplanned nuclear reaction, construction stopped on the plant's Pretreatment Facility and part of its High Level Waste Facility in 2013.

The Pretreatment Facility has been planned to be the first stop for the waste at the plant, separating it into a low activity radioactive waste stream and a high level waste stream for separate treatment and disposal.

To allow more time for the Pretreatment Facility to begin operating, DOE has proposed building the Low Activity Waste Pretreatment System outside the vitrification plant. It could separate out some of the low activity waste to send it directly to the Low Activity Waste Facility for glassification.

The second proposed facility, the Tank Waste Characterization and Staging Facility, would characterize, blend and prepare waste for treatment before it is sent to the vitrification plant.

It would reduce the size of some radioactive waste particles to allow them to be processed at the Pretreatment and High Level Waste facilities and possibly allow some waste to bypass the Pretreatment Facility and be sent directly to the High Level Waste Facility.

The Low Activity Waste Facility also has technical issues, the GAO report said.

A design review last year by a panel of outside experts identified 536 vulnerabilities, including 110 that could result in "severe consequences" to the ability to operate the plant. The review looked at just half of the facility's systems.

Among possible problems are weaknesses in the plant's ventilation system that could allow radioactive gases to escape. DOE does not

know the potential level of exposure to workers if a leak occurs, the GAO said.

The cost to address the issues could be \$525 million. However, the final review and steps to address issues have not been completed.

A May 2014 review of half of the technical systems in the High Level Waste Facility found all 12 reviewed were at risk of failure and required a changed design or more engineering studies. Among the risks is a release of hazardous or radioactive gases.

While DOE has employed an aggressive risk mitigation strategy for the vit plant's Pretreatment Facility, it has not done the same to address all technical uncertainties at the High Level and Low Activity waste facilities, the GAO report said.

"By continuing construction activities without employing aggressive risk mitigation strategies, DOE has limited assurance that technical challenges will be solved or mitigated without significant rework," the GAO report said. Rework could be extensive and expensive at the two facilities, it said.

It recommended that all systems at the two facilities undergo a design review and that DOE consider expanding the partial halt of construction at the High Level Waste Facility and halting construction at the Low Activity Waste Facility.

To date, \$19 billion has been spent in the past 25 years on projects at the Hanford tank farms and on several different waste treatment strategies, without treating any waste, the report said.

The GAO is concerned now that DOE is focused too narrowly on the two proposed facilities to solve some technical issues and make up for delays, including those caused by pauses in construction at the plant.

It believes DOE excluded consideration of other alternatives to address tank waste treatment and the danger caused by the potential leakage of radioactive waste from aging tanks by narrowly defining what it needed to address.

"These two projects might represent the best path forward, but without unbiased statements of mission need, DOE is unable to explore other alternatives, including some that might be less costly solutions," the report said.

One possibility could be building more underground tanks to safely contain waste while more time is taken to resolve technical issues at the vitrification plant.

DOE also should revise cost and schedule estimates of the two proposed facilities to meet industry best practices, the GAO report said. Now its estimates cannot be considered reliable, it said.

The Low Activity Waste Pretreatment System cost estimate does not include costs for handling secondary waste, costs to modify tank farm infrastructure, costs of additional infrastructure and costs for permits. The additional work could add \$150 million to costs, which does not include addressing some possible risks that may need to be addressed, the report said.

The Tank Waste Characterization and Staging Facility rough cost estimate also does not include all costs, including installing a system to get waste to the facility and then to the vitrification plant.

DOE officials in Washington, D.C., have estimated that just the Tank Waste Characterization and Staging Facility could cost from \$1 billion to \$1.5 billion, the report said.

DOE generally agreed with recommendations in the report, but it still issued a lengthy response out of concern with some of the conclusions in the report.

Of most concern is that DOE look at other alternatives to building the two proposed new facilities, said Mark Whitney, DOE acting assistant secretary for environmental management, in a response to the GAO.

The new facilities would allow a phased approach to treatment, allowing some waste to be treated before technical issues are resolved elsewhere at the plant. Some waste could be treated by the end of 2022, Whitney said.

It is the best approach to meet DOE's legal obligations for tank waste cleanup, he said.

The GAO report does not recognize that DOE cannot unilaterally abandon or reject the legal obligations governing tank waste cleanup, he said. DOE and the state of Washington have each submitted competing proposals in federal court to modify court-enforced deadlines related to tank waste.

DOE is continuing to work on cost estimates as plans advance for the proposed new facilities. Additional costs were not included because they will be part of the operating budget for the tank farms, Whitney said.

As for the proposal to stop construction, Whitney said construction is only continuing on parts of the High Level Waste Facility not affected by technical issues or their possible solutions. Construction is nearly completed on the Low Activity Waste Facility, and remaining risks are being addressed, he said.

DOE agreed with another GAO recommendation, that it bring in an outside agency to help review and evaluate the vitrification plant design and the approach to resolving technical challenges at the plant.

Bringing in outside agencies and review teams is a strategy DOE has used previously at the vit plant. Whitney said DOE would consider alternatives to enhance oversight and then quickly implement the best alternative.

The report is available [here](#).

What's the value of nuclear energy to the United States?
The Hill
May 4, 2015
[LINK](#)

To achieve America's energy, environmental and economic goals, there is no better generator of electricity and jobs than U.S. nuclear energy.

As a reliable source of steady electricity, nuclear energy serves an important role in U.S. grid stability. Even as regional grids become more sophisticated in managing fluctuating input from renewable sources, there remains a base-load requirement to maintain an on-demand minimum generation level. Nuclear energy provides this grid certainty by generating its maximum amount of electricity more often than any other electricity source — on average, more than 90 percent of the time. Life extension technologies, like AREVA's new cavitation peening for reactor heads, help utilities ensure continued safe generation for another 40 years.

Though many of the U.S. nuclear facilities were built in the 1970s, they have been continuously updated with the latest technology and

fuel designs. Think of a '71 Chevrolet Chevelle SS with a modern 300-horsepower electric motor under the hood, digital-responsive suspension and new safety systems. By installing advanced components and fine-tuning operations, utilities' output enhancements (uprates) to nuclear reactors have added major low-carbon generation ability to the existing U.S. nuclear fleet. There is a lot of untapped power in the existing nuclear fleet — about 50 percent of U.S. nuclear reactors have uprate potential, which would be the equivalent of adding eight to 10 new nuclear reactors to the U.S. fleet. For example, five reactor uprates can equal the added output of one new nuclear reactor, or the electricity needed to power 740,000 American homes.

On the regulatory side, there is opportunity to advance nuclear energy, too. We are looking forward to the Nuclear Regulatory Commission (NRC) implementing a pragmatic approach to regulation and a streamlined compliance review process.

Nuclear energy is already a significant part of America's energy portfolio — representing 19 percent of all U.S. electricity. But of greater importance to our nation's increasing demand for clean-air power sources, nuclear energy generates 63 percent of our low-carbon electricity. Along with the benefit to the air we breathe, the high energy density of nuclear power means using a lot less land to produce significant amounts of on-demand, steady electricity. That's a win for both traditional environmentalists and the new ecomodernists seeking to leverage advanced technology to centralize society's impacts and decouple our reliance on using environmental resources.

A primary concern of the nuclear industry is receiving full value for its low-emission electricity generation. As noted by the Nuclear Energy Institute (NEI), the Environmental Protection Agency's (EPA) proposed Clean Power Plan undervalues nuclear energy by crediting only 6 percent of existing nuclear generating capacity when calculating states' target emission rates. Also, the rule's rate-setting calculation includes the future generation of nuclear facilities that are still under construction as if they are already generating at 90 percent capacity. This approach negates any credit the states receive for new nuclear energy plants. To effectively act on climate concerns, we need to act to remove these restraints on achieving a new energy vision.

Other than copious amounts of low-carbon electricity, every nuclear power plant is a huge asset to the local community and the nation in terms of jobs and economic stimulus. The significant economic

benefits U.S. nuclear energy facilities provide include about 800 jobs per site, above-average wages, \$20 million in state and local taxes, plus \$400 million to \$1 billion (for multi-unit sites) in state and local economic benefits per year.

There's an educational benefit, too. In the next few years, the nuclear energy industry will need a large supply of next-generation employees. Nuclear utilities and AREVA are actively supporting and sponsoring science, technology, engineering and math (STEM) education in regional elementary schools up through graduate studies to create the next wave of skilled employees. Nuclear energy facilities are economic powerhouses driving and sustaining economic growth.

Nuclear energy is an all-of-the-above energy strategy: reliable electricity, significant low-emission power source, good-paying jobs. That's the value of nuclear energy to the U.S.

We need more nuclear energy, not less.

Gary Mignogna is president and CEO of AREVA Inc., the leading nuclear energy supplier in the United States.

Sec. Moniz Covers Full Range of Energy Department Work in Daily Show Appearance
Power Magazine
May 7, 2015
[LINK](#)

In his May 6 appearance on Comedy Central's Daily Show, Secretary of Energy Ernest Moniz addressed both the military and civilian energy issues that the Department of Energy is responsible for. His discussion with host Jon Stewart ranged from the recent negotiations with Iran over that nation's capability to enrich fissile material to domestic energy infrastructure.

Though the broadcast portion of the interview focused on the Iranian nuclear talks, the extended interview also addressed current U.S. energy resources, efficiency gains (and plans for more), and infrastructure.

When Stewart shifted to domestic power-related concerns, he asked, "I feel like we've been on the edge of an energy breakthrough for quite some time, but we still can't get past the combustion engine. . . . What is that energy revolution? Is it batteries, like an Elon Musk

would say? . . . What is it that's going to be the revolution?" Moniz responded, "I believe we are actually in the revolution."

"The costs of these clean technologies have been dropping incredibly," the secretary noted, giving the example of LED bulbs, as he looked around the studio.

When the discussion turned to infrastructure, Stewart said he feels as if we're living with 21st century technology but "early 20th century infrastructure." Moniz granted that "Infrastructure is a big deal. We just did a huge report on that."

The first part of that report, the Quadrennial Energy Review, was released on April 21, the day William F. Hederman Jr., DOE deputy director for energy systems and integration and senior advisor to the secretary, discussed it in his keynote presentation to the 2015 ELECTRIC POWER Conference & Exhibition.

Stewart also asked about the smart grid: "Why is that such a difficult effort to get off the ground?" Moniz responded, "It's actually happening," with the deployment of "a lot of IT" being added to the transmission and distribution grids, forming the "core" of the smart grid. He also gave the example of a microgrid being developed in New Jersey. "How will Governor Christie use it to punish his enemies?" Stewart quipped. Moniz responded, "No comment."

The full episode can be viewed [here](#).

Statesman Editorial: Idaho nuclear waste cleanup should be priority for Department of Energy
Idaho Statesman
May 3, 2015
[LINK](#)

U.S. Energy Secretary Ernest Moniz, left, and U.S. Sen. Jim Risch, R-Idaho, talk about Idaho's nuclear research efforts at Idaho National Laboratory in Idaho Falls on Aug. 20, 2014. Moniz spoke at the inaugural Intermountain Energy Summit.

After considering the concerns and proposals to bring spent nuclear fuel into Idaho for research in light of the 1995 Settlement Agreement, and the overall nuclear energy mission of the Idaho National Laboratory in the last six months, we conclude the most pressing matter is for the Department of Energy to get its cleanup programs back on track.

With all due respect to the complicated national and international security matters that Energy Secretary Ernest Moniz has been attending to in recent months, his agency signed on to the settlement agreement 20 years ago with cleanup provisions that are not in compliance. The energy.gov website states the DOE is “committed to a safe, complete cleanup of the environmental legacy of five decades of government-sponsored nuclear weapons development and nuclear energy research. As part of this mission, we safely and cost-effectively transport and dispose of low-level wastes; decommission and decontaminate old facilities; remediate contaminated soil and groundwater; and secure and store nuclear material in stable, secure locations to protect national security.”

Though there are other cleanup issues, we believe the most critical INL one involves the failure to meet a Dec. 31, 2012, deadline to treat sodium-bearing liquid high-level waste. There is roughly 900,000 gallons of this still being stored at INL — some of it going on 60 years. The processing plant that would convert it from liquid to a powdery substance that could be stored safely is yet to be made operable. DOE is working on it.

Reports and updates on progress or promises to get this project up and running are not the same as actually doing it. The 1995 agreement clearly states that Idaho’s sole remedy in light of DOE’s failure in cleanup matters is to suspend DOE spent fuel shipments to INL. The Idaho Attorney General’s office has no choice but to block any said shipments until cleanup resumes, and we support that stance.

We also support the state’s option to “waive performance by federal parties” when circumstances change. In other words, if DOE gets its equipment and process back in action to mitigate the dangerous liquid waste, there is a legal path for a conditional waiver and to allow new spent fuel rods back into the state for research in the lab. John Grossenbacher, director of INL, points out that the 200 pounds of spent fuel INL would like to bring in to Idaho over the next two years is not waste. “It is a small sampling of modern, commercial reactor fuel that has high research value.”

We would argue that the nation, INL and Idaho need this nuclear research to continue. INL is the country’s premiere nuclear energy research facility. To strip it of its mission makes no sense strategically or financially.

INL can not perform its research mission without the spent fuel it

needs in hand to study it. We are thankful that former Govs. Cecil Andrus and especially Phil Batt — who shepherded the 1995 agreement — recently brought attention and a historic perspective to DOE’s non-compliance issues at INL. But we would expect they also could respect that same settlement provides for INL’s continued research and that means it can allow limited levels of spent fuel to be brought into the state.

In the meantime, we challenge Secretary Moniz to keep his agency’s commitments — commitments that go back even before the settlement agreement, all the way back to Dixy Lee Ray, director of the Atomic Energy Commission.

Resume the process of cleaning up, and then we can talk.

DOE on verge of shipping hot-and-fissile materials from Oak Ridge to Nevada

Frank Munger’s Atomic City Underground May 5, 2015

[LINK](#)

After a two-year delay because of objections from the state of Nevada, the U.S. Department of Energy is once again on the verge of shipping highly radioactive and fissionable materials from Oak Ridge to a federal site north of Las Vegas.

A DOE spokeswoman in Washington, D.C., confirmed that a test shipment (without any radioactive material) left Oak Ridge on Monday to “make sure all details are squared away.” Namrata Kolachalam said she could not discuss the actual schedule for shipping the so-called CEUSP (Consolidated Edison Uranium Solidification Project) material from Oak Ridge National Laboratory to the Nevada National Security Site.

More than 400 containers of the nuclear material will eventually to be trucked to the disposal location. The actual number of shipments required has not been disclosed. Because of the fissile nature of the uranium and potential weapons application, the project requires high security.

The new shipment plans were first reported by the Las Vegas Review-Journal. DOE today released a statement from agency Chief of Staff Kevin Knobloch:

“After productive discussions with the State of Nevada, resulting in

numerous accommodations related to transportation, disposal, and stakeholder engagement, the Department of Energy is moving forward with the shipments of the Consolidated Edison Uranium Solidification Program materials from the Oak Ridge site to the Nevada National Security Site. This decision follows discussions by the leadership of both the State of Nevada and the Department of Energy to strengthen our working relationship and to address the concerns of the State over the past 18 months of focused dialogue. The Nevada National Security Site is an important location for the Department of Energy, the State of Nevada, and our Nation, and we look forward to continuing this productive and mutually beneficial relationship.”

The material to be shipped to Nevada is associated with a long-ago project that evaluated the potential of using Uranium-233 as fuel for nuclear reactors. The shipment and disposal of the legacy material attracted scrutiny and concern because the CEUSP stuff is highly radioactive due to the decay of the uranium isotopes, as well as fissionable — which means there is the possibility of it being converted to use in a bomb.

Nevada Gov. Brian Sandoval challenged the Energy Department’s original disposal plans, which were put on hold in early 2013. The state and DOE later formed a working group to discuss the project and address the concerns. The original project has reportedly been modified significantly to add safety features. A memorandum of understanding was signed in December.

The CEUSP material and other stocks of U-233 have been stored for decades in ORNL’s World War II-era Building 3019. Security and maintenance at the old site cost millions of dollars annually.