nuclear watch new mexico

# Formal Comments on the Draft Site-Wide Environmental Impact Statement for Continued Operation of the Los Alamos National Laboratory

April 10, 2025

Mr. Stephen Hoffman
LANL SWEIS Document Manager
National Nuclear Security Administration

*By email to: LANLSWEIS@nnsa.doe.gov*

Dear Mr. Hoffman:

We respectfully submit these formal comments on the Site-Wide Environmental Impact Statement for Continued Operation of the Los Alamos National Laboratory, as provided for by the National Environmental Policy Act.

These comments are also available online at https://nukewatch.org/formal-comments-on-the-draft-site-wide-environmental-impact-statement-for-continued-operation-of-the-los-alamos-national-laboratory.

Sincerely,

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## The Tangible Value of Public Comments under NEPA

Citizen comment in formal NEPA processes has time and again proved to be good for both the government and the public. One dramatic demonstration was public comment on the lack of analysis of the wildfire threat in a draft 1999 LANL Site-Wide Environmental Impact Statement (SWEIS). In response, the final LANL SWEIS included a detailed hypothetical wildfire that became all too real a half year later during the Cerro Grande Fire. That hypothetical scenario aided Lab leadership in their decision to order mandatory evacuation of all but essential personnel. Mitigation provisions in the final LANL SWEIS included fire prevention measures that helped to keep the Cerro Grande Fire a half-mile away from above ground plutonium-contaminated transuranic wastes stored at the Lab's Area G, which could have been catastrophic had their drums ruptured due to high heat.

Even LANL recognized that public comment helped to avert potential catastrophe, writing:

> "It is a story of an EIS process, of helpful public comments, of a timely response ... then a great fire, called Cerro Grande, that proves the value of outsiders' ideas… When the Cerro Grande Fire swept down from the mountains this spring, these extra defensive steps, taken in response to the public comments, paid for themselves many times over. The savings were in the form of the harm to facilities that was reduced or avoided and reduced risk to the public that might have resulted."
> https://hwbdocuments.env.nm.gov/Los%20Alamos%20National%20Labs/General/13435.pdf

This lesson on the value of public comment under NEPA can be extended to this 2025 LANL SWEIS. NNSA would be wise to really take to heart formal public comments as something far more valuable than just checking off a required NEPA compliance box.

## Council on Environmental Quality NEPA Regulations

Nuclear Watch New Mexico strongly opposes the Council on Environmental Quality's proposed removal of National Environmental Policy Act (NEPA) regulations as directed by Executive Order 14154. On his first day in office, President Trump unilaterally terminated the long standing NEPA regulations promulgated by the Council of Environmental Quality (CEQ). How this impacts the NEPA implementing regulations of individual executive branch departments, such as the Department of Energy, remains to be seen, but clearly it won't promote substantial NEPA compliance. In fact, it calls into question how NEPA processes such as this SWEIS will even survive and be carried on into the future.

NEPA plays a critical role in ensuring that federal agencies undergo thorough environmental reviews and public scrutiny. It provides a structured, science-based framework for evaluating environmental impacts, including the effects on the natural environment and human communities. For DOE and NNSA overseeing nuclear weapons production and radioactive waste disposal, NEPA is critically important in protecting public health, environmental integrity, and national security. Weakening these regulations will not lead to better or faster project approvals—it will result in rushed, poorly evaluated decisions that can cause long-term environmental damage, increase legal challenges, and ultimately undermine public health and safety. This rollback creates more uncertainty, as it removes clear review guidelines and introduces the potential for increased delays and litigation as courts step

in to address poorly conducted reviews. The elimination of these regulations is shortsighted, irresponsible, and dangerous.

NEPA has played a vital role in protecting the public from dangerous and poorly conceived projects by enabling citizen input, providing communities, scientists, activists, and conservationists a meaningful voice in decision-making processes. Without these safeguards, major projects could be approved without the necessary input from those most affected. This is not about "cutting red tape"—it is about eliminating accountability, silencing affected communities, and prioritizing industry profits over public safety.

As the U.S. attempts to "modernize" its nuclear arsenal—a plan involving ramping up plutonium pit production that will generate vast amounts of nuclear waste and affect communities across the country—NEPA's review process is critically needed. Without this review, the U.S. modernization plan would proceed without sufficient oversight and zero public input, leading to a far increased likelihood of preventable accidents, toxic exposure, and costly environmental disasters. Fast-tracking complex, high-risk projects under weakened regulations increases the potential for operational failures, contamination events, and long-term policy instability. Gutting NEPA benefits industry and government interests at the expense of public health, environmental sustainability, and accountability.

The final SWEIS should evaluate the impacts of gutting NEPA, especially with respect to project-specific NEPA processes that could possibly spin off from the SWEIS. But to conclude, the interim rule is clear that current CEQ regs still apply to this whole SWEIS process, which of course we expect to be fully followed.

## Summary of Why This Draft Should Be Withdrawn and Reissued

The draft SWEIS is grievously flawed and should be reissued for all the following reasons. Nevertheless, should the NNSA refuse, the substance of these remaining comments should still be considered, responded to, and incorporated into any final SWEIS.

- The NNSA has rigged the draft LANL Site-Wide EIS with three self-serving scenarios:
  - Expanded nuclear weapons programs (contradictorily called the "No Action Alternative").
  - Yet more expanded nuclear weapons programs ("Modernized Operations Alternative").
  - Yet far more expanded nuclear weapons programs ("Expanded Operations Alternative").

- A Reduced Operations Alternative must be included.

- The SWEIS' fundamental justification for expanded nuclear weapons programs is "deterrence." But "deterrence" has always included nuclear warfighting capabilities that could end human civilization overnight.

- The SWEIS purports to align with U.S. obligations under the 1970 NonProliferation Treaty. That is demonstrably false.

- Future plutonium pit production is NOT to maintain the safety and reliability of the existing nuclear weapons stockpile. Instead, it is for new-design nuclear weapons that could lower confidence in stockpile reliability and/or prompt a return to testing.

- The SWEIS' No-Action Alternative violates the National Environmental Policy Act (NEPA).

- The legally required programmatic environmental impact statement on pit production should be completed first, followed by the LANL SWEIS.

- Plutonium pit reuse should be analyzed as a credible alternative to pit production.

- A recent proposal for a data center at LANL is not in the SWEIS. It raises huge issues of future water and electrical use, the appropriateness of commercial interests at a federal lab, and the possible fusion of artificial intelligence and nuclear weapons command and control.

- Recent Executive Orders could strip the final SWEIS of environmental justice and climate change analyses. This must have clarification.

- Planned tritium releases should be fully analyzed.

- The Electrical Power Capacity Upgrade should be analyzed will all credible alternatives.

- The proposed BioSafety Level-3 facility must have its own standalone EIS.

- All Defense Nuclear Facilities Safety Board concerns should be addressed and resolved.

- Genuine comprehensive cleanup should be a preferred alternative.

- A new SWEIS should follow a new overdue Probabilistic Seismic Hazard Analysis.

## General Comments in Support of Withdrawing This Draft SWEIS

### SWEIS Alternatives

According to the Code of Federal Regulations:

> "The alternatives section is the heart of the environmental impact statement… In this section, agencies shall: (a) Rigorously explore and objectively evaluate reasonable alternatives to the proposed action" [1]

**Yet NNSA has rigged the draft LANL Site-Wide EIS with three scripted, self-serving scenarios:**

- Expanded nuclear weapons programs (contradictorily called the "No Action Alternative").

[1] 40 C.F.R. §1502.14, adopted by DOE at 10 C.F.R. §1021.103

- Yet more expanded nuclear weapons programs ("Modernized Operations Alternative").
- Yet far more expanded nuclear weapons programs ("Expanded Operations Alternative").

The third alternative is the National Nuclear Security Administration's official "Preferred Alternative" that incorporates all of the projects and programs of the previous two "alternatives" but adds still more. Essentially the NNSA is writing itself a blank check for whatever it wants to do at LANL. All three alternatives revolve around the expanded production of plutonium pit bomb cores, which NNSA argues is a "No Action Alternative" because it was self-approved in previous lesser analyses under NEPA. But none of that future pit production is to maintain the safety and reliability of the existing nuclear weapons stockpile. Instead it is for future new-design nuclear weapons.[2]

In contradiction to the agency's position, **in September 2024 a federal judge ruled that NNSA had violated NEPA** by not completing a new nationwide programmatic environmental impact statement (PEIS) on its plans for simultaneous pit production at LANL and the Savannah River Site (SRS) in South Carolina. We were very clear in our October 2002 scoping comments that:

> "First, NNSA needs to complete a new nation-wide programmatic environmental impact statement on expanded plutonium pit production instead of relying upon the 2008 Complex Transformation Programmatic Environmental Impact Statement. In addition to being woefully outdated, this begins with the fact that the 2008 PEIS never contemplated simultaneous plutonium pit production at two sites, that is LANL and the Savannah River Site in South Carolina." [3]

NNSA could have completed that PEIS between October 2022 and the issuance of this draft LANL SWEIS in January 2025, and certainly since October 2018 when we first notified NNSA of its legal obligation to complete that PEIS. As distasteful as we find it now, the proper course for NNSA to genuinely comply with NEPA is to complete the PEIS first, followed by a new final LANL SWEIS. Or, as a satisfactory alternative, continue with the LANL SWEIS because of other pressing issues (e.g. cleanup and wildfire protection) while omitting the nuclear weapons programs, to be revisited after the PEIS is completed.

As Nuclear Watch stated in its October 2022 scoping comments for this LANL SWEIS:

> Nuclear Watch New Mexico definitely believes that a Reduced Operations Alternative is not only reasonable but is in the actual best interests of the nation. Such an alternative would:
>
> - Best preserve stockpile reliability by foregoing production of new pits that may substantially deviate from tested legacy designs.
> - Conservatively maintain the existing, extensively tested nuclear weapons stockpile while refraining from new-design nuclear weapons right down to the components level.[4]

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[2] For much more on this please see Declaration of Dylan Spaulding, Senior Scientist at the Union of Concerned Scientists, https://nukewatch.org/wp-content/uploads/2025/01/Settlement-Agreement-and-Exhibits.pdf

[3] *Scoping Comments to the National Nuclear Security Administration On the Los Alamos National Laboratory Site-Wide Environmental Impact Statement*, Nuclear Watch New Mexico, October 18, 2022, https://nukewatch.org/wp-content/uploads/2020/12/NWNM-LLNL-SWEIS-scoping-comments-10-21-20.pdfhttps://nukewatch.org/wp-content/uploads/2020/12/NWNM-LLNL-SWEIS-scoping-comments-10-21-20.pdf

[4] As a negative example, new-design capacitators caused major delays and costly overruns for the B61-12 Life Extension Program and W88 Alteration.

- Augment and accentuate nonproliferation programs, especially the development of monitoring and verification technologies that could help underpin future arms control treaties and lead the way toward a future world free of nuclear weapons.
- In order to best protect New Mexico's precious limited water resources, augment and accentuate cleanup programs that are truly comprehensive, eschewing "cap and cover" that will leave more than 200,000 cubic yards of radioactive and toxic wastes permanently buried in unlined pits and shafts as a permanent threat to groundwater.

The draft SWEIS states:

> NNSA proposes to continue managing the Laboratory and its resources in a manner that meets evolving national security missions and that responds to the concerns of affected and interested individuals and agencies. This SWEIS analyzes the environmental impacts of three alternatives for the continued operation of LANL. (Summary page 4)

The third alternative is the National Nuclear Security Administration's official "Preferred Alternative" that incorporates all of the projects and programs of the previous two "alternatives" but adds still more. Essentially the NNSA is writing itself a blank check for whatever it wants to do at LANL. All three alternatives revolve around the expanded production of plutonium pit bomb cores, which NNSA argues is a "No Action Alternative" because it was self-approved in previous lesser analyses under NEPA.

In its Notice of Intent for the LANL SWEIS the NNSA stated:

> "For the foreseeable future, NNSA does not consider reducing operational or environmental remediation missions at LANL as reasonable. However, the timeframe for the SWEIS analysis is approximately 15 years into the future, and NNSA recognizes that requirements, needs, opportunities, and vision may change over such a long planning horizon. Consequently, NNSA has not made a final decision on whether to include a Reduced Operations Alternative in this SWEIS. NNSA welcomes input on this and any other alternative the public thinks are reasonable and should be analyzed in the SWEIS." [5]

We responded to that by saying in our October 2022 comments:

> "A Reduced Operations Alternative is not only a reasonable alternative but is in the actual best interests of the nation. Such an alternative would best preserve stockpile reliability by foregoing production of new pits that may deviate from tested designs; conservatively maintain the existing, extensively tested nuclear weapons stockpile; augment and accentuate nonproliferation programs, especially the development of monitoring and verification technologies that could help underpin a future world free of nuclear weapons; and augment and accentuate cleanup programs that are truly comprehensive, permanently eliminating the threat to groundwater."

[5] Notice of Intent To Prepare a Site-Wide Environmental Impact Statement for Continued Operation of the Los Alamos National Laboratory, NNSA, August 19, 2022, https://www.federalregister.gov/documents/2022/08/19/2022-17901/notice-of-intent-to-prepare-a-site-wide-environmental-impact-statement-for-continued-operation-of

However, in this draft SWEIS NNSA has clearly rejected a Reduced Operations Alternative. Nuclear Watch New Mexico definitely believes that alternative is not only reasonable but is in the actual best interests of the nation. Such an alternative would:

- Best preserve stockpile reliability by foregoing production of new pits that may substantially deviate from tested legacy designs.
- Conservatively maintain the existing, extensively tested nuclear weapons stockpile while refraining from new-design nuclear weapons right down to the components level.[6]
- Augment and accentuate nonproliferation programs, especially the development of monitoring and verification technologies that could help underpin future arms control treaties and lead the way toward a future world free of nuclear weapons.
- In order to best protect New Mexico's precious limited water resources, augment and accentuate cleanup programs that are truly comprehensive, eschewing "cap and cover" that will leave more than 200,000 cubic yards of radioactive and toxic wastes permanently buried in unlined pits and shafts as a permanent threat to groundwater.

Furthermore, the SWEIS purports to provide support for NNSA's mission as directed by Congress and the President. But in February President Trump made statements that clearly indicate that a new path is possible. For example, he is reported to have said:

> "We'd like to see denuclearization… Tremendous amounts of money are being spent on nuclear, and the destructive capability is something that we don't even want to talk about today, because you don't want to hear it. It's too depressing… So, we want to see if we can denuclearize, and I think that's very possible. And I can tell you that President Putin wanted to do it. He and I wanted to do it. We had a good conversation with China. They would have been involved, and that would have been an unbelievable thing for the planet." [7]

and

> "I'd like to have that as soon as things settle down. I'm gonna have that conference, primarily with China and Russia because those are the two that that really are out there, and we're gonna have them spend a lot less money and we're gonna spend a lot less money -- and I know they're gonna do it. They agreed to it, we were talking about de-nuking, de-nuclearizing, de-nuking, and President Putin and I agreed that we were gonna do it, in a very big way.
>
> There's no reason for us to be building brand new nuclear weapons. We already have so many you could destroy the world 50 times over, 100 times over. And here we are building new nuclear weapons, and they're building nuclear weapons, and China's building new nuclear weapons, and China's trying to catch up because, you know, they're very substantially behind, but within 5 or 6 years they'll be even.
>
> We're all spending a lot of money that we could be spending on other things that are actually, hopefully, much more productive. Hopefully, there'll never be a time when we need those weapons.

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[6] As a negative example, new-design capacitators caused major delays and costly overruns for the B61-12 Life Extension Program and W88 Alteration.

[7] *Donald Trump Provides Nuclear Weapons Update*, Newsweek, January 28, 2025, https://www.newsweek.com/donald-trump-nuclear-weapons-china-russia-2020120

> If there's ever a time when we need nuclear weapons, like the kind of weapons that we're building, and that Russia has and that China has, to a lesser extent, but will have, that's gonna be a very sad day. That's gonna be probably oblivion." [8]

Thus, President Trumps own words indicate that a new draft SWEIS should offer a fourth alternative of not expanding nuclear weapons programs. Moreover, the expansion of nuclear weapons programs as explained in this draft LANL SWEIS is premised on deeply flawed assumptions and distortions, explained (see comment section on "So-Called Deterrence" below).

## So-Called Deterrence

The underlying foundation for the draft LANL SWEIS justifies expanding nuclear weapons programs as "...Nuclear deterrence – Lead the nation in evaluating, developing, and ensuring effectiveness of the country's nuclear deterrent, including the design, production, and certification of current and future nuclear weapons." (Volume 1, PDF p. 44)

The nuclear weapons powers have always used "deterrence" to justify their nuclear stockpiles. It is always "we have nuclear weapons to deter others from using them against us." However, in the case of the United States and the Soviet Union/Russia, "deterrence" is at best only a half truth. First, as an obvious historic matter, the United States was the first and, so far, only country to use nuclear weapons in war.

Fast forward to today. In its 2024 Nuclear Employment Strategy the Pentagon explicitly rejected minimal deterrence while "reiterating the need to maintain counterforce capabilities... not rely[ing] on a counter-value or minimum-deterrence approach..." Counterforce is nuclear weapons jargon for targeting military targets and top political leadership, that is waging nuclear war. This is why both Russia and the U.S. have 1,000s of nuclear weapons instead of just the few hundred needed for minimal deterrence. The latter, also known as counter-value, targets cities and civilian populations, which is deeply immoral, characteristic of the basic nature of nuclear weapons as indiscriminate killers. But, because of inevitable immense collateral damage, both counterforce and counter-value arrive at the same potential end point of millions, if not billions, dead. But that said, nuclear war is more likely to occur under counterforce.

Nuclear warfighting creates pressure for endless modifications and/or new designs for the stockpile, which the 2024 Nuclear Employment Strategy characterizes as "flexible capabilities" and "a wide range of employment options." This is what is driving the U.S.' $1.7 trillion nuclear weapons "modernization" program. This in turn is driving expanded plutonium pit production at LANL, which despite the facade of "No-Action Alternative" is driving this draft LANL SWEIS. At a certain point the so-called "deterrence" meant to deter others becomes the threat that tempts adversaries into pre-emptive first strike. This fuels an escalating nuclear arms race that imperils us all.

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[8] *Trump Suggests U.S. Stop Building Nuclear Weapons, Cut Pentagon Budget In Half*, Real Clear Politics, February 13, 2025, https://www.realclearpolitics.com/video/2025/02/13/trump_suggests_us_stop_building_nuclear_weapons_cut_pentagon_budget_in_half.html

To add to this, the very concept of "deterrence" is now being turned on its head. The draft LANL SWEIS claims:

> "Nuclear weapons have played, and will continue to play for the foreseeable future, a critical role in deterring nuclear attack and in preventing large-scale conventional warfare between nuclear-armed states. U.S. nuclear weapons not only defend the U.S. and our allies against conventional and nuclear threats, but also help allies avoid the need to develop their own nuclear arsenals. This, in turn, furthers global security." (Volume 1, PDF page 32).

Putin's nuclear saber rattling has deterred the U.S. and NATO from militarily intervening in Ukraine. It remains to be seen if large-scale conventional warfare between nuclear-armed states (including NATO) will be prevented. In addition, given new geopolitical uncertainties introduced by the Trump Administration, there is increasing discussion in Europe, South Korea and Japan of their own possible independent "deterrents."

It is simply a different geopolitical world now. Therefore, under a fourth alternative of not expanding nuclear weapons programs for so-called deterrence, the LANL SWEIS should analyze as a fourth alternative U.S. global leadership toward nuclear disarmament that the nuclear weapons powers pledged to more than a half century ago in the 1970 NonProliferation Treaty.

Finally, there is another reason why the deterrent itself is the threat, perhaps the easiest reason to understand. There is a long history of nuclear weapons accidents and near miscalculations when the imperative is that there can be zero. The control of nuclear weapons must be perfect, and human beings are not perfect. For example, four megaton bombs crashed on the coast of Palomares, Spain, in 1966, widely spreading plutonium. Two megatons bombs were accidentally dropped near Goldsboro, NC, in 1961. One of them automatically went through four of five arming steps with only the last one preventing it from showering Washington, DC with fallout.[9]

We have the instance of one Soviet submarine officer vetoing the decision by two other officers to launch a nuclear-armed torpedo at a U.S. Navy destroyer during the Cuban Missile Crisis. At that time, it would have likely instigated nuclear Armageddon. We have the instance in 1983 when Lieutenant Colonel Stanislav Petrov of the Soviet Air Defense Forces decided not to alert his higher ups, intuitively sensing that something was wrong. Early warning radars had mistaken sunlight reflecting off of clouds for incoming American ICBMs.[10]

All of these instances may seem to have taken place long ago and operational safety measures have surely improved since then. But there is a new wrinkle - - artificial intelligence. Will AI trump human judgment when human instinct was integral to avoiding nuclear Armageddon? We can't really know until it is far too late. But the only way to 100% eliminate that threat is to eliminate nuclear weapons. It is the "deterrent" itself that is the threat.

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9 https://nsarchive2.gwu.edu/nukevault/ebb475/ Excerpt: "New Details on the 1961 Goldsboro Nuclear Accident Multi-Megaton Bomb Was Virtually "Armed" When It Crashed to Earth in North Carolina, Sandia Lab Report Concluded Nuclear Stockpile Safety Review from the Mid-1970s Identified Four Weapons Systems that Needed "Time Urgent" Evaluation Because of "Nuclear Detonation Safety Concerns" 1986 Sandia Lab Study Found that, with Respect to "Fully Assembled" and "Combat-Ready" Nuclear Weapons, U.S. Could Not Claim "in an Absolute Sense, that We Take Every Action to Ensure their Safety"

10 https://www.armscontrol.org/act/2017-10/news-briefs/man-who-saved-world-dies-77

## Two Near-Peer Nuclear Adversaries?

Much is made of the fact that China appears to be rapidly expanding its nuclear weapons stockpile after a consistent history of relative moderation, prompting alarms over two near-peer adversaries (i.e., Russia and China). The draft SWEIS states:

> While the U.S. has continued to reduce the number and prominence of nuclear weapons, others, including Russia and China, have moved in the opposite direction. They have added new types of nuclear capabilities to their arsenals, increased the prominence of nuclear forces in their strategies and plans, and engaged in increasingly aggressive behavior, including in outer- and cyberspace. By the 2030s, the U.S. will, for the first time, face two major nuclear powers as strategic competitors and potential adversaries. This will create new stresses on stability and new challenges for deterrence, assurance, arms control, and risk reduction. (Volume 1, PDF p. 32)

First, as the biblical passage goes, "Thou hypocrite, first cast out the beam out of thine own eye; and then shalt thou see clearly to cast out the mote out of thy brother's eye." The U.S. is not lowering the number of its nuclear weapons. In fact, dismantlements are the lowest they have ever been since the end of the Cold War. Despite denials, the U.S. has added new military capabilities to its nuclear weapons stockpile, witness the more accurate W76-1, the low-yield W76-2, and the limited earth penetrators B61-11 and -12. Concerningly increasingly aggressive behavior, as one example one can recall Trump threatening "fire and fury like the world has never seen" on North Korea.
But the concept of two near-peer nuclear adversaries has potentially huge implications that could directly impact everything, including LANL. In October 2023 the Congressional Commission on the Strategic Posture of the United States:

> "... conclude[d] that America's defense strategy and strategic posture must change in order to properly defend its vital interests and improve strategic stability with China and Russia. Decisions need to be made now in order for the nation to be prepared to address the threats from these two nuclear-armed adversaries arising during the 2027-2035 timeframe. Moreover, these threats are such that the United States and its Allies and partners must be ready to deter **and defeat** both adversaries simultaneously." (Bolded emphasis added)

First, the "and defeat" is significant, going beyond just "deterrence" into nuclear warfighting and planning to win it. The Commission's specific recommendations are a throwback to the first nuclear arms race. They include deploying multiple warheads on intercontinental ballistic missiles (which increases strategic instability), possibly deploying road mobile ICBMs, putting strategic bombers back on continuous alert status, adding more heavy bombers and strategic submarines, and increased emphasis on tactical or battlefield nuclear weapons. The Commission essentially calls for two deterrents, one for Russia and one for China, with unspecified consequences for the future size of the U.S. stockpile.

To achieve all this, the Commission recommends that "DOE/NNSA plan to increase production capacity beyond current POR [program of record]." The National Nuclear Security Administration's current plan is to produce at least 30 plutonium pits per year at the Los Alamos National Laboratory (LANL) and at least 50 pits per year at the Savannah River Site (SRS). In alignment with that, the Commission recommends the replacement of LANL's pit production facility known as PF-4. That would be a huge shift from the current program of record of ~$10 billion in upgrades over a decade.

It would be a huge and controversial expense, when at the same time both LANL and SRS are experiencing serious cost increases and schedule delays.

Note that the Commission said, "Decisions need to be made now in order for the nation to be prepared to address the threats from these two nuclear-armed adversaries." The Commission's report received widespread bipartisan praise and support. It's difficult to believe that planning is not already taking place within NNSA and LANL to meet at least some of the Commission's recommendations. The LANL SWEIS should disclose that planning, particularly as it pertains to increased rates of plutonium pit production and/or a new pit production facility at LANL.

Finally, yet again, there should be a fourth alternative in the LANL SWEIS of restrained nuclear weapons programs that seek to conservatively and reliably maintain the stockpile while the U.S. demonstrates international leadership toward global nuclear disarmament.

## The NonProliferation Treaty

The draft LANL SWEIS hypocritically claims that:

> "NNSA missions are conducted fully consistent with current treaty obligations. The SSMP [NNSA's Stockpile Stewardship and Management Plan] is fully consistent with and supports the U.S. commitment to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT)... In Article VI of the NPT, treaty parties "undertake to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a treaty on general and complete disarmament under strict and effective international control." The U.S. takes this commitment seriously and has emphasized dedication to both the long-term goal of eliminating nuclear weapons and the requirement that the U.S. has modern, flexible, and resilient nuclear capabilities that are safe and secure, until such a time as nuclear weapons can prudently be eliminated from the world... The NPT does not provide any specific date for achieving the ultimate goal of nuclear disarmament, nor does it preclude the maintenance of nuclear weapons until their disposition. Continued operations at LANL enable NNSA to maintain the safety, reliability, and performance of the U.S. nuclear weapons stockpile until the ultimate goals of the NPT are attained and are consistent with the NPT." (Volume 1, PDF page 33)

First, in 1996 the World Court concluded that there is indeed a timebound obligation in which the NPT Article VI mandate for "negotiations in good faith on effective measures relating to cessation of the nuclear arms race" must take place." It's like come on, the NNSA invokes how the NPT has no specific date after 54 years? That is not credible. It is also not credible how the U.S. refused to recognize the World Court, which after all does reflect majority world opinion.

On the question of when nuclear weapons can be "prudently" eliminated from the world, if not after the end of the Cold War, when will it ever be done? The U.S.' $1.7 trillion "modernization" program directly violates NonProliferation Treaty Article VI. LANL plays a central role in this through the design of new nuclear weapons and expanded plutonium pit production for them. For the LANL SWEIS to begin to claim by extension that it "is fully consistent with and supports the U.S. commitment to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT)" requires that it have a fourth alternative of not expanding nuclear weapons programs. The final SWEIS should comport

not only with the NPT's mandate to disarm nuclear stockpiles, but also with the essential need for the U.S. to lead by example toward ridding the world of weapons of mass destruction.

## The Treaty on the Prohibition of Nuclear Weapons

Back to "NNSA missions are conducted fully consistent with current treaty obligations." The silence in the LANL SWEIS' 1,000+ pages is deafening with the omission of any mention whatsoever of the Treaty on the Prohibition of Nuclear Weapons. That ban treaty, similar to chemical and biological weapons ban treaties that the U.S. helped to orchestrate, has now been in effect for 4 years and ratified by 73 countries (approaching a majority of nations and climbing). The nuclear weapons ban treaty came to be out of concern for the humanitarian consequences of nuclear war which the nuclear powers have suppressed, and out of the non-weapons states frustration that the weapons states have never begun to honor the NonProliferation Treaty's Article VI mandate to disarm.

Granted that the U.S. has no "treaty obligation" under the TPNW because it is vehemently against it and has pressured other nations to not sign it. The LANL SWEIS should fully explain and justify why that is so, and why the United States does not at least maintain observer status at the formal Meetings of the State Parties to the Treaty on the Prohibition of Nuclear Weapons held at the United Nations.

## Maintaining Stockpile Reliability

There are more than forty references in the draft SWEIS that one of LANL's main missions is "maintaining and enhancing the safety, reliability, and effectiveness of the U.S. nuclear weapons stockpile." "Deterrence" discussed above and "stockpile reliability" are the nuclear weapons establishment's quasi-religious mantras for its $1.7 trillion "modernization" program, which if repeated every year induces Congress to shower it with money. But given LANL's role in designing and producing new design nuclear weapons, is this really true?

The draft LANL SWEIS quotes "Restoring the ability to produce plutonium pits for primaries will guard against the uncertainties of plutonium aging in today's stockpile and will allow new pit designs to be manufactured, if necessary for future weapons," as one of the three pillars of Biden's 2022 Nuclear Posture Review. (Volume 1, PDF page 32).

It is an indisputable fact that new pit designs will be manufactured for future new-design nuclear weapons, specifically the W87-1 ICBM warhead at LANL and the sub-launched W93 warhead at the Savannah River Site (SRS). The related corollary omitted from public attention is that no future pit production is to maintain the safety and reliability of existing nuclear weapons, which have been extensively tested. None, zero. New pits with changed designs cannot be full-scale tested because of the existing international testing moratorium, thereby likely eroding confidence in stockpile reliability. Or, alternatively, these new designs could prompt the U.S. to return to nuclear weapons testing, which a former national security advisor to Trump has already called for. While renewed nuclear weapons testing could do much to restore confidence in stockpile reliability, it would have disastrous international proliferation impacts.

Ironically, in 2006 independent experts concluded that plutonium pits are reliable for at least 100 years, without attempting to determine an expiration date (the average age of pits in the stockpile is now ~42). A subsequent 2012 Livermore Lab study projected that plutonium would age "gracefully"

at 150 years. There are already at least 15,000 existing pits stored at the Pantex Plant near Amarillo, TX. There have been no updated full pit life studies since 2006. Why is that? Does NNSA already know that any new, full pit aging studies would not support its aggressive drive to expand plutonium pit production?

The inescapable conclusion is that future pit production is NOT for the claimed twin rationales of deterrence and maintaining stockpile reliability. Instead, it is for new design nuclear weapons for the new escalating nuclear arms which this LANL SWEIS process is aiding and abetting. Therefore, the LANL SWEIS should be reissued with a fourth alternative of conservatively and prudently maintaining the reliability of the existing, extensively tested nuclear weapons stockpile while the U.S. plays a global leadership role toward fully honoring the NPT's mandate for nuclear disarmament. Once again, there should be a fourth alternative in the LANL SWEIS of not expanding nuclear weapons programs.

## Plutonium Pit Aging

Yet another distortion driving the LANL SWEIS is over the aging (or rather the lack of it) of plutonium pits. As LANL Director Thom Mason puts it:

> "We don't have an immediate concern with aging. Up to this point, the plutonium pits in America's nuclear weapons have been very robust. But the pits we have today were largely manufactured in the 1980s, and we don't have the predictive ability to say with certainty that our current, 40-year-old pits will be good until any particular date. It's sort of glass half full, glass half empty; we can't prove that they will fail, but we also can't prove that they will work. **The best way to deal with this dilemma is to "take it off the table. We do that by making new pits, immediately."** [11]

With that he justifies spending tens of billions of dollars on the production of plutonium pits, not to ensure the safety and reliability of the existing nuclear weapons stockpile, but for new designs that can't be tested or, alternatively, could push the U.S. back into testing. Tens of billions of dollars that will permanently reshape the Lab into a nuclear weapons production facility, permanently impacting northern New Mexico as well. Tens of billions of dollars that will help accelerate the new nuclear arms race that is imperiling us all. And, of course, it's easy to fail to prove whether pits work or not if you don't try.

During the Cold War the Department of Energy's Rocky Flats Plant near Denver was annually producing up to 2,000 plutonium pits, the fissile cores or "triggers" of nuclear weapons. It ceased production in 1989 after the FBI and EPA conducted a dramatic raid investigating environmental crimes. In 1997 limited production of up to 20 pits per year was re-established at the Los Alamos National Laboratory, although the Lab never produced more than eleven pits in any one year.

In the early 2000's the National Nuclear Security Administration (NNSA) was increasingly sounding alarms over plutonium pit aging, saying that pits produced at Rocky Flats in the 1980's would last

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[11] *Pit production explained*, LANL, December 21, 2021, https://discover.lanl.gov/publications/national-security-science/2021-winter/pit-production-explained, bolded emphasis added.

only on the order of 45 years.[12] But even before then, in 1999 the JASONs (longtime expert consultants to the federal government) were reporting that:

> "Pit lifetimes are now discussed as 60 or 90 years… because there is neither evidence nor physical reason to expect that pit aging on the present time scale has in any way degraded weapons performance, there is no reason to rush decision making as to future pit production rates."[13]

In 2000, Raymond Jeanloz, a member of the JASONs (but writing in his own capacity), published these findings:

> "The most striking result of these studies is that the local deviation from the ideal fcc [face-centered cubic] structure vanishes with aging, disappearing sooner in samples having a higher Ga [gallium, used to alloy the plutonium] content. It is not surprising that the most gallium-poor samples would retain the most structural nonideality over time, because Ga is known to stabilize the d phase (figure 2b); on the nanometer scale, **aging appears to have the same effect as a greater Ga concentration, in that it shifts the Pu to a more stable configuration**...
>
> "The overall finding from a variety of observations, including detailed electrical-resistivity measurements as a function of temperature (which are sensitive to the density and distribution of defects present), positron annihilation spectroscopy, and other studies, is that the **Pu samples not only retain long-range order but actually get closer to the ideal crystal structure with increasing age**...
>
> "Surprisingly, however, the **high explosive used in US weapons has been found to improve systematically with age** in key measures of performance, such as yielding characteristics and detonation-front velocities.
>
> "Thus, **crucial primary-stage components that were initially subject to concern have been shown through the SSP [Stockpile Stewardship Program] to be robust as they age**. Indeed, there is now consensus among specialists that the Pu pits in the US stockpile are stable over periods of at least 50–60 years, with the most recent studies suggesting a far longer period. More important than the indications of benign aging is the demonstration that the materials are now becoming understood in sufficient detail, and surveillance methods are becoming sensitive enough, to ensure that any signs of degradation will be observed in time to apply the necessary repairs or refurbishment." [14]

Despite this expert advice, the NNSA began to push for a new-design Reliable Replacement Warhead and related expanded plutonium pit production. This initially included a proposal for a "Modern Pit Facility" capable of producing up to 450 pits per year, with concerns over possible pit

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[12] **"In approximately 2020, some pits in the enduring stockpile will be approaching the 45-year pit lifetime."** *Draft Supplemental Programmatic Environmental Impact Statement on Stockpile Stewardship and Management for a Modern Pit Facility*, USDOE, May 2003, Volume 1, page 2-**4**, https://www.energy.gov/sites/default/files/EIS-0236-S2-DEIS-01-2003.pdf **In the face of Congressional and public opposition DOE never completed a final programmatic environmental impact statement for the Modern Pit Facility.**

[13] *Remanufacture*, JASONs, JSR-99-300, October 1999, https://rlg.fas.org/JSR-99-300.pdf

[14] *Science-Based Stockpile Stewardship*, Raymond Jeanloz, Physics Today, 2000, bolded emphases added, https://nukewatch.org/wp-content/uploads/2024/02/Science-Based-Stockpile-Stewardship.pdf

aging cited as the primary driver for this huge new pit production plant.[15] However, in 2006 the JASONs concluded in a well-publicized report that plutonium pits have reliable lifetimes of at least 100 years.[16] Following that, Congress deleted funding for both the Reliable Replacement Warhead and the Modern Pit Facility.

In the mid-1990's J. Carson Mark[17] told NukeWatch personnel that from the beginning LANL had set aside plutonium pits for the express purpose of studying how they age. A Freedom of Information Act (FOIA) request quickly got a response from DOE acknowledging the existence of these "set aside" experiments, but that everything about them was classified. On a side note, Mark telling Nuclear Watch later prompted the organization to ask then-Senator Jeff Bingaman (D-NM) to require the 2006 JASON pit life study resulting in their 2006 conclusion that pits last at least a century.[18]

The debate over plutonium pit aging has been going on for decades, with some NNSA and lab people disputing the accuracy of the 2006 JASON conclusion. Concerning the results of the set aside experiments, Mark exclaimed to Nuclear Watch that, "the big news was no news!", that is plutonium pits do not functionally age in any time period of practical relevance. If indeed these set aside experiments exist, NNSA should generally disclose them and incorporate them into any ongoing studies about plutonium pit aging. The status, good or ill, of these legacy pits should directly inform the need for producing or not new pits. And if the existence of these set aside experiments is true, it speaks ill of NNSA and its predecessor DOE Defense Programs to have not disclosed them long ago.

In 2012 the Lawrence Livermore National Laboratory added to the reassuring data about pit aging by announcing:

> "This continuing work shows that no unexpected aging issues are appearing in plutonium that has been accelerated to an equivalent of ~ 150 years of age. **The results of this work are consistent with, and further reinforce, the Department of Energy Record of Decision to pursue a limited pit manufacturing capability in existing and planned facilities at Los Alamos instead of constructing a new, very large pit manufacturing facility (called the Modern Pit Facility) that would have been capable of producing hundreds of pits a year.**
>
> Bruce Goodwin, principal associate director for Weapons and Complex Integration, says he is "extremely pleased" at the continuing positive results… The results, he says, are highly positive for

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15 See *Draft Supplemental Programmatic Environmental Impact Statement on Stockpile Stewardship and Management for a Modern Pit Facility*, USDOE, May 2003, Volume 1, Sec. 2.1.1. "Pit Aging as a Driver," page 2-1, https://www.energy.gov/sites/default/files/EIS-0236-S2-DEIS-01-2003.pdf.

16 *Pit Lifetimes*, JASON, November 2006, www.nukewatch.org/facts/nwd/JASON_ReportPuAging.pdf This JASON study came about because Nuclear Watch New Mexico, knowing of the earlier *Remanufacture* JASON report, suggested to then-Senator Jeff Bingaman that a new JASON pit lifetime study would be appropriate. He then successfully passed that requirement through a**n** amendment to the 2004 Defense Authorization Act.

17 Manhattan Project physicist and leader of LANL's Theoretical Division from 1947 to 1973

18 See JASON Plutonium Pit Lifetime Report, November 28, 2006, https://nukewatch.org/resources-and-information/nuclear-weapons-complex-documents/

> the safety and reliability of the stockpile and for **avoiding the costs associated with remanufacturing pits."**[19] (Bolded emphases added)

Nevertheless, in May 2018 the Department of Defense and NNSA announced an aggressive plan to produce at least 80 pits per year,[20] with simultaneous production at LANL of at least 30 pits per year and at least 50 pits per year at the Savannah River Site, costing at least $50 billion over 30 years.[21]

The FY 2019 Senate Energy and Water Development Committee report (S.R. 115-258) mandated a new JASON study that should:

> "…include recommendations of the study for improving the knowledge, understanding, and application of the fundamental and applied sciences related to the study of plutonium aging and pit lifetimes, an estimate of minimum and likely life-times for pits in current warheads, and the feasibility of reusing pits in modified nuclear weapons. The report shall be submitted in unclassified form but may include a classified annex." [22]

However, JASON did not have time to do a full study, as it said….

> The report requested by the SEWD **[**Senate Energy and Water Development Committee**]** was too wide in scope for JASON to complete during its 2019 Summer Study. NNSA, JASON, and SEWD staff agreed to divide the study into two phases:
> • Phase One: Perform a 2019 JASON Summer Study that would generate a letter report covering updates since the prior JASON study on plutonium aging, Pit Lifetime, delivered in 2006.
> • Phase Two: Assess the need for the full study, and if deemed necessary and timely, perform a more detailed, multi-year JASON study.[23]

Phase One, the letter report, diminutive in size (all of two and a half pages), was completed. For Phase Two, in the letter report JASON did assess the need for a new study (see below) but did not receive any further directive from Congress or the NNSA to "perform a more detailed, multi-year JASON study."

However, conveniently for NNSA LANL Director Thom Mason, the JASONs did recommend that "pit manufacturing be re-established as expeditiously as possible in parallel with the focused program to understand Pu aging…" So NNSA has moved aggressively to expand plutonium pit

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19 *Plutonium at 150 years*, LLNL, 2012, https://www.llnl.gov/news/plutonium-150-years

20 *Joint Statement from Ellen M. Lord and Lisa E. Gordon-Hagerty on Recapitalization of Plutonium Pit Production***,** National Nuclear Security Administration, May 10, 2018, www.energy.gov/nnsa/articles/joint-statement-ellen-m-lord-and-lisa-e-gordon-hagerty-recapitalization-plutonium-pit

21 See ***Plutonium Pit Production Engineering Assessment Results***, slide 10, https://nukewatch.org/newsite/wp-content/uploads/2019/03/FINAL-Pu-Pit-Production-EA-Results-05.14.18_Unclassified.pdf This combines Alternative 1 (SRS) and Alternative 2a (LANL) for a total of $43 billion. Since then the construction costs of the Savannah River Plutonium Processing Facility have more than doubled to $11 billion, rounding out pit production costs over 30 years at $50 billion. This is bound to go up. It should also be noted that NNSA cost estimates of new warheads do not include the cost of pit production.

22 Senate Report 115-258, ENERGY AND WATER DEVELOPMENT APPROPRIATIONS BILL, 2019, page 104, https://www.congress.gov/115/crpt/srpt258/CRPT-115srpt258.pdf

23 Letter Report to the NNSA, JASON, November 13, 2019, but not transmitted by NNSA to Congress until April 6, 2020, https://irp.fas.org/agency/dod/jason/pit-aging.pdf

production but has not updated JASON-reviewed pit aging data as far as is publicly known. It is perhaps noteworthy that the leader of the 2019 JASON Letter Report is now NNSA Deputy Administrator of Defense Programs.

In that capacity, Marv Adams again trotted out plutonium aging as a declarant in the lawsuit in which a federal judge ruled to be in noncompliance with NEPA, claiming "Pit performance degrades over time... There is no concern over reliability today, but concerns will develop as existing pits continue to age." [24] If so, show us the evidence!

What he also declared is that the:

> "requirements these [future] warheads must meet differ from those met by existing warheads. In some cases, existing pits that might seem available for reuse are not well suited to the new requirements or are not available in the needed quantities. This is one reason pit manufacturing is needed without further delay."

Those "requirements" are of course not specified. But here one of our central points is again reaffirmed. **Pit production is not being driven by pit aging, although that is a primary false justification for it. Pit production is being driven by new-design nuclear weapons for the new arms race.**

The 2019 JASON letter does point the way to what future pit aging study should address:

> "…in general, studies on Pu aging and its impacts on the performance of nuclear-weapons primaries have not been sufficiently prioritized over the last decade."
>
> "The [labs' pit aging studies] program should assess and, if necessary, mitigate threats to primary performance caused by Pu aging. The labs briefly presented their program to address Pu aging to JASON. The plan seemed sensible, but a detailed JASON assessment would require additional information about the program as well as technical details.
>
> Continued study of Pu-aging should address the following:
>
> • Investigation of the properties of naturally and artificially aged Pu that are relevant to primary yield. These include compressibility, strength, and entropy at weapons-relevant pressures and densities.
> • Completion of aging studies for the full set of Pu materials used in the stockpile.
> • Extending the range of accelerated aging to identify the types, modes, timescales, and uncertainties in changes of Pu behavior that would affect primary performance.
> • The utility of integrated sub-critical experiments with new and aged Pu pits should be explored. They could cover the temperature and pressure conditions encountered during primary implosion to provide information about consequences of Pu aging."

The NNSA and the nuclear weapons labs have capitalized on this half-of-a study, citing it as a "paradigm shift." For example, as the Los Alamos National Laboratory puts it:

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[24] DOE/NNSA Plutonium Pit NEPA Settlement Agreement 01/16/25 https://nukewatch.org/wp-content/uploads/2025/01/Settlement-Agreement-and-Exhibits.pdf PDF p. 27

> "In 2019, the independent scientific advisory group Jason released a study that assessed plutonium pit lifetimes. The study, a follow up to the 2006 Jason report that concluded there wasn't enough proof to support a plutonium aging issue, stated that plutonium aging might in fact eventually impact the reliability of U.S. nuclear weapons. In the unclassified summary, the authors "urge that pit manufacturing be re-established as expeditiously as possible in parallel with the focused program to understand aging, to mitigate against potential risks posed by Pu aging on the stockpile."
> With this sudden paradigm shift, concern about aging pits has become more palpable in recent years. How much longer will pits last?
>
> "We don't have an immediate concern with aging," says Los Alamos Director Thom Mason. "Up to this point, the plutonium pits in America's nuclear weapons have been very robust. But the pits we have today were largely manufactured in the 1980s, and we don't have the predictive ability to say with certainty that our current, 40-year-old pits will be good until any particular date. It's sort of glass half full, glass half empty; we can't prove that they will fail, but we also can't prove that they will work."
>
> **The best way to deal with this dilemma is to "take it off the table," Mason explains. "We do that by making new pits, immediately."** (Bolded emphasis added.) [25]

With that the LANL Director justifies an expanded plutonium pit production program that will cost tens of billions of dollars, raise occupational and public risks, generate increase radioactive wastes with uncertain disposal pathways, fundamentally transform the Lab into a nuclear weapons production site and fuel the increasingly dangerous new nuclear arms race.

Congress has made its concern over the lack of pit aging studies explicit in legislation. The FY 2021 Consolidated Appropriations Act enacted the following provision:

> "Pit and Plutonium Aging.-There is concern with the apparent lack of focus on advancing knowledge regarding pit and plutonium aging since the JASONs conducted its first study in 2006. Given the future needs of the nation's nuclear deterrent, a robust program of research and experimentation is needed. Therefore, NNSA is directed to develop a comprehensive, integrated ten-year research program for pit and plutonium aging that represents a consensus program among the national laboratories and federal sponsors. Such a plan shall include estimated cost of ongoing research, new or upgraded capability needs, and key near-, mid-, and long-range milestones. The plan shall be submitted to the Committees on Appropriations of both Houses of Congress not later than 180 days after enactment of this Act." [26]

Congress gave further direction in the FY 2023 Defense Authorization Act:

> SEC. 3124. CERTIFICATION OF COMPLETION OF MILESTONES WITH RESPECT TO PLUTONIUM PIT AGING.

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[25] *Pit production explained*, LANL, December 21, 2021, https://discover.lanl.gov/publications/national-security-science/2021-winter/pit-production-explained

[26] FY 2021 Consolidated Appropriations Act, Division D, p. 108, https://www.aip.org/sites/default/files/aipcorp/images/fyi/pdf/Budgets/fy21-approps-nnsa-final-explanatory-statement.pdf

> (a) REQUIREMENT.—The Administrator for Nuclear Security shall complete the milestones on plutonium pit aging identified in the report entitled ‘‘Research Program Plan for Plutonium and Pit Aging’’, published by the National Nuclear Security Administration in September 2021.... and
> (2) seek to enter into an arrangement with the private scientific advisory group known as JASON to conduct, not later than 2030, an assessment of plutonium pit aging.

Compelled by a Freedom of Information Act request, NNSA released its 2021 ‘‘Research Program Plan for Plutonium and Pit Aging” to the public, but it is nearly 50% redacted (which is under appeal). Why the lack of openness over plutonium pit aging? Surely general findings could be disclosed without revealing classified design details. This casts a pall of suspicion that NNSA is deliberately dragging its heels on a new, comprehensive pit aging study because it knows it won't support its aggressive drive for production of new design pits for new design nuclear weapons. And why wait until 2030 for a new assessment of pit aging when by that time tens of billions of dollars will have been spent of plutonium pit production?

This draft LANL SWEIS notes this public scoping comment: ‘Commenters request that the Plutonium Pit Aging Study be completed by NNSA before pit production starts.” This draft LANL SWEIS responds with “*The need for pits was evaluated in the CT SPEIS [2019 Complex Transformation Supplemental PEIS], the [2020] SRS Pit Production EIS, and the 2020 LANL SWEIS SA. These documents address the Plutonium Pit Aging Study.”* (Volume 2, PDF page 210)

We roundly condemn that statement as misleading, more NNSA obfuscation, and downright wrong. NNSA has not fully disclosed the issue of plutonium pit aging, or rather the lack of it, since the 2006 Jason Life Study, even as it spends tens of billions of dollars for new-design nuclear weapons for the new nuclear arms race. **We reiterate, there should be a new and full independent pit life study before plutonium pit production begins. We regard this draft LANL SWEIS as illegitimate until that happens.**

## Plutonium Pit Production, LANL and this SWEIS

The draft LANL SWEIS purports the “No-Action Alternative” to be as follows:

> NNSA analyzed the No-Action Alternative to comply with the CEQ's [Council on Environmental Quality's] NEPA implementing regulations (40 CFR Parts 1500–1508) and to provide a baseline against which the impacts of the Proposed Action can be compared...An example of an approved action based on an earlier NEPA document is NNSA's 2020 decision to implement elements of the Expanded Operations Alternative from the 2008 SWEIS as needed to produce a minimum of 30 war reserve plutonium pits per year for the national pit production mission...” (Volume 1, PDF page 53)

For overall context, NNSA's Proposed Action in this draft SWEIS is its “Expanded Operations Alternative.” It incorporates the No-Action Alternative, thereby incorporating production of at least 30 pits per year all well.

First of all, with respect to the above SWEIS excerpt, the Trump Administration has unilaterally terminated the CEQ's NEPA Implementing Regulations without congressional authorization (see specific section below). This calls into question the fundamental legal structure of this draft SWEIS

and how it will play out in the final SWEIS. This is a serious topic that should be explained and addressed in the final.

Second, the NEPA process leading to the NNSA's Record of Decision for production of at least 30 pits per year following its 2020 Supplement Analysis of the 2008 LANL SWEIS was highly inadequate. As NNSA knows all too well, it has been the subject of litigation by Nuclear Watch New Mexico and other co-plaintiffs. In extensive formal comments for the 2019 Complex Transformation Supplemental PEIS, the 2020 LANL SWEIS Supplement Analysis and the 2020 Savannah River Site Pit Production Environmental Impact Statement, our single biggest point was that NNSA must complete a nationwide programmatic environmental impact statement on pit production because of its 2018 decision for simultaneous pit production at two sites. Prior to filing litigation in June 2021, we wrote to NNSA five times beginning in October 2018 warning the agency of that legal requirement (and we never got a response). In September 2024 a federal judge agreed with us, ruling that indeed NNSA had violated the National Environmental Policy Act (NEPA) by not completing a PEIS on plutonium pit production.

NNSA's 2020 LANL Supplement Analysis did not analyze simultaneous production at two sites and the interdependence of other impacted sites (for example the Lawrence Lab, the Kansas City National Security Complex, and the Waste Isolation Pilot Plant) in the nationwide plutonium pit production program. Its Record of Decision is therefore of questionable legality. It then also follows that inclusion of production of at least 30 pits per year at LANL as part of the so-called No-Action Alternative is of questionable legality.

In order to address certain points that are still relevant, here we incorporate some excerpts from our formal comments on the 2020 draft LANL Supplement Analysis:

> "NNSA has summarized the need for the draft LANL Supplement Analysis as follows:
>
> > "NNSA is preparing the SA to determine whether, prior to proceeding with the action to produce plutonium pits at a rate of no fewer than 30 pits per year no later than during 2026, the existing 2008 SWEIS for Continued Operations of LANL should be supplemented, a new environmental impact statement prepared, or no further National Environmental Policy Act (NEPA) analysis is required."
>
> This draft Supplement Analysis goes on to "preliminarily" conclude that NNSA will NOT prepare a new LANL site-wide environmental impact statement, which is the wrong decision. However, even before the question of a new site-wide environmental impact statement (EIS) for Los Alamos Lab, we believe that NNSA is legally required to first complete a new programmatic environmental impact statement (PEIS) on its nation-wide plans for expanded plutonium pit production. This is necessary to 1) raise the production cap of 20 pits per year explicitly set by the 1997 Stockpile Stewardship and Management PEIS; and 2) because NNSA now proposes a second site, the Savannah River Site (SRS) in South Carolina, for redundant pit production, which is inherently a "programmatic" decision.
>
> NNSA argues that it can rely upon an outdated 2008 Complex Transformation PEIS which considered various levels of expanded plutonium pit production at five specific NNSA candidate sites. However, that outdated document did not consider simultaneous production at two sites. This changed circumstance is justifiable cause alone for a new programmatic environmental impact statement.

When determining whether or not to prepare a PEIS, guidance must be sought in both DOE NEPA regulations and directives such as from the Council on Environmental Quality. The CEQ memo entitled *Effective Use of Programmatic NEPA Reviews*, December 2014, lays out when a PEIS shall be prepared. It states that the PEIS must be undertaken from the start of a proposal and for the public to be allowed to provide comments on the programmatic proposal, which NNSA has denied to the public.

The CEQ memo states:

> Programmatic NEPA reviews address the general environmental issues relating to broad decisions, such as those establishing policies, plans, programs, or suite of projects, and can effectively frame the scope of subsequent site- and project-specific Federal actions. A well-crafted programmatic NEPA review provides the basis for decisions to approve such broad or high-level decisions such as identifying geographically bounded areas within which future proposed activities can be taken or identifying broad mitigation and conservation measures that can be applied to subsequent tiered reviews…. One advantage of preparing a programmatic NEPA review for repetitive agency activities is that the programmatic NEPA review can provide a starting point for analyzing direct, indirect, and cumulative impacts. Using programmatic NEPA reviews allows an agency to subsequently tier to this analysis, and analyze narrower, site- or proposal-specific issues… The planning process for the proposed action and the development of a programmatic NEPA review should start as early as practicable. By starting the planning process early, there should be sufficient time for establishing the reasonable scope of actions, alternatives, and impacts in the programmatic review, and identifying the decisions the programmatic review will support so that the level of analysis is clear from the start.[27]

We contend that it is exactly that process that NNSA should follow, specifically broad programmatic review followed by site specific analyses."

- End of Excerpts -

NNSA decided to not complete a new LANL SWEIS even though the last one was in 2008. It also rejected a new programmatic environmental impact statement on pit production, even though the last relevant PEIS was also in 2008. Moreover, on the basis of the inadequate 2020 LANL SWEIS Supplement Analysis, issued a Record of Decision to expand plutonium pit production at LANL to at least 30 pits per year.

Now NNSA includes expanded pit production as part of the draft SWEIS' so-called No-Action Alternative while the agency has yet to announce when a court-ordered programmatic environmental impact statement on plutonium pit production will be scheduled. We have long argued that the new LANL SWEIS, or at least the portions pertaining to pit production, should be tiered off the PEIS. Any other course remains legally questionable under NEPA.

Concerning potential surge production beyond 30 pits per year, the 2019 Defense Authorization Act required "a detailed plan for designing and carrying out production of plutonium pits 31–80 at Los Alamos National Laboratory, in case the MOX facility is not operational and producing pits by 2030."

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27 www.energy.gov/sites/prod/files/2016/05/f31/effective_use_of_programmatic_nepa_reviews_18dec2014.pdf

The MOX Fuel Fabrication Facility (MFFF) at the Savannah River Site (SRS) cost American taxpayers ~$7 billion for nothing. NNSA's repurposing it into the Savannah River Plutonium Processing Facility was originally estimated to cost $4.1 billion and is now $11 billion and climbing. Hot operations are not expected to begin until the mid-2030s. So, what is LANL's congressionally required plan for picking up the slack from the Savannah River Plutonium Processing Facility? Why is there no mention of it in the draft LANL SWEIS when it is integral to the Lab's future? It must be listed as an essential reference document.

Yet another issue is that NNSA must develop an Integrated Master Schedule for pit production that GAO has long advocated,[28] which in turn should help frame the LANL SWEIS. NNSA's original cost estimates in 2018 for expanded plutonium pit production over 30 years was $43 billion. Since then the estimated costs for the Savannah River Plutonium Processing Facility have more than doubled to $11.4 billion and NNSA Administrator Jill Hruby has already asked for an additional half-billion dollars. With typical costs overruns we are betting that pit production will cost at least $60 billion over 30 years.

DOE Environmental Management and Defense Programs (now NNSA) have been on the GAO's High Risk List for project mismanagement ever since the list's inception in 1991. The lack of an Integrated Master Schedule between the two sites (LANL and the Savannah River Site) for such an exorbitantly expensive program is illustrative of why NNSA remains on GAO's High Risk List. The new LANL SWEIS should address an Integrated Master Schedule for expanded plutonium pit production.

Further, even if one is in favor of pit production, there is no need to rush it before NNSA and LANL get it right. Media has recently reported that the new Sentinel intercontinental ballistic missile is being seriously delayed because of drastically increasing costs.[29] LANL's planned new pits are for the W87-1 warhead for the Sentinel ICBM. The SWEIS should analyze slowing down planned pit production even beyond the delays it is already experiencing with a focus on resolving all the issues brought up in these comments and more.

Finally, recently confirmed DOE Secretary Chris Wright is reported to have said, "We've built one [pit] in the last 25 years, and we'll build more than 100 during the Trump administration." First, he is incorrect in that LANL produced 29 W88 pits during 2007-2011 to complete the production run that was abruptly halted by the 1989 FBI raid investigating environmental crimes at the Rocky Flats Plant near Denver.

But the relevant point here is that DOE Secretary Wright said 100 pits will be manufactured during the Trump Administration, which assuming no unconstitutional third term would end January 20, 2029. Acting NNSA Administrator Teresa Robbins stated in January that LANL would have the "capability" to make 30 pits per year "in or near 2028." [30] The Savannah River Site won't be able to produce new pits until the mid-2030s. It is almost impossible that LANL could produce 100 pits in

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28 See Nuclear Weapons: NNSA Should Further Develop Cost, Schedule, and Risk Information for the W87-1 Warhead Program, GAO, September 2020, at https://www.gao.gov/products/gao-20-703

29 gulfnews.com/world/americas/extending-1970s-era-icbms-until-2050-weighed-by-us-air-force-1.500074346

30 *EnergySec tells Fox News he wants to build 'more than 100' pits*, Exchange Monitor, April 4, 2025

that brief time. Nevertheless, the LANL SWEIS should explain and provide comprehensive background on the DOE Secretary's projection and justify how that can be safely done.

## The Draft SWEIS' No-Action Alternative Violates NEPA

The draft SWEIS states:

> **"S.2.2.2 No-Action Alternative – Operational Changes**
> The No-Action Alternative includes changes in current baseline operations that may or may not be associated with construction or upgrade of facilities, utilities, or infrastructure. These are described in more detail in Chapter 3, Section 3.2.4 of the SWEIS. Some examples include:
> • **Increased plutonium pit production** to produce a minimum of 30 war reserve plutonium pits per year and to implement surge efforts to produce up to the analyzed limit.
> • **Venting of Flanged Tritium Waste Containers (FTWCs)** – The Laboratory and NNSA have been integrating with the EPA and NMED to obtain approval to move forward with the plan to vent the FTWCs currently located in TA-54. The Laboratory maintains a public website to provide updated information about the plan (https://environment.lanl.gov/resources/ftwc/)
> • **Chromium Interim Measures and Final Remedy** – DOE will implement the proposed action in DOE (2024) and use adaptive site management to select and implement options to remediate the hexavalent chromium contamination in Mortandad and Sandia canyons." (Summary PDF page 16).

We assert that the inclusion of the above three cases in the so-called No-Action Alternative are clear violations of the National Environmental Policy Act (NEPA). In sequence:

**1) Increased plutonium pit production.** The draft LANL SWEIS adds to the expanded plutonium pit production mission under the so-called No-Action Alternative:

> **"3.2.3 Operational Changes**
> This section identifies changes in current baseline operations that may or may not be associated with construction or upgrade of facilities, utilities, or infrastructure. **These are notable changes that have the potential to affect the potential environmental impacts of Laboratory operations under the No-Action Alternative.**
>
> • Increased plutonium pit production – As discussed in Chapter 1, Section 1.4 of this SWEIS (and described in more detail in Appendix A, Section A.1.4), in September 2020, NNSA prepared a supplement analysis (NNSA 2020a) to evaluate NNSA's proposal to implement elements of the Expanded Operations Alternative from the 2008 SWEIS as needed to increase pit production at LANL. Based on that analysis, NNSA published an amended ROD in the Federal Register (85 FR 54544, September 2, 2020) to document the decision to implement elements of the Expanded Operations Alternative in the 2008 LANL SWEIS, as needed, to produce a minimum of 30 war reserve pits per year for the national pit production mission and to implement surge efforts to exceed 30 pits per year up to the analyzed limit to meet NPR and national policy.10 As discussed in Section 3.2.1, some of the projects listed in Table 3.2-1 will support increased pit production at LANL. The potential impacts of constructing those projects (along with other actions identified in Section 3.2) are included in the impact analysis in Chapter 5. Increased pit production at LANL will also change some environmental impacts at LANL during operations. **For example, compared to current operations, increased pit production will increase the LANL workforce, radiological emissions, collective worker dose, waste generation, and**

> **radiological transportation.** Appendix A, Table A.3.5-2 presents the operational parameters for the No-Action Alternative, which account for increases associated with the pit production mission.
>
> 10. For further understanding of pit production, please see the article Pit Production Explained at https://discover.lanl.gov/publications/national-security-science/2021-winter/pit-production-explained/(Volume 1, PDF page 61, bolded emphases added, footnote 10 in the original)

First of all, we address the article *Pit Production Explained* in our comment section on plutonium pit aging, or rather the lack of it. In sum, LANL Director Thom Mason makes the claim that the best way to eliminate uncertainty over pit aging is to immediately begin new pit production, thus justifying some $60 billion in taxpayer costs and more radioactive wastes. Our retort is that yes there is uncertainly when you don't go looking to resolve it with a new, full pit aging study The last full pit life study in 2006 concluded that most pits last at least 100 years while those that don't have clear mitigation measures to make them last that long.[31] The average age of pits now is around 42 years. There has not been a new full pit life study since 2006, contrary to Mason's claims.

The NNSA makes much of its 2020 Supplement Analysis of the 2008 LANL SWEIS and subsequent Record of Decision to expand pit production to 30 pits per year at LANL. Nuclear Watch New Mexico submitted extensive formal comment on the 2020 SA. Our single biggest point was that NNSA was legally required to prepare a nationwide programmatic environmental impact statement (PEIS) on pit production analyzing the agency's plan for simultaneous pit production at two sites (LANL and the Savannah River Site).[32] Prior to that, we wrote NNSA five times beginning in October 2018 asserting that legal point, to which we never got a response. In October 2022 scoping comments for this draft LANL SWEIS, we once again reiterated that NNSA had to complete a nationwide programmatic environmental impact statement before proceeding with expanded plutonium pit production at LANL.[33]

Nuclear Watch New Mexico, Savannah River Site Watch and Tri-Valley CAREs filed suit for a pit production PEIS in June 2021. A federal judge ruled in our favor that NNSA had violated NEPA by not completing a PEIS in September 2024.[34] As per our settlement with NNSA, the agency is now required to complete a PEIS and issue a Record of Decision by mid-July 2027.[35]

Other factors intersect here as well. These include the delay of production of 30 W87-1 pits per year at LANL to 2028, delay and massive cost overruns for the new Sentinel ICBM which will carry

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31 *Pit Lifetime*, JASON, 2006, https://nukewatch.org/wp-content/uploads/2023/05/pit.pdf

32 *Comments for the National Nuclear Security Administration's (NNSA's) Draft Supplement Analysis of the 2008 Site-Wide Environmental Impact Statement for the Continued Operation of Los Alamos National Laboratory (LANL) for Plutonium Operations*, Nuclear Watch New Mexico, May 2020, https://nukewatch.org/wp-content/uploads/2020/05/lanl-sweis-sa-nukewatch-comments.pdf

33 *Scoping Comments to the National Nuclear Security Administration On the Los Alamos National Laboratory Site-Wide Environmental Impact Statement*, Nuclear Watch New Mexico, October 2022, https://nukewatch.org/wp-content/uploads/2020/12/NWNM-LLNL-SWEIS-scoping-comments-10-21-20.pdf

34 *Judgment in a Civil Action,* Civil Action No. 1:21-cv-01942-MGL, September 30, 2025, https://trivalleycares.org/wp-content/uploads/2024/10/SRS-Judgment.pdf

35 *Settlement Agreement*, Civil Action No. 1:21-cv-01942-MGL, January 16, 2025, https://nukewatch.org/wp-content/uploads/2025/01/Settlement-Agreement-and-Exhibits.pdf Approved by the Court on February 14, 2025.

W87-1 warheads, continuing delay and massive cost overruns for pit production at SRS which could boomerang on LANL, etc. Putting all of this together, NNSA must withdraw this draft SWEIS' No-Action Alternative that includes expanded pit production and complete the nation-wide programmatic environmental impact statement. Following the PEIS, NNSA could issue a new draft SWEIS, which we strongly recommend given other issues that we address in these comments. Or, less desirable in our view, NNSA could complete another Supplement Analysis as allowed for under NEPA regulations.

In any event, this is a NEPA problem of NNSA's own making that we have no sympathy for. NNSA could have long ago completed a new programmatic environmental impact statement on expanded plutonium pit production if it had not willfully ignored us since 2018.

**2) Venting of Flanged Tritium Waste Containers (FTWCs)**. The fact that "[t]he Laboratory and NNSA have been integrating with the EPA and NMED to obtain approval to move forward with the plan to vent the FTWCs" inherently means that action is still yet to come and is not a "no action." To date the New Mexico Environment Department has not approved a "temporary authorization" to move forward and it remains to be seen that it ever will. Moreover, there is no real substantive discussion of the possible health and biological impacts of the tritium releases in the draft SWEIS, which it concedes could be up to 30,000 curies. Nor is the venting necessarily just a one-time event as the draft SWEIS claims, given that there are other known FTWCs at TA-16.

The one substantive item on planned tritium releases in the draft SWEIS is that LANL would control the releases up to a dose of 8 millirem to the "Most Exposed Individual" of the public. This is in order to stay under the Clean Air Act's legal limitation of 10 millirem to the MEI in any 12-month period. The draft LANL SWEIS makes bland assertions that LANL complies with all environmental laws. But it never once mentions that in 1997 a federal judge found that LANL had exceeded the 10 millirem standard after an unapproved "building shielding" reduction factor was disallowed. Further, the federal judge found that LANL was in major violation of the Clean Air Act at 30 major radioactive air emissions sources.

These planned tritium releases have been a source of major public controversy. This proposed action and alternatives to it should be fully discussed and analyzed in a new draft LANL SWEIS. For far more, please see our Tritium Releases section below.

**3) Chromium Interim Measures and Final Remedy:** "DOE will implement the proposed action in DOE (2024)..." which is the *Final Chromium Interim Measure and Final Remedy Environmental Assessment,* issued in July 2024.[36] But on December 30, 2024, in the middle of the holiday season, LANL posted the report *Independent Review of the Chromium Interim Measures Remediation System* to its largely unknown Legacy Cleanup Electronic Public Reading Room.

This report was prepared by a panel of independent experts that DOE Environmental Management Los Alamos (EMLA) and the New Mexico Environment Department had jointly agreed to in order to

[36] *Final Chromium Interim Measure and Final Remedy Environmental Assessment, Los Alamos National Laboratory, Los Alamos, New Mexico,* DOE/EA-2216, July 2024, https://www.energy.gov/nepa/doeea-2216-chromium-interim-measure-and-final-remedy-los-alamos-new-mexico

resolve their dispute over the reinjection of treated groundwater. The bottom line of the December 2024 chromium report was:

> "...at this time the plume is not sufficiently characterized to design a final remedy... data gaps and uncertainties need to be addressed before committing to an alternative or final remedy."

This is a full two decades after the chromium plume was first reported. The "Finding of No Significant Impact" for EMLA's Chromium Environmental Assessment states:

> DOE has determined that the Proposed action to use adaptive site management to remediate hexavalent chromium beneath Sandia and Mortandad Canyons is not a major Federal action significantly affecting the quality of the human environment within the meaning of NEPA.[37]

We strongly disagree. LANL's chromium contamination of the Española Basin's sole source aquifer is commonly recognized as the Lab's single biggest threat to the common environment. Further, it involves an irreplaceable drinking water source for an increasingly arid state.

DOE EMLA's reinjection of treated groundwater appears to be mostly politically driven to prevent further chromium contamination migration onto San Ildefonso Pueblo by creating a hydraulic wall. However, NMED disputes that, saying water injection can push the chromium contamination. In any event, we contend that the inclusion of DOE EMLA's proposed so-called remedies for chromium groundwater contamination in the No-Action Alternative is a gross violation of the National Environmental Policy Act. To correct that, a new draft SWEIS should be issued that fully considers the full range of possible remedies for LANL's most serious environmental threat.

## The Required Programmatic Environmental Impact Statement on Plutonium Pit Production

As previously mentioned, in September 2024 a judge in the Federal District of South Carolina found that the National Nuclear Security Administration (NNSA) had violated the National Environmental Policy Act (NEPA) by not completing a new or supplemental programmatic environmental impact statement (PEIS) on expanded plutonium pit production.

NNSA had last completed a Complex Transformation PEIS in 2008, which in part considered pit production. That PEIS was clearly outdated and, in any event, did not consider simultaneous pit production at two locations (LANL and the Savannah River Site in South Carolina). Nevertheless, NNSA relied upon the 2008 Complex Transformation PEIS, claiming it was sufficient NEPA coverage to proceed with its unprecedented 2018 decision for expanded plutonium pit production at both sites.

We have previously argued in these comments that the draft LANL SWEIS should be withdrawn and reissued for a number of reasons. To repeat one major reason, the pit production PEIS should be completed first, followed by the LANL SWEIS. Or, alternatively, the non-weapons portions of the

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[37] *DOE/EA-2216: Finding of No Significant Impact and Floodplain Statement of Findings,* DOE, August 15, 2024, https://www.energy.gov/nepa/articles/doeea-2216-finding-no-significant-impact-and-floodplain-statement-findings-august-15

LANL SWEIS could proceed, followed by a post-PEIS LANL SWEIS Supplement Analysis that analyzes the need or not for expanded nuclear weapons programs.[38]

But here, on a different point, we comment on the basic legal requirement for the NNSA to complete the PEIS. Nuclear Watch New Mexico was one of the co-plaintiffs in the lawsuit that resulted in that ruling of NEPA violation, which stated as follows:

> ...declaratory judgment is entered in favor of the plaintiffs, Savannah River Site Watch, Tom Clements, The Gullah/Geechee Sea Island Coalition, Nuclear Watch New Mexico, and Tri-Valley Communities Against a Radioactive Environment, as to their claim that the defendants, United States Department of Energy; Jennifer Granholm, in Her Official Capacity as the Secretary; The National Nuclear Security Administration; and Jill Hruby, Administrator, violated the National Environmental Policy Act ("NEPA") by not undertaking a proper alternatives analysis given the change in need and purpose and changed circumstances since the 2008 CT SPEIS, as the defendants have violated NEPA, 42 U.S.C. §§ 4321 et seq., and its implementing regulations, 40 C.F.R. §§ 1500 et seq., as to that claim.[39]

The settlement that followed explicitly requires that NNSA complete a new PEIS and issue a new Record of Decision (ROD) within 2.5 years of the settlement agreement. Should NNSA fail to do so, it is enjoined from constructing the Waste Storage RCRA Waste/DOT Inspection Station, Waste Characterization Lab, Construction Maintenance Building, and Vehicle Entry Control Facility at the Savannah River Site. More importantly, NNSA is also prohibited from introducing nuclear materials into the Main Processing Facility at the Savannah River Plutonium Processing Facility.[40] The parties signed this settlement on January 16, 2025, hence NNSA must complete the PEIS and issue a ROD by mid-July 2027.

This draft LANL SWEIS public comment period ends nearly three months from the date of the signed settlement. So far, NNSA has made no visible effort to formally announce the pending PEIS in the Federal Register, which would schedule the public "scoping" comment period and public hearings for at least five locations across the country. Moreover, the Trump Administration's efforts to radically slash federal staff and funding and its general push against legal constraints force us to suspect that NNSA may never complete the legally required PEIS on expanded plutonium pit production, or perhaps at best pay only lip service to it.

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38 However, although not statutorily required, that hypothetical LANL SWEIS Supplement Analysis must include a public comment period, like NNSA provided for in a 2019 CT PEIS Supplement Analysis and 2020 LANL SWEIS Supplement Analysis.

39 Judgment in a Civil Action, September 30, 2024, United States District Court for the District Of South Carolina, Savannah River Site Watch, Tom Clements, The Gullah/Geechee Sea Island Coalition, Nuclear Watch New Mexico, and Tri-Valley Communities Against a Radioactive Environment, Plaintiffs versus United States Department of Energy, Jennifer Granholm, in her official capacity as the Secretary, The National Nuclear Security Administration and Jill Hruby, Administrator, Defendants, Civil Action No. 1:21-cv-01942-MGL https://trivalleycares.org/wp-content/uploads/2024/10/SRS-Judgment.pdf

40 Settlement Agreement, January 16, 2025, Civil Action No. 1:21-cv-01942-MGL, https://nukewatch.org/wp-content/uploads/2025/01/Settlement-Agreement-and-Exhibits.pdf

We co-plaintiffs filed suit in June 2021. However, we had written NNSA five times beforehand, beginning in October 2018, notifying the agency that we were convinced that it was legally required to complete a new PEIS on pit production. NNSA never even bothered to reply, but a federal judge eventually agreed with us.

Therefore, in this legal record created by the LANL SWEIS, Nuclear Watch New Mexico is strongly reminding NNSA of its legal obligation to complete a new programmatic environmental impact statement on expanded plutonium pit production. We will not tolerate the absence of a PEIS in whole or part. Nor will we tolerate any evasion of the injunction against building the SRS facilities or introducing nuclear materials into the Main Processing Facility of the Savannah River Plutonium Processing Facility until a PEIS is completed and a Record of Decision issued. There will be follow up litigation on this matter, if necessary.

## Pit Reuse

The 2020 Savannah River Site Environmental Impact Statement specifically stated that pit reuse is being considered, as follows:

> Life extension programs include pit reuse activities. The Complex Transformation SPEIS (NNSA 2008a) provides the following description of pit reuse, which his taken from the SSM PEIS (DOE 1996, p. S-20): "Intrusive pit modification reuse requires handling and processing of the plutonium internal to the pit. Non-intrusive pit modification reuse involves the external features of the pit and does not require an extensive plutonium infrastructure; the risk of contamination and generation of radioactive waste is very low for non-intrusive modification activities."
>
> "Implementing a moderate pit manufacturing capability now is a prudent approach to mitigate against age-related risk. For the foreseeable future, NNSA will rely on a combination of newly manufactured pits and judicious reuse of existing pits to modernize the U.S. nuclear stockpile. This approach enables NNSA to implement a moderately sized pit manufacturing capability of not less than 80 pits per year beginning during 2030." [41]

According to a word search for "pit reuse," the term occurs only twice in the entire 1,000 page-plus LANL SWEIS, and only then only in passing as "Current missions at PF-4 include nuclear weapon pit manufacturing and pit reuse" without further explanation or discussion. To us, this is more evidence of the self-serving slant of the entire draft LANL SWEIS. It seeks to advance the agenda of expanded plutonium pit production that is showering taxpayers' money on the Lab.

We note the existence of the Special Nuclear Material Component Requalification Facility at the Pantex Plant, also the site for storage of at least 15,000 existing pits. The Plant itself has boasted how pit reuse is much less expensive and environmentally damaging than the production of new pits.

> "With underground testing long out of the question, the health of the country's nuclear weapons stockpile relies in part on pit testing conducted at Pantex. At Pantex's Special Nuclear Material Component Requalification Facility, pits — a nuclear weapon's heart — are probed for analytical

[41] *Final Environmental Impact Statement for Plutonium Pit Production at the Savannah River Site in South Carolina*, NNSA, September 2020, Footnote one, p. S-3 & S-4, https://www.energy.gov/nepa/articles/doeeis-0541-final-environmental-impact-statement

> data... Requalification allows a pit to stay in the stockpile; surveillance involves obtaining information on a pit, then sharing it with the national laboratories to help certify to the President that the nuclear weapons stockpile is at an extremely high level of quality." [42]

We contend that pit reuse must be analyzed in great detail as a more than credible alternative. That in turn should help to determine the needed rate of production of new pits at LANL and SRS.

We are well aware of NNSA's arguments against pit reuse. For example, in response to public comments, the SRS EIS stated:

> **"S.2.3.4 Only Reuse Existing Pits**
> NNSA currently stages plutonium pits at Pantex. Like the pits in the active stockpile, those pits are aging and would not mitigate plutonium aging risks or enable NNSA to implement enhanced safety features to pits to meet NNSA and DoD requirements. As identified earlier in Sections S.1.2.1 and S.2.1, this SRS Pit Production EIS analyzes judicious reuse of pits from the existing stockpile, however, the *Atomic Energy Defense Act* requires the production of new pits, so this alternative would not support the purpose and need for agency action (50 U.S.C. § 2538a). Consequently, an alternative that relies only on reused pits was eliminated from detailed analysis." [43]

Here, we attempt to attack that argument head on. As we extensively discussed in our section on plutonium pit aging, there is no publicly available evidence that aging effects will impact plutonium pit reliability in any foreseeable practical time scale. We have only the NNSA and lab directors invoking uncertainty (however, we do concede that there is certainly uncertainty when the NNSA and lab directors seem to avoid new pit aging studies that could alleviate that uncertainty). If there is classified information showing serious aging effects, well then, sanitize it. Put it into a declassified form that can help convince the public that the risks of new pit production are justified. Among such risks we include the exorbitant expense, increased radioactive wastes and the uncertainties that new designs could introduce, including a possible resumption of full-scale testing,

Concerning "enhanced safety features to pits to meet NNSA and DoD requirements," we assert that "safety" is certainly a convenient mom and apple pie issue. Who can be against "safety"?

However, we fear that "safety" is a Trojan Horse for nuclear weapons designers to do whatever they want in an endless string of weapons variants and new designs. On a cautionary note, any kind of "enhanced safety features to pits" that are intrusive to the pits themselves could conceivably impact the all-important symmetry of implosion and subsequent mix of plutonium and tritium, potentially impacting reliability. This, again, could lead to full-scale testing with serious international proliferation consequences.

Concerning "the *Atomic Energy Defense Act* requires the production of new pits," yes, there is no getting around that. It is the NNSA's trump card. However, we are aware of how legislative sausage gets ground. The influence of the nuclear weapons prompted that statutory requirement to begin with. As Ray Charles sang, "Them that got get." But that does not make it right or in the country's best national security interest.

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42 *Day in the Life of a Pit,* Pantex Plant, July 15, 2015, https://pantex.energy.gov/news/blog/day-life-pit

43 Ibid., p. S-25

A declaration by Marvin Adams, NNSA Deputy Administrator for Defense Programs, is relevant here. He stated, "Pit performance degrades over time... There is no concern over reliability today, but concerns will develop as existing pits continue to age."

If so, show us the evidence! If there is no concern today, what is the projected date that such concerns would be valid? You can't have it both ways, saying everything is fine today but will be terrible tomorrow without evidence.

But Adams also declared that the:

> "...requirements these [future] warheads must meet differ from those met by existing warheads. In some cases, existing pits that might seem available for reuse are not well suited to the new requirements or are not available in the needed quantities. This is one reason pit manufacturing is needed without further delay." [44]

Here we get into the nub of things. Those "requirements" are of course not specified. But here one of our central points is again reaffirmed. Pit production is not being driven by pit aging, although that is the primary false justification for it. Pit production is being driven by new-design nuclear weapons for the new arms race.

We think the following is instructive:

> "This letter is provided in response to language within the Senate Energy and Water Development (SEWD) Committee report (S.R. 115-258) accompanying the Energy and Water Development Appropriations Bill, 2019. The provision directed the Department of Energy's National Nuclear Security Administration (DOE/NNSA) to enter into a contract with the JASON Defense Advisory Group to assess NNSA's efforts to understand plutonium aging.
>
> The report requested by the SEWD was too wide in scope for JASON to complete during its 2019 Summer Study. NNSA, JASON, and SEWD staff agreed to divide the study into two phases:
> • Phase One: Perform a 2019 JASON Summer Study that would generate a letter report covering updates since the prior JASON study on plutonium aging, Pit Lifetime, delivered in 2006.
> • Phase Two: Assess the need for the full study, and if deemed necessary and timely, perform a more detailed, multi-year JASON study.
>
> NNSA concurs with the findings, observations, and recommendations of JASON's Phase One report, Pit Aging. NNSA recognizes that there is continued uncertainty in assessing performance of older pits due to radioactive decay of the plutonium, and is committed to a variety of risk mitigation options, including placing higher priority on studies of plutonium aging and its effect on performance.

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[44] Declaration of NNSA Deputy Administrator Marvin Adams, in opposition to our successful lawsuit for a programmatic environmental impact statement on pit production, No 1:21-cv-01942-MGL, https://nukewatch.org/wp-content/uploads/2025/04/Signed-by-NA-10-APPELLATE-540618-v1-Nuclear_Pits_Dr__Adams_Declaration_121224-FINAL-v2.pdf

> The NNSA strategy is a combination of reusing existing legacy pits and also replacement with newly manufactured pits." [45]

Note how Phase Two, a new pit life study, has NOT been done. We contend that new pits are only necessary for new-design nuclear weapons. That is indisputable given that planned pit production is for the new-design W87-1 and W93 warheads.

We assert that the correct NNSA strategy would be to forego new designs and new pit production for them while relying on non-intrusive pit requalification, or pit "reuse,' to maintaining the existing, extensively tested stockpile as needed. That is what a draft LANL SWEIS should consider as a credible fourth alternative to expanding nuclear weapons programs.

Another reason pit reuse needs serious evaluation is that NNSA has been forced to rely upon it because of its own delays and cost escalations. This is made clear in former NNSA Administrator Jill Hruby's response to Sen. Angus King's question, "Is the pit production schedule running in parallel with the renewal of the triad?"

> "Yeah, we have a plan that's fully consistent with the schedule with the Department of Defense to put new pits in our warheads. Now, in some cases, the Savannah River is... We're targeting completion of construction of the Savannah River Plutonium Processing Facility in 2032, and then we have to introduce plutonium. We have to introduce the processes and the rate production. That'll take a few more years. But our plan is to be able to produce pits for the new W93 warhead, and we're targeting at least half of that population. We don't think we can get that facility up in time to do all of the W93 builds, but it's important that we have a fair number of those new pits because **our option is to reuse pits**, which introduces some uncertainty, but more importantly, it limits what else we can do and our stockpile when we reuse those pits." [46]

Thus, it looks like up to half of the new-design W93 warheads could have reused pits. We again argue that untested new-design nuclear weapons should not be added to the stockpile because of the uncertainties they will introduce. But the specific point here is that pit reuse is real and is planned to be used. It is inexcusable that the draft LANL SWEIS did not discuss pit reuse and posit it as a more than credible alternative that could in whole or part obviate the need for expanded plutonium pit production at LANL. We regard this as a major deficiency in the draft LANL SWEIS.

## Pit Production and the Waste Isolation Pilot Plant

A major vulnerability to the NNSA's overly ambitious plans for expanded plutonium pit production is the uncertainty of future disposal of radioactive transuranic (TRU) wastes and related lack of analysis under the National Environmental Policy Act (NEPA). The only repository for TRU wastes is the Waste Isolation Pilot Plant (WIPP) in southern New Mexico. WIPP is already way oversubscribed for all of the possible TRU wastes that the Department of Energy and NNSA would

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45 Letter transmitting the 2019 JASON report, Pit Aging, to SASC Strategic Forces, Subcommittee, NNSA Administrator Lisa Gordon-Hagerty, April 2020, https://irp.fas.org/agency/dod/jason/pit-aging.pdf

46 Senate Committee on Armed Services, Hearing title: To receive testimony on the Department of Energy and National Nuclear Security Administration atomic energy defense activities in review of the Defense Authorization Request for Fiscal Year 2025 and the Future Years Defense Program, April 17, 2024, bolded emphasis added.

like to send to it. In addition, legal agreements with the States of Idaho and South Carolina and the relatively new State permit also bind WIPP operations.

Given this, it is not clear where future TRU wastes from plutonium pit production will go in the long term, unless there is an additional repository or WIPP's legal capacity limit is changed by Congress. A senior NNSA official has noted that future disposal of transuranic wastes is the Achilles heel of expanded plutonium pit production.

> "Addressing the elephant in the desert, an official with the National Nuclear Security Administration (NNSA) on Wednesday warned that ongoing nuclear-weapon maintenance [code for plutonium pit production] will require a transuranic waste disposal site that is open beyond 2050: the current, best-case availability for the Waste Isolation Pilot Plant in New Mexico.
>
> "From an NNSA perspective, with an enduring mission, we are going to continue to have a need to dispose of transuranic waste past 2050," James McConnell, the National Nuclear Security Administration's associate administrator for safety, infrastructure, and operations, said Wednesday at the Exchange Monitor's virtual RadWaste Summit. "Far and away the biggest challenge for NNSA is to make sure that the disposal system for transuranic waste is robust enough to not become a choke point for our mission," McConnell said." [47]

The LANL SWEIS must analyze the possibility of not having the Waste Isolation Pilot Plant available (WIPP) for disposal of some or all of the radioactive transuranic (TRU) wastes from plutonium pit production. First, there is the matter of an accident shutting WIPP down for indefinite periods, as happened for nearly three years after an improperly prepared radioactive waste drum from LANL ruptured on Valentine's Day 2014.

However, we do note that NNSA is:

> "...propos[ing] to construct and operate up to four additional staging locations for TRU waste generated from PF-4, primarily associated with pit production operations. The potential staging facilities would be constructed to minimize the potential for a long-term WIPP shutdown to affect pit production activities at LANL." (Volume 1, page 3-49)

But we are talking about longer term than just a few years. The NNSA itself seems unclear how long WIPP needs to be open. According to the 2020 draft Savannah River Site (SRS) environmental impact statement:

> "WIPP was originally planned for an operational life of 25 years, followed by closure and post closure phases. In August 2019, DOE released, for stakeholder review and comment, a draft Carlsbad Field Office Strategic Plan based on maintaining WIPP TRU waste disposal operations active through 2050 as needed to support identified TRU waste inventory." (SRS DEIS p. 3-54)

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47 *Post-WIPP Disposal 'Far and Away' Biggest TRU Waste Challenge for NNSA Pit Mission, Official Says,* Exchange Monitor, September 10, 2020, https://www.exchangemonitor.com/pit-waste-far-away-biggest-challenge-nnsa-pit-mission-official-says/

A strategic plan, even one that had stakeholder review, is not a NEPA document. And 2050 would be less than halfway through NNSA's expanded pit production plans, so would another strategic plan be in order?

As another 2020 NNSA document put it, "Continued availability of WIPP to dispose TRU waste for the next 50+ years is of the utmost importance to NNSA's mission. It estimated that by 2038 NNSA will be largest generator of TRU waste."

In contradiction to the "four additional staging locations for TRU waste" that the LANL SWEIS proposes, the same document declares that:

> "LANL and SRS must focus on timely processing of TRU waste and avoid dependence on the development of new TRU waste storage facilities...
>
> **Priority for Timely Off-Site Shipments of NNSA Newly Generated (NGEN) TRU Waste to WIPP** Goal: Commitment from CBFO [Carlsbad Field Office] for steady state characterization and certification of waste streams for timely off-site shipping to WIPP (now and to into the future)" [48]

The LANL SWEIS should explain in detail how long WIPP needs to be open to accept pit production wastes from LANL and SRS and how NNSA, which has no legal authority over WIPP, plans to ensure that WIPP will remain open. [49]

NNSA's 2019 Final Supplement Analysis of the Complex Transformation SPEIS states:

> "Based on current estimates, producing 30 pits per year at LANL and 50 pits per year at SRS could generate a maximum of 1,151 $m^3$ of TRU waste annually (consisting of 107 $m^3$ at LANL and 1,044 $m^3$ at SRS)... The combined TRU waste (1,151 $m^3$) generated over 50 years would be 57,550 $m^3$, which would account for 53 percent of the projected available capacity at WIPP. In addition, **use of WIPP capacity for national security missions such as pit production would be given priority in the allocation process**." [50]

First of all, this fundamentally changes WIPP's mission from cleanup (however poor) of DOE's nuclear weapons complex to direct support of expanded plutonium pit production. This does not comport with the current New Mexico state permit that requires DOE to prioritize disposal of LANL's legacy TRU wastes instead of new plutonium pit production wastes.[51]

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48 *RadWaste Summit 2020, National Nuclear Security Administration Prioritization Approach*, James J. McConnell, Associate Administrator for Safety, Infrastructure and Operations, September 9, 2020, bolded emphasis and parentheses in the original, https://srswatch.org/wp-content/uploads/2023/01/Doc-1-Radioactive-Waste-Summit-NA-50-Briefing-Final-9-4-20-2-1.pdf

49 The WIPP Land Withdrawal Act, Public Law 102-279, as amended by P.L. 104-201, reserves the WIPP site for "the use of the [DOE] Secretary" as authorized by Section 213 of P.L. 96-164. § 3(a)(3).

50 Final Supplement Analysis of the Complex Transformation SPEIS, NNSA, December 2019, page 65, https://www.energy.gov/sites/default/files/2020/01/f70/final-supplement-analysis-eis-0236-s4-sa-02-complex-transformation-12-2019.pdf

51 DOE shall "prioritize by so certifying the emplacement at WIPP of stored (including buried) TRU mixed waste from the clean-up activities at the Los Alamos National Laboratory (LANL)." Waste Isolation Pilot Plant Hazardous Waste Facility Permit, June 2024, 4.2.1.4 Prioritization and Risk Reduction of New Mexico Waste,

As more evidence that NNSA may not have WIPP for TRU waste disposal for the long run, the New Mexico State permit also requires:

> "...an annual report summarizing its progress toward siting another repository for TRU waste in a state other than New Mexico. The annual report shall summarize the steps the DOE has taken toward siting such a repository in another state and the report shall include documentation supporting the summary." [52]

Yet more evidence of New Mexico's increasing resistance to "Forever WIPP" is this additional provision in the State WIPP permit:

> "The Secretary [of the New Mexico Environment Department] shall issue a notice of revocation and reissuance for cause within 30 calendar days if, as specified in the Land Withdrawal Act (Pub. L. 102-579, as amended), the volumetric disposal limit for TRU waste of 6.2 million cubic feet at the WIPP facility is increased, or additional types of waste (i.e., other than defense-related TRU waste) are authorized, by federal statute." [53]

## WIPP is Already Over Subscribed

And then there is the question whether WIPP will have the capacity to dispose of the NNSA's projected TRU wastes from plutonium pit production. This section concerns other streams of TRU wastes that DOE wants to send to WIPP.

"In this AROD, DOE/NNSA is announcing its decision to use the dilute and dispose method to disposition up to 7.1 MT of non-pit plutonium as contact handled transuranic (CH-TRU) waste at the Waste Isolation Pilot Plant (WIPP)." [54]

In all, DOE plans to send up to 48.2 metric tons of "excess" plutonium to WIPP. The plutonium will first have to be processed at LANL's PF-4 (see our comments on Plutonium Disposition), then shipped to the Savannah River Site (SRS) for "dilute and dispose" treatment, then shipped back across the country to WIPP for disposal. Note that much of this is spurred by the failure of the Mixed Oxide Fuel Facility and litigation by the State of South Carolina.

The National Academy of Sciences states that the large volumes involved are as follows:[55]

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parentheses in the original, https://wipp.energy.gov/Library/Information_Repository_A/Searchable_Permit_4ItemPackage_Dec2024_1.pdf

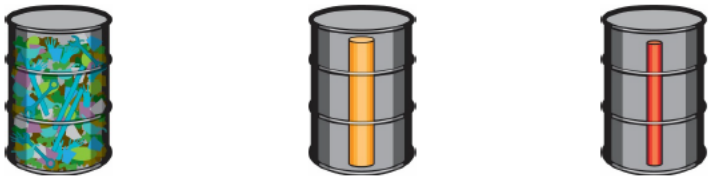
[52] Ibid., 2.14.3 Repository Siting Annual Report

[53] Ibid., 1.3.1 Permit Modification, Suspension, and Revocation

[54] DOE/NNSA, 8-28-20, https://www.federalregister.gov/documents/2020/08/28/2020-19023/surplus-plutonium-disposition

[55] *Review of the Department of Energy's Plans for Disposal of Surplus Plutonium in the Waste Isolation Pilot Plant* (2020), NAS, page 30, https://www.nationalacademies.org/ocga/briefings-to-congress/review-of-the-department-of-energys-plans-for-disposal-of-surplus-plutonium-in-the-waste-isolation-pilot-plant

**BOX 2-3** Continued



(a) (b) (c)

| Characteristics | (a) Direct-loaded | (b) Pipe Overpack Container | (c) Criticality Control Container/Criticality Control Overpack (CCC/CCO) |
|---|---|---|---|
| Inner dimension | N/A | 12-inch-diameter pipe | 6-inch-diameter pipe |
| Physical volume | 0.21 $m^3$ | 0.21 $m^3$ | 0.21 $m^3$ |
| Inner container volume | 0.21 $m^3$ | 0.046 $m^3$ | 0.013 $m^3$ |

**BOX FIGURE 1** Graphical illustration of the three types of 55-gallon drums approved for disposal of TRU waste at WIPP with information on the physical volumes (outer container volume) and inner container volumes affected by the volume of record decision. (a) A standard sized, direct-loaded 55-gallon drum, (b) a pipe overpack container which has a 12-inch pipe centered within a 55-gallon drum, and (c) the criticality control overpack which has a 6-inch-diameter pipe (the criticality control container) centered in a 55-gallon drum.
SOURCE: Committee-generated with information from (p. 20): https://www.wipp.energy.gov/library/WDS/DOE-WIPP-09-3427_Rev_17.pdf (accessed April 21, 2020).

The dilute and dispose plan would produce approximately 160,666 CCOs (based on a total of 48.2 MT of surplus plutonium and 300 FGE per CCC)—more than the number of 55-gallon drums currently emplaced in WIPP. The LWA volume for the DSP-TRU waste, using the numbers above, would be 2,057 $m^3$ while the TMW volume would be 33,740 $m^3$—a factor of 16 larger.

[a]Other types of POCs are used, but the 12-inch POC is the most prevalent.
[b]Only 58 POCs used a 6-inch-diameter inner pipe; the remainder used the 12-inch POC.

In addition, DOE has long sought to reclassify high level wastes at Hanford and send them to WIPP. This even resulted in a permit modification by NMED that barred those wastes.[56] If DOE has agreed to not seek to change that permit provision, it should so state in the SWEIS and other DOE documents.

Yet another major plutonium waste stream could be created by the Virtual Test Reactor. Its final environmental impact statement (EIS) states:

> "The Waste Isolation Pilot Plant (WIPP) is currently the only disposal option for defense TRU waste. WIPP's Land Withdrawal Act total TRU waste volume limit is 175,564 cubic meters. As of April 3, 2021, 70,115 cubic meters of TRU waste were disposed of at the WIPP facility. TRU waste volume estimates such as those provided in NEPA documents, cannot be used to determine compliance with the WIPP Land Withdrawal Act TRU waste volume capacity limit."" [57]

[56] *Environment Department Takes Action to Prohibit High-Level Sludge from WIPP Disposal*, NMED, October 29, 2004, https://www.env.nm.gov/wp-content/uploads/sites/12/2019/10/HLW_Approval_PR.pdf WIPP Permit 2.3.3.8 Excluded Waste.

[57] VTR final EIS, NNSA, May 2022, page S-41, https://www.energy.gov/sites/default/files/2022-05/final-eis-0542-versatile-test-reactor-summary-2022-05.pdf

• As the 2020 National Academy of Sciences Report determined, present and possible future TRU waste amounts at WIPP, not including possible Versatile Test Reactor waste, exceed the legal capacity, even using the Volume of Record calculation, as illustrated here:[58]

The committee was asked to review additional TRU waste streams and to assess DSP-TRU waste's potential impact on them as well as the impact on LWA capacity limits. To reassess these impacts against the new volume of record (VoR) calculations, the committee updated the volumes of specific waste streams noted in its Interim Report: Greater-Than-Class-C-like wastes, tank wastes, and TRU waste generated by pit production. Recent DOE-reported volumes for emplaced and future TRU wastes were used (DOE-CBFO, 2018a, 2019a; see Table 3-2). The results shown in Figure S-5 highlight two main issues:

- Under the VoR recalculation, the LWA volume of the DSP-TRU waste generated by processing 48.2 MT of surplus plutonium is reduced from 33,740 $m^3$ to 2,056 $m^3$, which is approximately 1 percent of the LWA capacity, yet the physical volume is substantial (approximately the physical space of two panels); and
- When additional TRU wastes volumes are taken into account, the LWA capacity will still be challenged—primarily due to initial estimates with potentially large uncertainties of TRU waste from pit production.

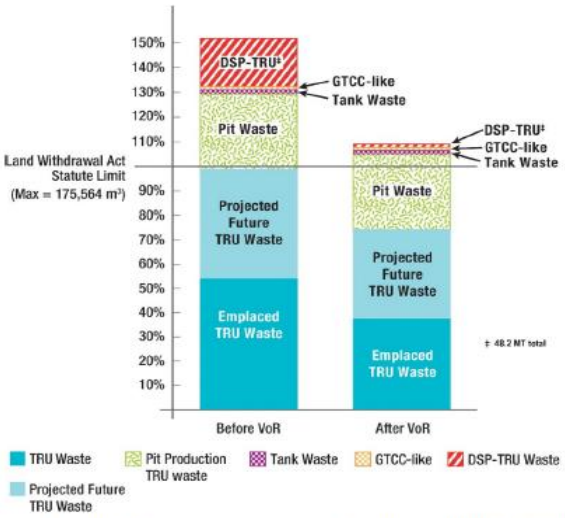



**FIGURE S-5** DOE-reported emplaced and future transuranic wastes estimates (DOE-CBFO, 2018a, 2019a) and additional wastes, identified by the committee. Additional wastes are DSP-TRU, Greater-Than-Class-C-like (GTCC-like) TRU wastes, tank wastes, and TRU waste generated from pit production. The graphs illustrate the impact of the volume of record (VoR) recalculation, in particular the large reduction in DSP-TRU waste volumes. Both graphs also show that the Land Withdrawal Act statutory limit is likely to be exceeded. DSP-TRU volumes have been subtracted from TRU waste estimates. See Table 3-2.

Acronyms:
DSP-TRU = TRU wastes generated by processing excess plutonium for disposal at
CBFO = DOE Carlsbad Field Office which oversees the Waste Isolation Pilot Plant (WIPP)
GTCC = Greater-Than-Class-C radioactive wastes are wastes generated by licensees of the Nuclear Regulatory Commission, which is to say commercial nuclear energy.
LWA = WIPP's Land Withdrawal Act that set its legal limit
TRU = radioactive transuranic wastes, primarily produced from using plutonium to fabricate nuclear weapons
VoR = Volume of Record being contested by the Southwest Research and Information Center and Nuclear Watch New Mexico

To conclude, the LANL SWEIS must fully explain and justify how the NNSA can guarantee that the Waste Isolation Pilot Plant will be available for disposal of its plutonium pit production transuranic wastes.

58 Ibid., p. 6.

## The LANL SWEIS Must Also Address these NMED WIPP-Related Issues

In order to demonstrate that WIPP has the capacity and capability of disposing LANL's future plutonium pit production wastes, the SWEIS must address these issues that the New Mexico Environment Department has formally commented on.

NMED commented on NNSA's 2020 Savannah River Site, Draft Environmental Impact Statement for Plutonium Pit Production. It stated:

> "Department of Energy (DOE) and National Nuclear Security Administration (NNSA) did not disclose, discuss and/or quantify various environmental legal matters that could have a material impact on its Proposed Action...
>
> Additionally, the April 2020 draft EIS does not discuss the November 2019 settlement between the DOE and the State of Idaho related to Idaho National Laboratories and the associated impacts of how the DOE prioritizes shipments and emplacement at WIPP. The total volume of emplaced and future waste shipments is expected to exceed the legislated volume capacity for WIPP (National Academy of Sciences Review of Department of Energy's Plans for Disposal of Surplus Plutonium in the Waste Isolation Pilot Plant, April 2020). The Idaho Settlement allocates fifty-five percent (55%) of all TRU waste shipments received at WIPP for Idaho. Depending on how the DOE prioritizes future waste shipments across the complex, other facilities around the U.S., including LANL, will need to store remediated legacy waste and/or delay remediating legacy waste. The State of New Mexico objects to the DOE prioritizing defense waste over remediating and emplacing legacy contamination at the WIPP, particularly in the state that hosts and regulates the WIPP. The DOE and NNSA failed to disclose, discuss and/or quantify various environmental legal matters that will have a material impact on legacy contamination and risk to communities…
>
> The DOE and NNSA failed to quantify the risk, impacts, and costs associated with the successful emplacement of SRS wastes at the WIPP in the draft EIS…
>
> The draft EIS fails to demonstrate that the Proposed Action will achieve environmental justice for the high percentage of minority and low-income populations in the State of New Mexico that have already suffered disproportionately high adverse human health and environmental effects of U.S. Department of Energy programs…
>
> The disposal of SRS TRU waste at the WIPP site must conform to the following requirements:
> a. Future waste streams must meet requirements in the DOE WIPP Waste Acceptance Criteria, the WIPP Hazardous Waste Facility Permit Waste Analysis Plan, and the WIPP Transportation Safety Plan Implementation Guide;
> b. DOE must adhere to the limits on types and quantity of waste imposed by the 1992 WIPP Land Withdrawal Act, as amended by Public Law No. 104–201 (1996); and
> c. Legacy waste, particularly from LANL, must remain a high priority for disposal at the WIPP.[59]

Note that "b" is important because WIPP is already way oversubscribed for disposal of all TRU wastes that DOE is considering. Concerning "c", DOE is not prioritizing legacy wastes from LANL.

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[59] NMED, May 2020, blob:resource://pdf.js/f6181b10-d9d9-d84d-8aa9-8b48a0b6c867#filename=2020-05-18-NEPA-EIS-Savannah-River-Plutonium-Pits-Final.pdf

Instead legacy wastes from Idaho and non-legacy waste from South Carolina and future plutonium pit production wastes are being prioritized.

NMED commented on NNSA's May 2020 Supplemental Analysis of the 2008 LANL Sitewide Environmental Impact Statement:

> Further, the March 2020 draft supplemental analysis of the 2008 SWEIS does not discuss the November 2019 settlement between DOE and the State of Idaho related to Idaho National Labs. In that settlement, DOE agreed to allocate fifty-five percent (55%) of all transuranic waste shipments received at the Waste Isolation Pilot Plant (WIPP) for Idaho National Labs. By prioritizing waste shipped from the State of Idaho to the WIPP, DOE will need to store remediated legacy waste at LANL and/or delay remediating legacy waste at LANL or both. DOE and NNSA did not address this risk which contradicts the conclusion that there is "no significant new circumstances or information relevant to environmental concerns. DOE and NNSA failed to account for these settlements or explain the impacts from these settlements in the draft EIS and the overall conclusion…"
>
> 9. Increased pit production will generate extra waste and DOE and NNSA will likely have to request permit modifications to increase their hazardous waste storage capacity. Section 3.3.5, page 55 indicates that low level waste and chemical waste will exceed the 2008 SWEIS estimates for the plutonium facility but not for the entire facility. DOE and NNSA will needed extra storage capacity at TA-55 and NMED approved the permit modification request in May 2017. Increased pit production will generate extra waste and DOE and NNSA may have to request permit modifications to increase their hazardous waste storage capacity. Mixed waste is currently stored at LANL beyond the one-year storage allowed by the federal Resource Conservation and Recovery Act (RCRA) under a Federal Facility Compliance Order, Site Treatment Plan. The increased pit production will result in generation and storage of more mixed waste at LANL than currently present.
>
> 12. ... The disposal capacity limits at WIPP are defined by several different laws, agreements, and permits intended for the purpose of regulating both the physical space as well as the physiochemical and radiological aspects of transuranic (TRU) and hazardous waste disposal. The WIPP Land Withdrawal Act (LWA) limits TRU waste disposal capacity to no greater than 6,200,000 $ft^3$ (175,564 $m^3$) of defense related TRU waste, a limit that is overseen by the USEPA. The Record of Decision (ROD) for the WIPP limits the amount of remote handled TRU (RH TRU) waste in the WIPP to no more than 250,000 $ft^3$ (7,079 $m^3$) of the LWA total. In the National Academies of Sciences Engineering and Medicine (NAS) Review of the Department of Energy's Plans for Disposal of Surplus Plutonium in the Waste Isolation Pilot Plant (2020), the report identifies 48.2 metric tons of surplus plutonium that is under consideration or slated for disposition at the WIPP. Based on the current LWA statute limit and on the waste volume decision (currently under appeal in the New Mexico Court of Appeals) the waste exceeds the authorized volume of waste allowed in the WIPP.[60]

NMED commented on NNSA's September 2020 Notice of Intent for a Lawrence Livermore National Laboratory (LLNL) SWEIS. It stated:

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[60] NMED, May 9, 2020, https://www.env.nm.gov/wp-content/uploads/2020/05/2020-05-09-OOTS-NEPA-Review-LANL-Sitewide-EIS-Supplemental-Analysis-Final.pdf

The SWEIS must include a description of the radionuclides and activities of waste that will be transported to New Mexico for disposal at WIPP, along with anticipated changes in waste generation and disposal that will result from the Proposed Action.[61]

NMED also commented:

"Action Alternatives in the SWEIS that involve transporting material from LLNL to New Mexico must ensure any action will achieve environmental justice for the high percentage of minority and low-income populations in the State of New Mexico. These populations have already suffered disproportionately high adverse human health and environmental effects from nuclear energy and weapons programs of the United States."

In October 2020 NMED commented to the Savannah River Site Site-Specific Advisory Board:

1. DOE/National Nuclear Security Administration (NNSA) publicly stated plans to dilute and dispose of non-pit plutonium waste. DOE/NNSA plans to dispose of this waste at the Waste Isolation Pilot Plant (WIPP) facility in Carlsbad, New Mexico. However, DOE/NNSA has not yet discussed the regulatory implications of such plans with NMED nor satisfied the approval conditions of its Resource Conservation and Recovery Act (RCRA) Hazardous Waste Facility Permit issued by the State of New Mexico. The State of New Mexico requests that the EM SSAB carefully consider the ramifications of the incomplete analysis of the proposed final disposition pathway for this waste.

On December 24, 2015, DOE/NNSA announced in the Federal Register, 80 Fed. Reg 80,348, that its preferred alternative for disposition of the 6 metric tons (MT) of non-pit plutonium was the dilution/downblending of the waste at SRS and disposal at WIPP, located near Carlsbad, New Mexico, otherwise known as the "WIPP Disposal Alternative." At that time, DOE/NNSA did not state a preferred alternative for dispositioning the associated 7.1 MT of pit plutonium. In its April 5, 2016 Record of Decision, 81 Fed. Reg. 19,588, DOE/NNSA announced its decision to implement their preferred alternative for the disposition of 6 MT of non-pit plutonium as contact- handled transuranic (CH-TRU) waste for disposal at WIPP. A disposition path for the 7.1 MT of pit plutonium was not decided at this time.

On July 23, 2020, DOE/NNSA announced that SRS had resumed plutonium downblending. In its press release, DOE/NNSA stated that "Plutonium downblending is the process of mixing plutonium oxide with a multicomponent adulterant. After downblending, the plutonium will be shipped to the Waste Isolation Pilot Plant in New Mexico for disposal."

On August 28, 2020, DOE/NNSA issued an amended decision in the Federal Register, 85 Fed. Reg. 53,350, stating that it will now dispose of an additional 7.1 MT of pit plutonium as CH-TRU waste at the WIPP facility. According to DOE/NNSA, the process would be the same as described for the 6 MT of non-pit plutonium that DOE/NNSA had previously delineated for disposal at WIPP. Conversion to oxide may be performed at either Los Alamos National Laboratory (LANL) or at SRS.

DOE Environmental Management must satisfy the requirements in NMED's Hazardous Waste Facility Permit, Part 2 and Attachment C, in order for this waste to be eligible for disposal at the WIPP facility. To date, it has not specifically been articulated how DOE Environmental Management will ensure

[61] NMED, September 2020, https://www.env.nm.gov/wp-content/uploads/2020/05/2020-08-25-OOTS-NEPA-Lawrence-Livermore-NL-Intent-to-Prepare-Sitewide-EIS-draft.pdf

compliance with the Permit's Waste Acceptance Criteria. DOE must engage with NMED to demonstrate such waste will meet the WIPP Waste Acceptance Criteria." [62]

The LANL SWEIS must fully explain and justify how the NNSA is addressing these additional NMED WIPP-related issues.

## Plutonium Disposition

The draft LANL SWEIS states:

> "As a result of the announced delay in implementation of the SPDP project as analyzed in the SPDP EIS,[63] this SWEIS also analyzes the potential limited enhancement of operations of the ARIES processing line in PF-4. This limited enhancement would take advantage of efficiencies in the process and would increase the amount of actinides processed in support of surplus plutonium disposition from the current limit of 400 kilograms per year to 700 kilograms per year. This increase in annual throughput was previously analyzed as part of the Expanded Operations Alternative in the 2008 LANL SWEIS. There would be no change to the existing building footprint for the limited enhancement (no new construction) nor would any additional floor space be required in PF-4 for ARIES operations. This limited enhancement of operations of the ARIES processing line would not violate the prohibition on ARIES expansion as expressed in Section 3116 of the 2024 National Defense Authorization Act, codified at 50 U.S.C. § 2538a(f)." (Volume 1, PDF p. 95)

AS LANL explains, the purpose of the Advanced Recovery and Integrated Extraction System (ARIES) is to:

> "...convert plutonium metal that could be used to make nuclear weapons into plutonium oxide powder. The program supports the Laboratory's—and the nation's—nuclear nonproliferation commitments by helping to prevent the spread of weapons-grade nuclear material...
>
> Initially, the United States hoped to convert weapons-grade plutonium into fuel for commercial power reactors, but that plan was scrapped when cost estimates skyrocketed.[64] Instead, in 2018, Congress approved a much less expensive "dilute and dispose" plan in which Los Alamos receives surplus nuclear weapon pits (cores) from the Pantex plant near Amarillo, Texas. The pits are disassembled, using a machine called a pit cutter, and the plutonium is placed into a furnace for up to 48 hours. The heat from the furnace turns the plutonium metal into plutonium oxide powder, which is then blended to ensure uniformity." [65]

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62 NMED, October 22, 2020, blob:resource://pdf.js/2cff43c8-0b44-c54d-9eff-0a71d4e0f802#filename=2020-10-22%20-%20NMED%20SRS%20CAB%20Comments%20(Final).pdf

63 Surplus Plutonium Disposition Program Final Environmental Impact Statement (DOE/EIS-0549), Department of Energy, December 2023, https://www.energy.gov/sites/default/files/2024-01/final-eis-0549-surplus-plutonium-disposition-volume-2-2023-12.pdf

64 Left unsaid is the fact that the canceled MOX Fuel Fabrication Facility at the Savannah River Site cost taxpayers around $7 billion for nothing (but is unknown since the government has not publicly given an accounting for it). It is now being repurposed into the Savannah River Plutonium Processing Facility for unneeded pit production, originally estimated at $4 billion but now costing more than $11 billion.

65 *Metal to powder: The ARIES program alters plutonium so that it can't be used in nuclear weapons*, LANL, April 2022, https://www.lanl.gov/media/publications/national-security-science/0422-aries

First of all, the "announced delay in implementation of the SPDP project" is reflective of the "original sin" of this LANL SWEIS, which is nuclear weapons *uber alles*, with the three rigged alternatives of more nuclear weapons programs, yet more nuclear weapons programs, and even yet more nuclear weapons programs. This reputed nonproliferation program is being delayed because essentially NNSA can't do both at the same time, that is expand ARIES operations and plutonium pit production in PF-4's limited floor space. That is exactly why Congress recently prohibited expansion of ARIES so that NNSA can focus on nuclear weapons production while cutting nonproliferation programs. But this is not to say that ARIES doesn't also play a role in supporting pit production, as the draft SWEIS states:

> "The process development work in the ARIES processing line also supports plutonium pit production, as described in the 2008 SWEIS, for actinide materials science and processing R&D. The disassembly process developed for ARIES supported development of similar equipment used in the first step in recovery of plutonium from pits arriving from Pantex. Equipment used in ARIES in PF- 4 can be used to support pit disassembly for the pit production mission." (Volume 1, PDF page 631)

So, the question is, which the pending SWEIS should answer, will ARIES be used to provide feedstock plutonium for pit production (presumably pre-oxide)?

To quote the draft SWEIS again:

> "This limited enhancement would take advantage of efficiencies in the process and would increase the amount of actinides processed in support of surplus plutonium disposition from the current limit of 400 kilograms per year to 700 kilograms per year. This increase in annual throughput was previously analyzed as part of the Expanded Operations Alternative in the 2008 LANL SWEIS." (Volume 1, PDF p. 95)

That 75% increase in plutonium is a lot and its approval reliant upon the 2008 SWEIS is insufficient. As we stated in our comments on the draft 2008 LANL SWEIS:

> DSWEIS Table 3-18 states that the Expanded Operations Alternative will include the capacity to disassemble up to 500 plutonium pits per year, in contrast to the "No Action Alternative" of 200 pits per year. Almost no discussion ensues, except *Special recovery processes are performed, including demonstration of the disassembly and conversion of plutonium pits using hydride-dehydride processes and development of expanded disassembly capacity*. DSWEIS, p. 3-57. This is a significant failure that a new DSWEIS must correct.
>
> "Hydride-dehydride processes" are probably the "Advanced Recovery and Integrated Extraction System" (ARIES), which a new DSWEIS should fully explain the merits and demerits thereof. What waste volumes in all categories will result from ARIES? What safety problems might there be with the process? [66]

These questions merit full reconsideration in the pending final SWEIS. It is not clear how expanded pit production can safely operate concurrently with other major plutonium programs at the aging PF-

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66 *Comments to the National Nuclear Security Administration on the Draft Environmental Impact Statement for Continued Operation of the Los Alamos National Laboratory*, Nuclear Watch New Mexico, September 27, 2006, https://nukewatch.org/oldsite/facts/nwd/NWNM_SWEIS_Comments.pdf

4 facility, very much including ARIES. The Government Accountability Office (GAO) raised this issue years ago with no apparent resolution, saying:

> "However, plans for converting additional surplus plutonium into plutonium oxide are uncertain because of two issues. These issues include NNSA's still-developing plans for new pit production, which will also take place at LANL, and issues surrounding the agency's ability to ship newly produced plutonium oxide for dilution to DOE's Savannah River Site (SRS) in South Carolina. According to agency officials, NNSA and DOE are taking several actions that, if successfully implemented, are designed to allow NNSA to meet its long-term plutonium oxide production goals. These actions include continuing to review plutonium oxide and pit production plans, increasing plutonium storage at LANL, reducing the amount of SRS's surplus plutonium, and accelerating the shipment of diluted plutonium from SRS to WIPP." [67]

There will be programmatic conflicts and competition for PF-4 floor space between ARIES and plutonium pit production. As GAO reported on:

> NNSA officials told us in February 2019 that as a result of pit production requirements, the agency might need to use a portion of the processing areas in PF-4 for pit production that the agency had planned to use for plutonium oxide production. Pit production requirements also may use more space in the high-security vault in PF-4 where plutonium must be temporarily stored. Also, in February 2019, NNSA officials said that PF-4's high-security storage space is already near full capacity and that pit production may demand storage space that NNSA had planned to use for plutonium oxide production.
>
> **Reviewing use of operational space in PF-4.** LANL reported in March 2019 that the requirement to produce 30 pits per year would have no significant negative impact on plutonium oxide production. However, LANL reported that a number of programs, including pit production, were planning to increase operations in PF-4, placing demands on the aging facility that could lead to more frequent maintenance outages.[68]
>
> While NNSA is taking actions to address pit production and shipment issues, the agency continues to work on refining the long-term plutonium oxide production goals in its 2018 conceptual plan. However, NNSA officials said that establishing firm long-term plutonium oxide production plans now would be premature and that the agency would use the next several years to balance plutonium oxide production, pit production, and shipment issues as they refine long-term production plans.[69]

In short, the conflicts that GAO points out cry out for both nation-wide programmatic review and LANL site-wide review.

The operation of the Advanced Recovery and Integrated Extraction System (ARIES) at LANL and the transport of plutonium from Pantex to be processed in ARIES must be fully reviewed in the SWEIS. Reaching back for blanket approval in the 2008 LANL SWEIS is not appropriate given the new programmatic demands on PF-4, particularly expanded plutonium pit production.

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67 *SURPLUS PLUTONIUM DISPOSITION NNSA's Long-Term Plutonium Oxide Production Plans Are Uncertain,* GAO, October 2019, "What GAO Found," https://www.gao.gov/assets/gao-20-166.pdf

68 Ibid., page 18

69 Ibid., page 22

NNSA's proposal for now is to operate ARIES at LANL in order to produce plutonium oxide to be shipped to the Savannah River Site for downblending and disposal in WIPP. However, the Senate's version of the 2020 National Defense Authorization Act directed NNSA to consider alternative locations for the plutonium oxide production mission, including SRS. Any NNSA document relevant to moving ARIES to SRS should be included in the reference documents for the LANL SWEIS. In addition, environmental and proliferation risks of shipment of plutonium oxide from ARIES at LANL to SRS must be fully discussed.

## Data Center

The Department of Energy (DOE) has just released a *Request for Information on Artificial Intelligence Infrastructure on DOE Lands*, with the stated intent to "enable the construction of AI infrastructure at select DOE sites to begin by the end of 2025" by "exploring opportunities to leverage its land assets to support the growing demand for AI infrastructure." **This is a significant new proposal that warrants a dedicated Environmental Impact Statement (EIS).** The target timeline for construction beginning by the end of 2025 is extremely aggressive and quickly approaching, which is why a separate EIS *must* be completed.

**NukeWatch has serious concerns and questions regarding the ethicality, appropriateness, and ultimately, legality of allowing private commercial ventures on national security sites.** The RFI states that it "seeks to assess industry interest in developing, operating, and maintaining AI infrastructure on select DOE-owned or managed lands." There are substantial ethical concerns and tangible risks associated with allowing commercial AI infrastructure to be developed, operated, and maintained within active national security and nuclear defense sites. A small number of powerful technology executives have increasing control over AI and advanced computing infrastructure in the U.S. These companies operate not according to public input or oversight, but to market goals and private interests. The proposal to bring such a setup to LANL, or any other site involved in nuclear weapons production and radioactive waste handling, is not only risky but reckless, deeply misguided and fundamentally inappropriate. The public must have a clear and meaningful path for involvement on whether this plan should be allowed to proceed through an independent environmental impact statement.

The RFI also states, "Site and surrounding land are DOE federally owned. **Updated SWEIS nearing approval** that includes new construction for a mission expanding new HPC infrastructure of at least 100,000 square foot facility, a 25,000 square foot staging facility, and a parking lot in currently undeveloped area in TA-06 adjacent to the WTA substation to support AI supercomputers to replace or supplement the current HPC at the SCC" (RFI, p. 37, bolded emphasis added). This is highly misleading. The infrastructure projects cited are part of the Expanded Operations alternative within the draft SWEIS. This language implies that a Record of Decision has already been issued and that this construction has been approved and planned. This framing undermines the NEPA process and suggests that the Expanded Operations alternative is a foregone conclusion. If plans are already underway for an alternative that has not been publicly accepted, how can the public have confidence that our input will be genuinely considered? This statement undermines public trust and gives the impression that the NEPA process, this SWEIS included, is a pretense. **It is essential that transparency and procedural integrity be maintained to ensure meaningful public engagement and compliance with NEPA requirements.**

Proposing to allocate such vast quantities of water for commercial AI infrastructure is environmentally indefensible. "The facility would use evaporative cooling and could require up to 162 million gallons of cooling water from Los Alamos County, and 62 million gallons of potable water would be required. An additional water treatment facility may be required to supply treated water for supercomputer cooling operations at the new facility. A new NPDES-permitted outfall was proposed in Two-Mile Canyon for this proposed facility."[70] New Mexico faces ongoing drought and is an arid desert – this is not a responsible nor justifiable stewardship of our local resources. **It is unacceptable to divert hundreds of millions of gallons for energy- intensive commercial or private AI infrastructure given the increasing scarcity of water in the Southwest.**

There is mention in the RFI that "A better approach [versus shifting power from the SCC to the new AI facility] would be to identify and deploy new onpremises power sources such as gas turbine (exercise options to expand the existing steam plant), or nuclear small modular reactors." **The potential impacts of a microreactor must be specified.** Please refer to the "Specific Comments" section of this document for further comment on the proposal to bring microreactors to LANL.

The draft SWEIS barely mentions artificial intelligence[71], yet the RFI notes, "In responding to this call, LANL recognizes that this new on-premises commercial data center would expand our mission further" (p. 36). A "mission expansion" is not a minor change; it delineates a fundamental shift in scope. The National Environmental Policy Act requires that any substantial new or modified operation be evaluated for environmental and societal impact. **The proposed plan for AI infrastructure clearly falls into this category and demands a stand-alone Environmental Impact Statement.**

## Essential vs Non-Essential DOE Personnel

In its 2025 "High Risk List," the Government Accountability Office (GAO) identified the NNSA's "understaffed" federal workforce and difficulties monitoring project performance as factors hampering the agency's ability to meet deadlines and cost targets in its nuclear modernization campaign.[72] Media has reported that up to 40% of DOE personnel could be considered as "nonessential" and thus subject to termination.[73] Offices that are reportedly considered essential include Cybersecurity; Energy Security and Emergency Response; Environmental Health, Safety and Security; Environmental Management; Intelligence and Counterintelligence; the National Nuclear

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70 *Request for Information on Artificial Intelligence Infrastructure on DOE Lands*, DOE 6450-01-P, March 21, 2025 https://www.energy.gov/sites/default/files/2025-04/RFI%20to%20Inform%20Public%20Bids%20to%20Construct%20AI%20Infrastructure%20%28website%20copy%29.pdf

71 The draft LANL SWEIS mentions artificial intelligence 5 times not including definitions: Vol. 1 PDF p. 91; Vol. 2 PDF p. 30, PDF p. 31, PDF p. 46, PDF p. 395

72 *High-Risk Series: Heightened Attention Could Save Billions More and Improve Government Efficiency and Effectiveness***,** GAO-25-107743, Feb 25, 2025, https://www.gao.gov/assets/gao-25-107743.pdf

73 See for example *Energy Department considers more than 40 percent of its staff nonessential as layoffs loom,* Rachel Frazin, the Hill, April 4, 2025, https://thehill.com/policy/energy-environment/5233347-energy-department-essential-employees-layoffs/

Security Administration; and the Bonneville, Southeastern, Southwestern and Western Area Power Administrations.

Nevertheless, this does raise questions of future safety, which a draft SWEIS should examine. The haphazardness of recent terminations, in which some staff (including the NNSA) were let go and later recalled, adds to this concern. As a specific, NNSA nuclear safety officers have always been understaffed at LANL, even though the Lab has a long track record of nuclear safety incidences that are likely to increase with expanded plutonium pit production.

Another area of concern is the timeliness of honoring FOIA requests, which is already truly awful. At times we have waited for years to have FOIA requests honored, which can only grow worse with potential staff cuts.

We also know that the current Administration's zeal for dramatically reducing the federal workforce will be selective. Despite some of President Trumps encouraging musings on globally reducing nuclear arsenals, it is still unlikely that nuclear weapons programs will be deeply impacted, at least not for contractors. But we suspect that cleanup programs will be on the chopping block, blocking the comprehensive cleanup that we advocate for instead of the false cleanup of "cap and cover" that LANL wants.

The GAO estimates that some 1,800 NNSA staff oversee some 55,000 contractor personnel in the nuclear weapons complex. The GAO further noted that "NNSA faces challenges recruiting and retaining federal staff, partly because of intense competition with other agencies and the private sector for skills that are in high demand." [74]The nuclear weapons complex is already subject to massive cost increases and waste of taxpayer dollars that enrich the contractors. We want to see NNSA oversight increase in nuclear safety and staff honoring FOIA requests, plus expansion of DOE environmental management programs designed to achieve genuine comprehensive cleanup.

In short, a new draft LANL SWEIS should examine what negative impacts cutting federal employees might have.

## Tritium Releases

On April 9, 2025 the Los Alamos National Laboratory announced a request for "Temporary Authorization" from the New Mexico Environment Department (NMED) to proceed with its planned tritium releases of up to 30,000 curies. It's ironic that LANL makes this announcement the day before the public comment period ends for this document itself, the draft LANL SWEIS.

The draft LANL SWEIS states:

> "The potential tritium releases associated with this project could be as high as 30,000 curies, which would result in a potential offsite dose contribution to a MEI [Most Exposed Individual of the public] of up to 8 millirem. The actual release of tritium would be dependent on the efficiency of the tritium capture system but not exceed 30,000 curies for any 12-month period. NNSA would limit annual tritium releases from

[74] National Nuclear Security Administration: Actions to Recruit and Retain Federal Staff Could Be Improved, GAO-24-106167, May 29, 2024, https://www.gao.gov/products/gao-24-106167

> FTWC venting to ensure that the total annual MEI dose (considering all site-wide releases) would remain less than 10 millirem per year." (Draft SWEIS Volume 1, Chapter 5, page 63)

The 10 millirem dose to the public in any 12-month period through radioactive air emissions is a standard set by the federal Clean Air Act that is illegal to exceed. In the 1990s LANL used an unapproved "building shielding" factor to conceal the fact that it was breaking the law. There is little if any further discussion in the draft LANL Site-Wide EIS on the potential health impacts of these intentional tritium releases. This issue has been highly controversial and will remain so. Burdened communities near LANL already face disproportionate health risks. Transparency must be prioritized and NNSA must reconsider the planned venting process by conducting a more thorough environmental review that accounts for these risks. **Alternative sites and strategies should be explored to mitigate potential impacts, and the full scope of the project must be properly assessed to ensure public health and safety.**

**The draft SWEIS fails to provide an accurate and comprehensive assessment of the planned tritium release at LANL.** The potential quantity of tritium to be released by venting of the FTWCs is repeatedly stated in the draft SWEIS to be 30,000 Ci:

> "Venting of FTWCs (a one-time event) could release as much as 30,000 curies of tritium." (Volume 1, PDF p. 108)

> "As described in Appendix H, venting of FTWCs would be a one-time event that could occur under the No-Action Alternative. During this singular action, up to 30,000 curies of tritium could be released." (Volume 1, PDF p. 295)

> "The Laboratory could have a one-time release of up to 30,000 curies of tritium from venting flanged tritium waste containers." (Volume 1, PDF p. 299)

> "The potential tritium releases associated with this project could be as high as 30,000 curies, which would result in a potential offsite dose contribution to an MEI of up to 8 millirem." (Volume 1, PDF p. 318; Volume 2, PDF p. 281)

This is inaccurate and misleading. The repeatedly used, limiting language of "as much as," "up to," and "as high as" in the draft SWEIS is a false reassurance that this amount cannot be exceeded. Yet planning explicitly provides for possible release of *more than 3.8 times* that quantity. The potential tritium releases from this project could total 114,683 Ci, not 30,000, as stated in LANL's application to EPA for approval of the planned venting process:

> Tritium H-3 Inventory (Ci) and Emissions Source Term (Ci/year): 114,683.[75]

> This represents the upper bound on emissions that could come from the facility and establishes the operational envelope for the activity.[76]

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[75] LANL EPA Application for Pre-Construction Approval for venting operation of the Flanged Tritium Waste Containers (FTWCs). Table 2, "Radioactive Materials Usage and Dose Summary, Uncontrolled Emissions and Off-Site Dose" p. 10: https://permalink.lanl.gov/object/tr?what=info:lanl-repo/eprr/ESHID-603412

[76] Ibid.

> The permitting process requires analysis of the worst-case scenario. For this project, that would be a 100% release of the contents of all four containers (approximately 114,000 curies) with no mitigation or capture.[77]

30,000 Ci is merely an administrative decision point at which LANL will stop the venting process to avoid exceeding the NESHAP 10 millirem exposure limit - it does not represent the potential total quantity of tritium that will have been released in the completed process. LANL's emissions management plan sets an annual administrative limit of 8 mrem for the venting of FTWCs, meaning venting will cease once this limit is reached but may resume in subsequent periods.

> The actual release of tritium would be dependent on the efficiency of the tritium capture system but not exceed 30,000 curies for any 12-month period. NNSA would limit annual tritium releases from FTWC venting to ensure that the total annual MEI dose (considering all sitewide releases) would remain less than 10 millirem/year. (Volume 2, PDF p. 281)

> "To allow for variation in meteorology and fluctuations in LANL operations, the administrative annual limit for FTWC emissions is 8 millirem to any NESHAP receptor. When off-site doses meet this level, no further venting operations will occur for 12 consecutive months."[78]

Contrary to the Draft SWEIS's claims that the tritium release will be a "one-time" or "singular" event, the venting process may be spread over multiple years. Because the venting process will have to stop when the calculated 8 millirem MEI dose has been reached, not when the venting is complete, the date and even year of completion of the process is uncertain.

Thus, there is no basis for the repeated SWEIS statements, quoted above, that the release will be a "one-time," or "singular" event. In the worst case, venting 114,683 curies at the rate of 30,000 curies per 12-month period would require more than 3.8 years to complete the task, which is nowhere pointed out in the draft SWEIS. That is fundamentally misleading.

**The proposed venting process is a potentially long-term process involving more containers than the four which are the subject of the LANL approval request, and the entire process and scope require NEPA review.** According to the investigative journalist Alicia Inez Guzman, "(a)t least 15 more containers with tritium waste appear to be in limbo there [at the WETF] and at Area G, two of which are in line to be vented after this emission is completed." *Searchlight*, February 5, 2025. But if the FTWC venting campaign is to have more "phases" than the present one, then it is a recurring operation, and the SWEIS description is incorrect:

> This venting project, which was planned to be completed years ago, is now expected to be completed during the analytical period of this SWEIS. Because FTWC venting is not a recurring operation, this SWEIS presents the potential dose from the FTWC venting project as a one-time event. (Volume 1, PDF p. 318)

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77 https://www.lanl.gov/engage/environment/ftwc FAQ No. 11

78 Letter from Taunia Van Valkenburg, Triad Nat'l Sec., LLC, to George Brozowski, EPA Region 6, Re: Notification of Operational Scope Change for the FTWC Venting Project at Los Alamos National Laboratory (LANL) (Mar. 5, 2020) (LA-UR-20-22148) https://www.osti.gov/servlets/purl/1605114 PDF p. 20

The draft SWEIS includes the current venting plan in the "No-Action" baseline, even though the plan has not undergone appropriate NEPA review. Merely noting that the potential releases would be within previously used bounding quantity assumptions, with no specifics of the process being considered, is vastly insufficient. **It is absurd to include in a "No-Action" description a plan which currently envisions dosing an MEI at potentially 80% of the maximum allowable by law, dwarfing current LANL calculated air emissions doses, which may be repeated for more than 3 years into the future, and which has an undefined scope.**

**The proposed releases do not adequately protect non-permanent users near the possible points of release.** As noted, LANL expects to vent the container headspace tritium until completed or until their administrative limit of total calculated dose to the appropriate Maximally Exposed Individual (MEI) is 8 millirems, or 80% of the NESAHAP limitation on all of LANL's emissions in any 12-month period. But the MEI is defined as "a person at the offsite location with the highest radionuclide concentration where there is an office, school, or residence." (40 CFR 61.93(a), .94(a)) Thus, non-permanent users of the land, such as hikers, bikers, and others, where there is no office, school, or residence, are excluded from the dose calculation. But Pueblo and non-Pueblo lands surround the potential points of release, and those lands see extensive use by individuals who do not reside there. For example, the MEI for releases from TA-54 is expected to be 2,195 m away, but San Ildefonso Pueblo lands are only about 500m away from the planned release point. **Depending on the winds during releases, and since the 8 millirem MEI dose may be acquired in a short time, potentially one day or less, an individual on San Ildefonso lands and only near the LANL boundary for a day or less could receive a much greater dose than for a permanent resident, or office or school attendee where the MEI is calculated.** Thus, non-permanent users of both Pueblo and non-Pueblo lands do not have the same dose protections as permanent residents, and when a large dose is delivered in a short time, the unfairness is compounded, and the public safety is compromised.

LANL's calculated potential doses for members of the public are only for adults, however, "adults are not the most exposed members of the public for the proposed activity. Infants are." [79] The dose calculation must be redone using worst-case short-term weather data for infants and one-year olds. In a recent analysis of this project, Dr. Arjun Makhijani states, "Infant and one-year old doses would be exceeded even if annual average weather is used for either of the two most loaded FTWCs. Based on available information, the venting proposal would be in violation of 40 CFR 61, and specifically the dose limit at 40 CFR 61.92, when infant doses are modelled." [80] When calculated for infant members of the public, under adverse weather conditions, "even the least loaded FTWC may exceed the 10 mrem dose limit." [81]

**We urge NNSA, as part of an honest, "hard-look" analysis of the proposed venting process, to reduce the present planned administrative MEI dose limit to 1 millirem per week. If LANL's claims of tritium capture efficiency are realistic, then this limit should provide little administrative inconvenience or significantly extend the venting process. On the other hand, if**

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79 An evaluation of the regulatory aspects of Los Alamos National Laboratory's proposal to vent tritium from waste containers, Prepared for Tewa Women United, Santa Cruz, New Mexico, Arjun Makhijani, Ph.D. November 2024 p. 5

80 Ibid.

81 Ibid.

**tritium capture is not as efficient as hoped, then the process should be stopped quickly so as not to deliver such a large dose in a short time, with the uncertainty and unfairness described above.**

**The draft SWEIS's statements that the venting will take place at TA-54 are not accurate.** According to LANL's March 12, 2020 Notification of Operational Scope Change for the FTWC Venting Project at Los Alamos National Laboratory (LANL), if, after initial venting at TA-54,

> ...operators notice that pressure is again building up inside the FTWC above established thresholds, the container will go through the venting process again. This secondary venting will take place at whatever point it is discovered; this can be at any of the following locations: within Building 1028; the parking lot outside of Building 1028; on the transport truck at TA-54, prior to departure; on the transport truck at TA-16, after arrival; at the receiving facility at TA-16, outside WETF.[82]

Because the MEIs for the TA-54 and the TA-16 locations are different, with the TA-16 MEI located much closer to the release point that the MEI for the TA-54 location (740 m for the TA-16 MEI vs 2195 m for the TA-54 MEI), potentially far less tritium can be released at the TA-16 site before the 8 millirem calculated dose limit is reached, meaning the complete venting process for all FTWCs could take even longer than the 3.8 years worst-case scenario for venting at TA-54. In November 2024, Dr. Arjun Makhijani reported, "LANL stated there would be a risk of explosions during transport of the containers without actually making measurements to determine whether there were hydrogen-oxygen mixtures in the headspace of the waste containers sufficient to cause an explosion."[83] Making the public aware of the results, LANL must sample the headspace of each FTWC without venting, followed by determining which FTWCs, if any, pose fire or explosion risks, analyzing fire versus explosion risks and evaluating transport issues and risks in light of sampling results.

The draft SWEIS claims LANL "maintains a public website to provide ***updated information about the plan*** (https://environment.lanl.gov/resources/ftwc/)" (bolded emphasis added). However, this website contains no indication of the possibility of venting at more than one site and contains further links to outdated information, including fact sheets referencing delays due to the Covid-19 pandemic. There is also a statement on the website that "There is no urgency for this project beyond the broader mission goals to reduce onsite waste liabilities," which directly contradicts the rather serious sense of urgency conveyed in other LANL documentation on the subject stating, "The Applicants have determined that continued tritium storage in these containers could pose an unsafe condition. To mitigate this hazard, the FTWCs will be vented in-place to remove hazardous gases." These internal contradictions and discrepancies within the provided references underscore LANL's failure to provide an accurate, transparent and comprehensive assessment of the proposed tritium release.

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82 Letter from Taunia Van Valkenburg, Triad Nat'l Sec., LLC, to George Brozowski, EPA Region 6, Re: Notification of Operational Scope Change for the FTWC Venting Project at Los Alamos National Laboratory (LANL) (Mar. 5, 2020) (LA-UR-20-22148) https://www.osti.gov/servlets/purl/1605114 PDF p. 4-5

83 An evaluation of the regulatory aspects of Los Alamos National Laboratory's proposal to vent tritium from waste containers, Prepared for Tewa Women United, Santa Cruz, New Mexico, Arjun Makhijani, Ph.D. November 2024 p. 26

The draft SWEIS presents an incomplete and ultimately dangerously misleading picture of the planned tritium release at LANL in failing to account for the full extent of potential emissions, the prolonged nature of the venting process, and the risks posed to nearby communities. The repeated assertion that this is a "one-time" event is contradicted by LANL and EPA's own documentation that demonstrates the possibility of multiple years of releases, across potentially multiple sites. DOE must continue working with NMED in pursuit of conducting a thorough, science-based assessment that prioritizes public health, environmental justice, and accurate risk disclosure. Anything less is unacceptable when it comes to the public risk of handling such dangerous materials and risky procedures.

## Environmental Justice Issues

The draft SWEIS states:

> Under EO [Executive Order] 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," 37 federal agencies are responsible for identifying and addressing the possibility of disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations (59 FR 7629, February 16, 1994)...
>
> Regardless of alternatives considered in this SWEIS, DOE will continue to implement its environmental justice requirements and obligations in accordance with DOE's trust responsibilities to tribal nations, EOs on environmental justice; [and] guidance from the CEQ [Council on Environmental Quality]...
>
> • Protecting tribal people and their resources—land, air, water, vegetation, wildlife and fisheries—from DOE actions that could harm their health, safety, or sustainability.
> • Protecting "reserved" rights (such as hunting and fishing rights that were specified in treaties as retained or reserved even though the lands are not part of the reservation).
> • Protecting Indian cultural and religious artifacts and sites on land now managed by DOE, and avoiding any unnecessary interference with traditional religious practices, which includes providing appropriate access to sacred sites on DOE lands.
> • Protecting the sovereignty of tribal governments.
>
> ... LANL shares a property boundary with the Pueblo de San Ildefonso—one of several sovereign federally recognized tribes with a government-to-government relationship with DOE. Other federally recognized tribes within the ROI [LANL's "Region of Influence"] include portions or entireties of the Pueblos of Cochiti, Jemez, Nambé, Ohkay Owingeh, Picuris, Pojoaque, Sandia, Santa Ana, Santa Clara, San Felipe, Santo Domingo, Taos, Tesuque, Zia, and a portion of the Jicarilla Apache Indian Reservation. (Volume 1, PDF pages 241-242)

In his second day in office, Trump wasted no time in revoking Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," under the rubric of "Ending Illegal Discrimination and Restoring Merit-Based Opportunity."

The question then becomes will DOE "continue to implement its environmental justice requirements and obligations in accordance with DOE's trust responsibilities to tribal nations"? Will environmental justice language in the draft SWEIS disappear in whole or part in the final SWEIS? If so, will there be just the quiet absence of environmental justice in the final SWEIS, or will there be

clear indications that environmental justice issues were removed? How will DOE and NNSA communicate this to the affected Tribes? More seriously, what are the substantive impacts to the Tribes of any deletion, in whole or part, of environmental justice issues? And how will this impact DOE/NNSA relations with the Tribes?

Rescinding through Executive Orders environmental justice and other issues (such as climate change initiatives) that are interwoven throughout the draft SWEIS makes it impossible for the public to know which parts are still relevant for comment or, if they do comment, know that it will be seriously considered. This obviously thwarts the ability to meaningfully comment and cries out for a new draft SWEIS that clarifies all this.

As it stands in the present draft SWEIS, environmental justice issues stemming from increased pit production have been inadequately considered. As NNSA's 2020 LANL SWEIS Supplement Analysis documents, the population within the Laboratory's 50-mile radius "Region of Influence" is 68% minority. NNSA's plan to expand production both in total number of plutonium pits and increased radioactive and hazardous wastes along with significant safety and health concerns will saddle already-burdened communities with increased risks.

Moreover, a new draft SWEIS should analyze and thus serve to accelerate the return of land to the San Ildefonso and Santa Clara Pueblos. This is a quintessential environmental justice issue, the return of forcibly seized lands to the original indigenous population.

## Electrical Power Capacity Upgrade

The draft LANL SWEIS states:

> In 2023, NNSA prepared a Draft EA (NNSA 2023b) to evaluate a proposal to provide DOE/NNSA with a reliable and redundant electrical power supply to meet existing mission requirements. The project would construct an approximately 14-mile-long electric power transmission line that would cross land administered by the BLM, SFNF [Santa Fe National Forest], and ultimately span White Rock Canyon onto DOE/NNSA-managed lands at LANL. Because the Electric Power Capacity Upgrade project is undergoing its own NEPA review in parallel with this LANL SWEIS, elements of this description will potentially change as part of the development of the Final EA to address comments from the public and state and federal agencies. The Final LANL SWEIS will include updated information, if available. (Volume 1, PDF page 57)

The U.S. Forest Service, which needs to grant right-of-way across its lands in the culturally and environmentally sensitive Caja del Rio, also conducted a narrow environmental assessment. The public reaction to both environmental assessments has been overwhelming with up to 24,000 comments submitted in opposition. Because of strong cultural and ancestral ties, the Pueblo of Tesuque has been and is very strong in its opposition.

Clearly the National Nuclear Security Administration did not provide complete information on viable alternatives in its EPCU EA, evidence of acting in bad faith to the 24,000 citizens and organizations that submitted public comments on NNSA's proposal, and particularly to Tribal leadership. The draft LANL SWEIS clearly indicates that up to "159 megawatts of solar photovoltaic arrays across the

site" could be installed as part of NNSA's preferred Expanded Operations Alternative. That alone could eliminate the need for the EPCU.

The LANL SWEIS is the appropriate NEPA platform for analyzing and reaching a decision on the EPCU. That is what site-wide environmental impact statements are supposed to do, project a site's utility and water needs over a ~15 year time horizon and consider all credible alternatives that would help meet the site's needs. NNSA did not do that, even though it pays lip service to "its environmental justice requirements and obligations in accordance with DOE's trust responsibilities to tribal nations."

The U.S. Forest Service should scrap its pending decision on right-of-way for the EPCU. LANL states that "NNSA will announce its decision on whether [to, sic] issue a Finding of No Significant Environmental Impact (FONSI) or prepare an Environmental Impact Statement (EIS) in early 2025."[84] Instead of the final SWEIS including updated information, the fate of the EPCU should be decided upon through the LANL SWEIS with consideration of all possible alternatives.

Moreover, this is yet another reason why this draft SWEIS should be withdrawn to be replaced by one that analyses the EPCU and possible alternatives, and upon which the public is afforded the legally required opportunity to comment. That said, a reasonable alternative would be a full-blown environmental impact statement for LANL's future electrical needs that includes, but is not limited to, the EPCU, and all possible alternatives disclosed in the SWEIS (see below) and elsewhere as applicable.

## Climate Change Issues

On his first day in office this term, President Trump for the second time withdrew the United States from the Paris climate agreement. Instead of protecting the environment, the new head of the Environmental Protection Agency now claims that the agency's goal is to "...make purchasing cars or heating homes more affordable...." Any and all programs dealing with climate change are to be gutted. The 2025 Annual Threat Assessment by the U.S. intelligence community made no mention of climate change for the first time in eleven years, making clear how deep and broad this ideological purge will be. Climate change issues are particularly salient to the Los Alamos National Laboratory as the threat of wildfires will only grow with increased global warming and aridity.

With respect to climate change, the draft SWEIS depicts an alarming grim future, one that directly impacts other significant issue such as future water use and the wildfire threat. It states:

> "The 2017 National Climate Assessment projects annual average temperature over the contiguous U.S. will continue to rise in the future (USGCRP 2017). The 2023 National Climate Assessment states temperatures in the contiguous U.S. have risen by 2.5°F since 1970, compared to a global temperature rise of around 1.7°F over the same period. This reflects a broader global pattern in which land is warming faster than the ocean and higher latitudes are warming faster than lower latitudes. There are substantial seasonal and regional variations in temperature trends across the U.S. and its territories. Winter is warming nearly twice as fast as summer in many northern states. Annual average temperatures in some areas (including parts of the Southwest) are more than 2°F warmer than they were in the first half of the 20th century (USGCRP 2023).

[84] https://www.lanl.gov/engage/environment/epcu

> The Southwest region is historically arid and marked by episodes of intense drought and precipitation. Climate change is exacerbating these conditions, as increasing temperatures are leading to hotter extreme heat events, drier soils, greater atmospheric evaporative demand, and reduced flows in major river basins such as the Colorado River and Rio Grande. Additionally, since 2000 the Southwest has experienced an exceptional "megadrought"—defined as an episode of intense aridity that persists for multiple decades—that is recognized as the driest 22-year period in 1,200 years (USGCRP 2023).
>
> Across New Mexico, average and summer seasonal precipitation is projected to decrease, droughts are projected to intensify, and streamflow in major river basins is projected to decline. Spring thaws are projected to occur earlier, and a greater fraction of precipitation is projected to fall as rain rather than as snow, reducing mountain snowpack. The risk of wildfire and the average annual area burned is expected to increase across the region (USGCRP 2023).
>
> Executive Order (EO) 14008, "Tackling the Climate Crisis at Home and Abroad," outlines policies to reduce GHG emissions and to bolster resilience to the impacts of climate change. The Laboratory completes annual site sustainability plans and a vulnerability assessment and resilience plan consistent with EO 14008. The vulnerability assessment and resilience plan describes climate change hazards and defines a range of resilience solutions. Wildfire was found to cause the greatest risk to LANL. Other hazards identified were increased frequency and intensity of extreme heat events; increased frequency, intensity, and duration of extreme precipitation events; thunderstorms; and increased flooding and erosion events." (Volume 1, PDF page 162)

Trump rescinded President Biden's Executive Order (EO) 14008, "Tackling the Climate Crisis at Home and Abroad," mentioned above. Further, he recently issued a new Executive Order that seeks to block the efforts of individual states to mitigate adverse climate change.[85]

A word search of "climate change" in the LANL SWEIS yields some forty results. Will it all be purged from any final SWEIS? As with environmental justice issues, rescinding through Executive Orders climate change initiatives that are interwoven throughout the draft SWEIS makes it impossible for the public to know which parts are still relevant for comment or, if they do comment, know that it will be seriously considered. This obviously thwarts the ability for the public to meaningfully comment. It cries out for a new draft SWEIS that clarifies all this.

As we have repeatedly said, there should be a fourth alternative of restrained nuclear weapons programs in the LANL SWEIS. Amongst everything else, the LANL SWEIS should consider a Manhattan-Project-like effort to solve the world's global warming and clean, sustainable energy problems. This would do far more for true, long-term national security and global stability than new nuclear weapons will ever do.

Analyses of climate change programs in the draft SWEIS also intersect with environmental justice issues and the Electrical Power Capacity Upgrade (EPCU) because of the renewable energy alternatives it presents. The draft SWEIS has these relevant excerpts (PDF page numbers and bolded emphases are added):

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[85] *PROTECTING AMERICAN ENERGY FROM STATE OVERREACH,* April 8, 2025, https://www.whitehouse.gov/presidential-actions/2025/04/protecting-american-energy-from-state-overreach/

"Summary, page 4: ...Under the Modernized Operations Alternative, NNSA would implement 27 projects involving facility upgrades, utilities, and infrastructure, affecting about 925 acres (more than 40 million square feet) of the LANL site. Of this 925 acres, **up to 795 acres are proposed for installation of up to 159 megawatts of solar photovoltaic arrays across the site**.

S-4: The Expanded Operations Alternative [NNSA's "Preferred Alternative"] includes the actions proposed under the Modernized Operations Alternative...

S-17: The Modernized Operations Alternative includes the scope of the No-Action Alternative, as described in Section S.2.2, plus additional modernization activities. The alternative also includes proposed projects to reduce greenhouse gases and other emissions (e.g., a Net-Zero Project, increased implementation of electric vehicle charging stations, **and development of up to 795 acres of solar energy facilities**).

S-25: **Annualized social benefits from implementation of half of the proposed solar PV arrays (~89 MW) was estimated at $37,000,000.**

S-34: (Repeated as Table 3.8-2 in draft LANL SWEIS Volume 1, PDF page 116)

Volume I, PDF page 302: Emissions from Table H-33 were applied to the SC-GHG annual rates at a 1.5-percent discount rate to calculate a **site-wide SC-GHG [social cost of greenhouse gases] for the Expanded Operations Alternative at a 2024 present value with a 1.5-percent discount rate in 2020 dollars of $1,988 million** and an annualized value over the 15-year period at a 1.5-percent discount rate of $149 million.

Volume I, PDF page 358: Chapter 6, Section 6.4.10, identifies a project in which Los Alamos County expects to begin receiving energy into the LAPP [Los Alamos Power Pool] from the Foxtail Flats solar and battery storage project near Farmington, New Mexico, in 2026 (LAC 2024). This project will add 170 MW/HR to the LAPP and would help ensure sufficient available capacity…"

- End of Excerpts -

In short, enough solar arrays are proposed that would be sufficient to eliminate the claimed need for the Electrical Power Capacity Upgrade. At the same time, it would offset nearly $2 billion in costs of greenhouse gases over 15 years. What's not to like? But will this all be purged?

To conclude, both a new draft SWEIS and a final SWEIS should retain climate change issues and speed up the installation of solar arrays both for their own merit and as an alternative to the Electrical Power Capacity Upgrade. Nuclear Watch New Mexico strongly objects to any possibility that climate change issues would be deleted from the final SWEIS.

## Wildfire Threat

The risk of wildfires will increase with adverse climate change and global warming. We note the risks posed by past wildfires at the Idaho National Laboratory and the Hanford nuclear reservation in Washington State. In April-May 2000 and June 2011 very dangerous crown fires threatened the Los Alamos National Laboratory (indeed the Lab and townsite were fully evacuated except for essential

personnel during the 2000 Cerro Grande Fire). In November 2018 the Woolsey Fire nearly completely burned the Santa Susanna Field Laboratory, causing deep public mistrust over resulting airborne contaminants.

As mentioned at the beginning of these comments, public comments on the 1999 draft LANL SWEIS played a crucial role in helping to avoid greater catastrophe during the 2000 Cerro Grande Fire. Scoping comments on this LANL SWEIS submitted by the public in 2022 reiterated the need for comprehensive analysis of the wildfire threat, which clearly has strong public interest. This critically needed comprehensive analysis is lacking in this draft SWEIS, which should be rectified in the final.

It goes without saying that plans to mitigate wildfires must remain a high priority. The SWEIS does acknowledge that all across New Mexico annual average and seasonal precipitation is projected to decrease, droughts are projected to intensify, and streamflow in major river basins will decline. Spring thaws are projected to occur earlier, and a greater fraction of remaining precipitation is forecast to fall as rain rather than as snow, reducing mountain snowpack. The risk of wildfire and the average annual area burned is expected to increase across the region.

However, in substance, pretty much all the draft LANL SWEIS has to say on the threat of wildfire is:

> Since the publication of the 2000 EA [2000 Environmental Assessment for the Wildfire Hazard Reduction and Forest Health Improvement Program at LANL] and 2011 Las Conchas fire, environmental and wildland fire conditions have changed at LANL including longer fire seasons, changes in vegetation, and global climate change. To address those changes, LANL issued a 2019 Supplemental Environmental Assessment to the 2000 EA (NNSA 2019c). The 2019 Supplemental EA concluded that wildland fire risk reduction and forest health objectives would be accomplished through treatments for forest thinning, life safety actions, open space forest health, and the implementation of new treatment practices. (Volume 1, PDF page 137)

But the document NNSA 2019c referred to above is entirely insufficient, with less than two pages devoted to "Wildland Fire Management," and obtuse, referring to a maze of other documents. It does not constitute serious wildfire analysis for the purposes of this LANL SWEIS. In terms of something current and perhaps meaningful, the draft SWEIS also refers to a document entitled "Updated LANL Wildland Fire Treatment Standards and Proposed Wildland Fire and Forest Management Program Activities to Analyze in the 2023 SWEIS," available at permalink.lanl.gov/object/tr?what=info:lanl-repo/lareport/LA-UR-24-20250 However, after clicking on the URL, one is told to submit a Freedom of Information Act (FOIA) request which can take years to get.

Conveniently not listed in the draft SWEIS formal reference documents is a 2021 report by the DOE Inspector General. It said:

> "We found that the [LANL] contractor had not fully implemented activities designed to reduce the impact from wildland fire. Specifically, we found that mitigation measures such as tree thinning, which are necessary to reducing the risk of crown fires, were not always performed, and therefore increased the potential for a wildland fire to spread. In addition, not all fire roads were maintained in a state to ensure safe passage for firefighters and equipment responding to wildland fires in undeveloped areas, which could create dangerous conditions for emergency responders and delay response times. Further, contractor officials could not demonstrate that annual planning and

> preparedness activities were completed as prescribed in the Wildland Fire Management Plan. Without documenting planning and preparedness activities, there was no assurance that all prevention and mitigation options were considered and that the site was fully prepared for wildland fire events." *The Department of Energy's Wildland Fire Prevention Efforts at the Los Alamos National Laboratory,* DOE Inspector General, February 2021, https://www.energy.gov/ig/downloads/audit-report-doe-oig-21-13

Given this, are we to take the draft SWEIS' implicit assurances that all is okay in the mitigation of the wildfire threat? Clearly no. In all, the analysis of the wildfire threat at LANL in the draft SWEIS is seriously deficient, despite the fact that the 2000 Cerro Grande Fire, 2011 Las Conchas Fire and 2022 Cerro Pelado Fire all demonstrated the grave threat to the Lab and surrounding public. Past lessons are apparently not learned even as it is commonly recognized that adverse climate change will only increase the threat.

The pending final SWEIS should have comprehensive wildfire analysis like the 2000 SWEIS did. That document and related wildfire mitigation measures clearly helped to avert greater catastrophe during the Cerro Grande Fire, including the possible rupture of above ground waste drums at Area G that could have sent respirable plutonium across northern New Mexico. There is a serious need for credible, comprehensive analysis of the wildfire threat to LANL and the surrounding public, which the final SWEIS must provide.

## Biosafety Level-3 Facility

**Working with dangerous pathogens at a secret nuclear weapons lab raises serious ethical, security and proliferation concerns.** LANL's preferred expanded operations alternative involves constructing a BioSafety Level-3 (BSL-3) facility to handle bioweapons agents like anthrax, reportedly for defensive purposes. The SWEIS states, "LANL currently operates BSL-1 and BSL-2 facilities. DOE has determined that operations involving BSL-1 and BSL-2 facilities would not result in significant impacts to workers or the public (10 CFR Part 1021, Subpart D, Appendix B)." (Volume 1 PDF p. 322) This implies that BSL-3 facilities, on the other hand, may result in significant impacts to workers and/or the public. Yet the draft SWEIS does not identify what bioagents may be used, scope the maximum inventory of infectious agents, nor provide data on the expected diversity of infectious agents during operation of the BSL-3 facility. Furthermore, the types of research anticipated at the BSL-3 facility are not specified. This is despite the Lab recognizing within the draft SWEIS that "The Centers for Disease Control and Prevention (CDC) and National Institutes of Health have established standards for operating BSL3 labs. These require that before infectious microorganisms may be handled, a risk analysis must be prepared and the local medical community informed of the agent, how to identify it, and treat its associated diseases." (Volume 1 pdf p. 327)

**If plans for a BSL-3 facility move forward, it must have its own environmental impact statement.** Serious safety risks soar when research involves the combination of infectious agents with high explosives. "The LANL BSL-3 EA (NNSA 2002) discusses the potential for laboratory-acquired infection, a laboratory accident, the potential for transportation accidents, and the potential for terrorist actions. For the potential for a laboratory-acquired infection or accident, the LANL BSL-3 EA relied on information presented by the U.S. Army (Army 1989)." (Volume 1 PDF p. 413) The draft SWEIS relying on a 2002 Environmental Assessment and a 1989 U.S. Army document for safety/security evaluations and accident scenario modeling is grossly negligent. These are both now

extremely outdated assessments that do not account for modern threats like artificial intelligence and terrorism – a comprehensive, updated risk assessment in the form of an environmental impact statement is needed.

The 2002 Environmental Assessment referenced above purports that "LANL occupational medicine and the local medical community would be informed of the microorganisms to be handled in the BSL-3 laboratories and would be aware of the methods of identification and control of associated diseases." However,

[From 2002 NukeWatch EA Comments]:

> "This does not fully address the complex issues of local emergency response. LANL is obligated to ensure that local emergency response teams are properly trained to identify a patient's symptoms in order to determine whether those symptoms correspond to organisms at the proposed BSL-3. LANL is obligated to provide all the appropriate equipment, medicine, and facilities that would be needed for local medical personnel to handle and treat patients exposed to those organisms. LANL is also obligated to inform local emergency response teams and medical personnel when they are conducting research on a specific agent, what that agent is, to verify that adequate training has been conducted in the event of an emergency, and to verify that the local medical facilities have the capability to handle an emergency should an accident occur. This means that complete transparency is required between the local medical community and LANL.
>
> If LANL is to find acceptance of the proposed BSL-3 facility within the local communities LANL must create an atmosphere of complete transparency for its biological research program. That transparency includes strict compliance with the above Implementing Requirements. Such a transparent environment can only be enhanced by maintaining an autonomous IBC composed of all interested parties. The IBC must always have final decision making powers that supersede all decisions within LANL, NNSA, or the DOE. The IBC must be structured in such a way that members of the general public may petition for a place on the committee. The IBC must always have at least a minimum of 2 members of the general public as well as appropriate members of the local emergency response teams and medical community. The IBC must meet on a monthly basis and their meetings must always remain open to the public…If these conditions are not met by LANL, all biological work conducted at LANL could become shrouded in secrecy which will only instill further distrust among the public.
>
> **BSL-3 Terrorism Risk Analysis:**
>
> The [EA] claims that "Scenarios involving a deliberate terrorist attack are not considered and evaluated in the same way as potential accidents in a NEPA analysis. These latter events lend themselves to a conventional approach of qualitative and quantitative analyses of probability and consequence, so that the Federal Manager, and members of the public, can see the residual risks posed by the activity to the workers, public, and the environment as required by NEPA."

- End of Excerpts -

In light of current threats related to artificial intelligence and terrorism, a "conventional approach" is not a valid method to determine the risks associated with a facility that will be conducting research on biological agents "historically used for bioweapons." Bioterrorism analyses would comprise worst case scenarios, but the events of the pandemic years demonstrate that a worst case may be a very probable case. The risk analysis provided in the 2002 Environmental Assessment, and consequently

this draft SWEIS, is grossly inadequate. A BSL-3 facility at LANL would be immediately at risk to a deliberate terrorist attack designed to penetrate and capture inventories of the microorganisms at the facility. An environmental impact statement must be completed to ensure comprehensive risk analysis of a direct assault on the BSL-3 laboratory and must describe measures LANL will undertake to minimize that risk.

"Operations personnel would be at the greatest risk of becoming ill from an accident involving a release into the facility, however researchers at a BSL-3 laboratory would wear powered air purifying respirator hoods with HEPA filters, so an exposure would be unlikely. As described in Appendix D, Section D.3.8, using the assumed scenario and organism from the Army study, a potential release from the containment laboratory, even under the worst-case meteorological conditions, would not represent a credible risk to the non-involved worker or offsite MEI or population." (Volume 1 PDF p. 413) "Worst-case meteorological conditions" and "credible risk" are terms that need to be defined.

[More from 2002 NukeWatch EA Comments]:

> "The risk analyses, as provided in the EA, appear to consider events that happen during daylight hours when microorganisms released from the proposed BSL-3 facility would be quickly killed by ultraviolet (UV) light. Structurally damaging earthquakes, that have the potential to cause containment breaches, are just as likely to occur during the night when no UV rays exist as they are during the day. It is also known that anthrax and anthrax spores survive in windy conditions and once released from their containment can become airborne."

The draft SWEIS states, "Work with biohazardous agents is reviewed and approved by the LANL Institutional Biosafety Committee, which includes members that are both internal and external to LANL organizations." (Volume 2 PDF p. 397) What is not clear is whether the LANL IBC has yet conducted a review of the proposed BSL-3 facility per DOE guidelines, that includes "assessment of containment level, facilities, procedures, practices, and training and expertise of personnel"[86] or a review of the "site's security, safeguards, and emergency management plans and procedures to ensure that they adequately address work with biological etiologic agents."[87] The IBC must play an integral role in the planning and design of the BSL-3 if it is to determine the adequacy of the proposed BSL-3 facility safety and security. This cannot be accomplished if the required safety and security documents do not exist.

Given the serious ethical, security, and public health concerns associated with operating a BSL-3 facility at a secret nuclear weapons lab, the Lab must prioritize full transparency, independent oversight, and comprehensive risk assessments before proceeding. If LANL is to gain any public trust regarding this facility, it must conduct a stand-alone Environmental Impact Statement (EIS) that fully evaluates security, proliferation, and biosafety risks. The lack of clarity in the draft SWEIS regarding the specific bioagents to be used, the research scope, and the potential risks to workers and surrounding communities is unacceptable. Relying on decades-old safety and security evaluations is both negligent and dangerous, as modern threats ranging from AI-driven bioterrorism to deliberate

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[86] THE SAFE HANDLING, TRANSFER, AND RECEIPT OF BIOLOGICAL ETIOLOGIC AGENTS AT DEPARTMENT OF ENERGY FACILITIES DOE N 450.7 p. 2

[87] Ibid.

attacks targeting bioweapons-grade pathogens are very real and require the latest tools for up to date hazard modeling. The BSL-3 facility must have its own environmental impact statement to address these matters, and risk analyses must consider worst-case scenarios under all conditions, including bioterrorism, structural failures, containment breaches, and nighttime releases when UV sterilization is ineffective.

## Water Use

The western United States is drying up.

> The Southwest region is historically arid and marked by episodes of intense drought and precipitation. Climate change is exacerbating these conditions, as increasing temperatures are leading to hotter extreme heat events, drier soils, greater atmospheric evaporative demand, and reduced flows in major river basins such as the Colorado River and Rio Grande. Additionally, since 2000 the Southwest has experienced an exceptional "megadrought"—defined as an episode of intense aridity that persists for multiple decades—that is recognized as the driest 22-year period in 1,200 years (USGCRP 2023).
>
> Across New Mexico, average and summer seasonal precipitation is projected to decrease, droughts are projected to intensify, and streamflow in major river basins is projected to decline. Spring thaws are projected to occur earlier, and a greater fraction of precipitation is projected to fall as rain rather than as snow, reducing mountain snowpack. The risk of wildfire and the average annual area burned is expected to increase across the region (USGCRP 2023).

Yet LANL plans to increase its water usage substantially.

> "...powering and cooling the ATS-7 or artificial intelligence supercomputers to replace or supplement the current HPC at the SCC. The facility would use evaporative cooling and could require up to 162 million gallons of cooling water per year. Of this amount of cooling water, approximately 100 million gallons of non-potable water (from Los Alamos County) and 62 million gallons of potable water would be required. An additional water treatment facility may be required to supply treated water for supercomputer cooling operations at the new facility" (PDF Pg. 3-43)

From Table A.3.5-2

| **Resource** | **Baseline Data** | **No-Action Alternative (2023–2029)[a]** | **Modernized Operations Alternative (2024–2038)[b]** | **Expanded Operations Alternative (2024–2038)[c]** |
|---|---|---|---|---|
| Water Usage | 266 million gallons/year (annual average 2017–2022) | Increase to 290 million gallons/year | Increase to 300 million gallons/year (including NAA) | Increase to 495 million gallons/year (including NAA) |

> "as shown in Table A.3.5-2, increased water and electricity usage at LANL in the future would be primarily associated with cooling water usage for the expanded FSI/HPC and operation of the DMMSC at TA-53"

**NukeWatch has serious concerns and questions regarding the ethicality, appropriateness, and ultimately, legality of allowing private commercial ventures on national security sites.** See section on "Data Center" in these comments above for more.

## Socioeconomic Issues

New Mexicans are subject to persistent DOE propaganda that links jobs, jobs, jobs to expanding nuclear weapons programs and claimed economic benefits. Astonishingly, the ~$10 billion that DOE spends in New Mexico every year is roughly equal to the State's entire discretionary budget. Roughly 75% of that DOE money is for core nuclear weapons research and production programs and 5% for dumping the radioactive bomb wastes from those programs.

Los Alamos County is the 11th richest county in the USA and has the most millionaires per capita. In contrast, New Mexico is the fourth poorest state with 18.4% of its population living in poverty. Per capita income has fallen from 32nd in 1959 to 47th in 2022. New Mexico is rated worst in the well-being of our children and dead last in quality of public education. Los Alamos County has the lowest number of children in the USA living in poverty. New Mexico has the most (30%).[88]

The six county governments surrounding Los Alamos County suffer net economic losses from the services they provide Lab commuters versus taxes received.[89] The Lab tried to suppress that study.[90] Traffic is visibly higher on regional roads leading to LANL because of the added employees recently hired, mostly for expanded plutonium pit production. As a result, traffic accidents are higher too. The cost of living, especially housing costs, is going up as well. Increased water use is a major concern given growing aridity in New Mexico.

For all three scripted alternatives for expanded nuclear weapons programs, the draft LANL SWEIS claims that "Due to the low potential for impacts on the [50 mile radius] region of influence population, steady-state operations would not be expected to affect community services and schools." (Volume 1, PDF page 113) We think that another bland assertion by the draft LANL SWEIS that is not credible. Instead, a new draft SWEIS should have a discerning socioeconomic analysis of what good does expanding nuclear weapons programs really do for the average New Mexican.

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88 For more, including sources, see *New Mexico: America's Nuclear Colony*, Nuclear Watch New Mexico, https://nukewatch.org/wp-content/uploads/2023/06/New-Mexico-Americas-Nuclear-Colony.pdf

89 *The Economic and Fiscal Impact of LANL*, UNM Bureau of Business and Economic Research, 2020, https://nukewatch.org/bber-lanl-economic-impact-presentation-08-17-20/

90 *Inequities Edited Out of Los Alamos National Lab Study,* Molly Montgomery, Rio Grande Sun, June 26, 2020 http://www.riograndesun.com/news/inequities-edited-out-of-los-alamos-national-lab-study/article_ea042414-b7f8-11ea-ada6-a7134ccaff97.html

## Worker and Public Safety and the Defense Nuclear Facilities Safety Board

The LANL SWEIS' calculated potential doses to workers and the public are orders of magnitude lower than those calculated by the independent Defense Nuclear Facilities Safety Board (some of which are lethal doses).[91] This is of natural concern because the SWEIS states, "Under normal operations, public radiation doses would occur from airborne releases from continued operations." (Volume 1, PDF page 323). Those public radiation doses are going to increase with implementation of any one of the three scripted alternatives of expanding nuclear weapons programs in this draft SWEIS.

In one particular case of high potential doses to the public:

> "NNSA Headquarters accepted an "exigent condition" where there is no viable control strategy to meet DOE's evaluation guideline for postulated consequences to the public. In this case, NNSA accepted bounding mitigated consequences to the public that range from 490 to 3,175 rem depending on the amount of radioactive material assumed to leak out of the building structure following a post-seismic fire. NNSA deemed the risk acceptable based on the conservatisms in the analysis, the low likelihood that the accident occurs, and the limited number of shipments. The primary controls credited to protect the public are the shipping containers (which must be received by May 2024 before certifications expire) and the seismic power shutoff system (which has an acknowledged deficiency and cannot prevent all fire ignition sources following an earthquake). Work associated for this activity will be primarily performed in four gloveboxes where only one of the gloveboxes meets minimum seismic requirements." [92]

Thus, clearly NNSA is more than willing to risk the health and well-being of its workers and the public in pursuit of its missions. Risk analysis is at the heart of NEPA. This mismatch between the NNSA's and the Safety Board's potential dose calculations urgently needs to be reconciled in a new SWEIS.

LANL's chronic history of nuclear safety incidences need analysis and resolution before expanding plutonium pit production. These concerns are serious enough that major operations at LANL's main plutonium facility (PF-4) were halted for more than three years, yet nuclear safety incidences still occur. Further, a Defense Nuclear Facilities Safety Board report noted that approximately one third of Lab criticality evaluations reviewed were noncompliant with analysis and documentation requirements defined in DOE-STD-3007. The impacts of and rigorous avoidance of criticality accidents must be analyzed in the SWEIS.

The long track record of chronic nuclear criticality incidences at LANL has become publicly known primarily through the reporting of the Defense Nuclear Facilities Safety Board (DNFSB). In what

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91 See Table 1, page 10 of the Defense Nuclear Facilities Safety Board's report *Potential Energetic Chemical Reaction Events Involving Transuranic Waste at Los Alamos National Laboratory* at https://www.dnfsb.gov/documents/reports/technical-reports/potential-energetic-chemical-reaction-events-involving It gives lethal potential occupational doses of 760 rem and public doses of up to 24 rem.

92 *Los Alamos Activity Report for Week Ending April 1, 2022*, DNFSB, https://www.dnfsb.gov/sites/default/files/document/25541/Los%20Alamos%20Week%20Ending%20April%201%202022.pdf Parentheses in the original.

was arguably an attempt to kill the messenger DOE issued its Order 140.1 *Interface with the Defense Nuclear Facilities Safety Board*.

As the Board itself observed:

> "…DOE Order 140.1, *Interface with the Defense Nuclear Facilities Safety Board*, issued in May 2018, threatens to undermine the Board's ability to execute its statutory mission under the Atomic Energy Act. DOE Order 140.1 improperly attempts to diminish the Board's statutory mandate in four principal ways, all of which are inconsistent with the text of the Atomic Energy Act:
> • The Order contains a narrow definition of "Public Health and Safety," which only includes individuals located outside of DOE site boundaries (i.e., excluding onsite individuals and workers);
> • The Order provides exemptions allowing DOE and contractors to not provide access to facilities that DOE determines do not have the potential to adversely affect public health and safety, which could limit Board oversight at many defense nuclear facilities;
> • The Order lacks a clear provision to provide the Board with ready access to such information, facilities, and personnel as the Board considers necessary to carry out its responsibilities; and
> • The Order provides an allowance for DOE to deny Board requests for relevant deliberative and pre-decisional information."

The last point in particular strikes at the heart of potential risks that the public may be exposed to by expanded plutonium pit production at both LANL and SRS. The Safety Board is the only independent entity that can review and comment on NNSA facility planning before those plans are made final. The DOE attempt to bar the DNFSB from ostensibly "deliberative and pre-decisional information"—apparently designated as such unilaterally by DOE without any prospect for appeal or review—could directly lead to pit production facilities lacking the safety provisions and requirements that would make the public safer.

Fortunately, in the face of public and congressional pressure, DOE rescinded it Order 140.1. But this bears remembering as the NNSA aggressively expands plutonium pit production and the Safety Board faces possible cutbacks.

DOE/NNSA's degradation of safety even as it plans to ramp up plutonium pit production appears to be systematic. As the Safety Board noted:

> "DOE has begun the process to revise 10 CFR Part 830, *Nuclear Safety Management*, which has served as the cornerstone of its regulatory framework to ensure adequate protection of public health and safety… Overall, the Board is concerned that the proposed revision to 10 CFR Part 830 will make it more difficult for the Department to exercise consistent oversight across the complex and loosens requirements upon which DOE and the public rely to ensure adequate protection of public health and safety. The Board identified concerns with DOE's proposal to remove the requirement for DOE to annually review and approve changes to documented safety analyses. The Board found that DOE's proposed change, if implemented, created a potential for the safety basis and facility operations to drift outside the envelope approved by DOE." [93]

[93] Defense Nuclear Facilities Safety Board 29th Annual Report to Congress, April 2019, p. ii, https://www.dnfsb.gov/sites/default/files/document/17791/2018%20Annual%20Report%20to%20Congress%20%5B2019-100-017%5D.pdf

This is again directly relevant to the risks posed to the public by plutonium pit production at both LANL and SRS. LANL's PF-4 has long had a bad track record of insufficient and/or outdated safety bases. The removal of the requirement to annually review and approve changes could directly threaten the public. In short, a new draft SWEIS is needed to fully review the risks posed by plutonium pit production to the public by apparent systemic attempts by DOE to degrade institutional safety and independent review of safety.

A 2009 DNFSB recommendation stated:

> "Consistent with the Board's Recommendation 2004-2, Active Confinement Systems, one long-term strategy that could provide effective mitigation for seismic events involves upgrading the facility's confinement ventilation system to meet seismic performance category 3 criteria. This strategy would allow the confinement ventilation system to reduce reliably the consequences of a seismically induced event by many orders of magnitude to acceptably low values." [94]

In March 2022, NNSA stated that they are no longer pursuing a safety class active confinement system at PF-4.[95] Basically, active confinement systems would automatically close doors and turn off, or on, exhaust fans during an accident. This would contain the radiologic materials, such as plutonium, in PF-4. This discussion between the DNFSB and DOE has been going on for over a decade. The SWEIS must analyze the potential impacts of the Lab not installing active confinement at PF-4.

As the Defense Nuclear Facilities Safety Board (DNFSB) noted in its required 2018 annual report to Congress:

> "Nuclear Criticality Safety at Los Alamos National Laboratory (LANL)—Based on an evaluation of the LANL nuclear criticality safety program, the Board in its November 28, 2018, letter to the Secretary of Energy, identified the following related to this vitally important safety program: (1) lack of concrete milestones in corrective action initiatives for weaknesses in the program; (2) inadequate staffing in the nuclear criticality safety division; (3) inadequate documentation for daily work activities with the potential to impact nuclear criticality safety; (4) instances of poor operational quality in implementing nuclear criticality safety requirements; and (5) repetitive, ineffective corrective actions for weaknesses in the program." [96]

We contend that a new draft SWEIS must analyze the occupational and public risks of repeated, chronic nuclear criticality safety incidences at LANL and how to resolve them.

We excerpt the following passages from the DNFSB's March 2024 Report to Congress:

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94 Recommendation 2009-2, DNFSB, https://www.dnfsb.gov/sites/default/files/document/10377/rec_2009-2_32.pdf

95 See *Los Alamos Activity Report for Week Ending April 1, 2022*, DNFSB, https://www.dnfsb.gov/sites/default/files/document/25541/Los%20Alamos%20Week%20Ending%20April%201%202022.pdf

96 Defense Nuclear Facilities Safety Board 29th Annual Report to Congress, April 2019, p. ii, https://www.dnfsb.gov/sites/default/files/document/17791/2018%20Annual%20Report%20to%20Congress%20%5B2019-100-017%5D.pdf

> "The Board is concerned that DOE's planned and completed actions will not be sufficient to drive necessary safety improvements to the requirements and processes that ensure safe and effective management of decades-old defense nuclear facilities.
>
> *Onsite Transportation Safety*—The Board identified safety weaknesses in Los Alamos National Laboratory's (LANL) transportation safety document, stemming in part from weaknesses in the safe harbors that govern transportation safety document development under 10 CFR 830, *Nuclear Safety Management*.
>
> *Los Alamos National Laboratory Plutonium Facility Safety Posture*—NNSA is working to improve the safety basis and engineered safety systems for the LANL Plutonium Facility to support the facility's increased mission scope...The Board is using this information to evaluate the assumptions that underpin NNSA's passive confinement strategy for the facility, the functional requirements of the facility fire suppression system, and the design and performance requirements for the facility's confinement ventilation system.
>
> In a January 19, 2024, letter, the Board noted that, while LANL has implemented several notable process upgrades that reduce the risk of radiological releases caused by adverse chemical reactions in transuranic waste, LANL still has not defined how the chemical compatibility program will interface with the nuclear safety bases of its facilities. Further, the Board noted opportunities for improvement within the chemical compatibility program.
>
> *Criticality Safety*
> Over the last several years, the Board has observed persistent criticality safety staffing challenges and increased significance of criticality safety infractions." [97]

In response to "Criticality Safety," the draft LANL SWEIS states:

> "... In response to the DNFSB, DOE took actions to address the criticality safety concerns. Corrective actions include revising the Nuclear Criticality Safety Program. In addition, the Laboratory conducted a causal analysis of criticality safety infractions that occurred in 2013 and submitted a plan to DOE for reopening PF-4 for operations. The Laboratory incorporated corrective actions from prior assessments into the 2014 *Nuclear Criticality Safety Program Upgrades Project Management Plan* (LANL 2014a). Full operations, including pit manufacturing, resumed at PF-4 in August 2016. In NNSA's January 2023 annual report to the DNFSB (NNSA 2023c) regarding DOE nuclear criticality safety programs, LANL's "program health" and "operational implementation" were both assessed to be "good." In a letter in August 2023, DNFSB acknowledged that the Laboratory completed a probabilistic risk analysis and concluded that the seismic safety risk of PF-4 is acceptable until the site-specific probabilistic seismic hazard analysis is updated in 2025. DNFSB found that NNSA's conclusion was technically defensible and that the accompanying peer review process was robust (DNFSB 2023).
> (Volume 2, PDF page 44 & 45)

Note that DNFSB "concluded that the seismic safety risk of PF-4 is acceptable until the site-specific probabilistic seismic hazard analysis is updated in 2025." The last site-specific probabilistic seismic hazard analysis was completed in 2009 and should have been completed in advance of this draft

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97 *Defense Nuclear Facilities Safety Board 34th Annual Report to Congress,* https://www.dnfsb.gov/sites/default/files/document/30216/DNFSB%2034th%20Annual%20Report%20to%20Congress_0.pdf

PEIS. This is crucial information that is missing in what should be NEPA's required "hard look" at potential risks.

The "increased significance of criticality safety infractions" is concerning. Their frequency and significance may well (or is even likely to) increase as LANL tries to speed up expanded plutonium pit production. We are also concerned with "persistent criticality safety staffing challenges" that we address more in our comment section *Essential vs Non-Essential DOE Personnel*.

We do note that the LANL SWEIS did respond to our October 2022 scoping comment on the disparity between NNSA and DNFSB calculated doses. (Volume 2, PDF page 237) However, we are not satisfied with that response. For example, it did not address a serious source of potential lethal doses, the incompatible wastes that shut down the Waste Isolation Pilot Plant for just under three years. All of these Defense Nuclear Facilities Safety Board concerns need to be fully addressed in a new draft Site-Wide Environmental Impact Statement.

## Cleanup

The legal framework and timetable for cleanup of "legacy" hazardous and mixed waste pollution from LANL operations has drastically changed, with most contaminated areas' cleanup times going from no later than 2016 to no mandated deadline at all, and with DOE estimates for actual cleanup extending beyond 2036. Yet no analysis has been performed of the additional health risks and environmental consequences of ignoring these contaminants for an additional 20+ years.

Further, the 2008 LANL SWEIS heavily relied upon the 2005 Consent Order negotiated with the New Mexico Environment Department (NMED). However, NMED has since sued DOE to terminate the revised 2016 Consent Order, thereby putting DOE's reliance upon it in serious jeopardy. In addition, the 2008 SWEIS did not substantively address what has since become recognized as the most serious and immediate environmental threat, which is hexavalent chromium contamination of the regional aquifer. The new SWEIS must address all of these cleanup issues.

"Cleanup" itself needs to be defined. LANL plans to "cap and cover" some 200,000 cubic yards of radioactive and toxic wastes in unlined pits and trenches and call it cleaned up. The permanent threat to groundwater must be analyzed. Comprehensive cleanup, including waste exhumation and proper treatment, must be analyzed as a more than reasonable alternative. The environmental and public health dangers of per- and polyfluoroalkyl substances, or PFAS, are being increasingly recognized and must be analyzed in detail.

The new LANL SWEIS should include a crosswalk between estimated wastes in 2008 and 2022. The Volatile Organic Compound monitoring plans for Material Disposal Areas L, G, C, T and A must be analyzed. Impacts of transportation of radiological and hazardous materials to and from Los Alamos must be analyzed.

- LANL's online Intellus database of environmental sampling has thousands of contaminants "non-detects" which are still not zero, some at considerable depth from soil surface, perhaps indicating vertical contaminant migration. This, of course, is a vital issue concerning more potential groundwater contamination. The LANL SWEIS should discuss these non-detects and related quality

assurance that verifies that they are indeed non-detects. For example, are the size of samples large enough and counting times with alpha spectrometry long enough to get valid results?

The environmental effects of the contaminated runoff from Laboratory properties to the Rio Grande, and the increasing contamination of the regional aquifer, most notably with hexavalent chromium, were either inadequately considered or completely ignored in the 2008 SWEIS. Those facts, standing alone, would require a new or supplemental SWEIS, but the need is exacerbated by the fact the Buckman Direct Diversion Project (BDD) now diverts water from the Rio Grande to supply the City of Santa Fe and Santa Fe County. DOE has simply failed to consider the consequences of expanded Laboratory operations on that essential water supply and how LANL could minimize the intake of Laboratory contaminants at the BDD, particularly in time of low flow, or alternately during high-flow events that can transport contaminants.

## Cleanup must not include "cap and cover" of unlined waste dumps.

All Material Disposal Areas (MDAs) must be excavated. DOE must analyze the impacts of leaving waste behind in MDAs as compared to excavating it. And DOE must analyze the impacts of excavating the wastes. Since the New Mexican Environment Department (NMED) is calling for the excavation, it must be analyzed.

DOE must stop labeling samples that may be below a "minimum detectable activity" as "non-detects. There is much literature that concludes that smaller amounts of contaminants in samples must be addressed. The groundwater data in the SWEIS that could represent systematic underestimates of the actual contamination and cannot be relied upon in the SWEIS.

**LANL Must Not Allow Contaminants to Reach the Aquifer or The Rio Grande.**
PFAS chemicals must be specifically analyzed. The fact is that tritium, perchlorates, chromium, and high explosives contaminants from Lab operations have already reached the regional aquifer. Lab computer models show a five-year travel time from the surface to the aquifer in some areas. LANL must prioritize protecting our precious aquifer.

A new SWEIS must analyze the planned demolition of the ~550,000 square feet Chemistry and Metallurgy Research Building. What is the schedule and where will the contaminated rubble go?

Plutonium from LANL operations has hit the aquifer. The Lab must treat the contaminants seriously and not just dismiss them as non-detects. In addition to the 259,110 cubic meters of waste and contaminated backfill, buried at Materials Disposal Area C, the Lab has at least 1.4 million cubic meters of wastes buried in unlined trenches in LANL's largest waste dump (Area G) alone. DOE plans to "cap and cover" and leave most of those wastes buried forever, creating a permanent nuclear waste dump above our groundwater, three miles uphill from the Rio Grande. Is this the true legacy of Los Alamos?

## Material Disposal Area C and Other Remaining Waste Sites Must Be Excavated

MDA C at LANL is an 11.8-acre landfill estimated at 198,104 cubic meters. The regional aquifer is estimated to be approximately 1,332 ft below ground surface The total amounts of wastes disposed of

into MDA C are unknown. The extent of the migration of wastes from MDA C is unknown. A subsurface volatile organic compound (VOC) vapor plume is also present beneath MDA C, but the volume of VOCs remaining that could add to the plume are unknown. The RCRA hazardous wastes and the radioactive wastes leaking from the site are commingled and the extents are unknown. Given the amount of transuranic waste, such as plutonium-239, that is likely to be buried in MDA C, leaving the wastes buried 25 feet deep in a landfill rated for only 1,000 years is simply not acceptable.

**Other Alternatives to Cap and Cover Including a Middle Path Must Be Analyzed.** LANL officials have indicated that their plans for a new cover will last for an estimated 1,000 years. But with hits of plutonium and other contaminants already showing up in the regional aquifer, too many unknowns exist concerning the geology to state that leaving the waste in place will be protective of human health and the environment for future generations.

Compounding this problem is that no one truly knows how much or what exactly is buried at Area C. Given these facts, the wastes in Area C must be characterized to fully understand the potential for any migration to groundwater. While being characterized, the waste might as well be recycled before being placed into a lined landfill with leachate collection. We propose that an engineered and rolling landfill must be considered as an alternative in the upcoming CME. This could reduce the landfill footprint and the number of trucks going up and down the hill to the site. The pits and shafts at Area C are only 25 feet at the maximum. This is a doable depth. By DOE's own rules, transuranic waste (mostly plutonium and americium) requires disposal in a geologic repository that will remain safe for 10,000 years.

Given the amount of transuranic waste that is likely to be in Area C, leaving it buried at 25 feet deep in a landfill rated for 1,000 years is not acceptable.

Conceptually, a modern, engineered landfill would look like this:

1. Explain the plan to the Pueblos and the Community and obtain consent. Check with NMED and get approval and permits.
2. Place large hanger-like dome enclosures with robust monitoring over the first pit to be excavated and over the pit next to it. The domes would be on wheels.
3. Set up a fully equipped characterization lab and recycling center with comprehensive monitoring in another dome next to the pit domes.
4. Start with excavating the first pit. Stockpile the removed dirt for later use.
5. Line the newly excavated pit and slope the bottom for comprehensive leachate collection. Place a second liner and leachate system above the first.
6. Send in robot-diggers and highly trained personnel.
7. As a piece of waste is exhumed, characterize it. Inventory it. Don't lose the inventory. Take pictures. Ship any TRU to WIPP. Clean, carefully recycle, and reuse anything possible. Repackage the waste and place it in the first pit, along with any low-level waste and dirt. Take pictures and catalogue where the waste is emplaced.
8. Recycle to the fullest extent possible all uncontaminated materials.
9. When the new pit is full, move the domes on their tracks over the pit that was excavated last.
10. Cover the previous pit with robust cover.
11. Repeat steps 3-11 until finished.

**The Chromium Interim Measures and Final Remedy must not be under No-Action**
DOE prepared the Chromium Final Remedy Environmental Assessment (EA) to evaluate alternatives for interim measures and a final remedy for the hexavalent chromium contamination in Sandia and Mortandad Canyons. The Chromium Final Remedy EA provides four options representing different remediation methods and technologies that provide flexibility to adjust to potential or unanticipated events. (3-13) Yet the boundaries of the plume are still unknown. The Chromium Interim Measures and Final Remedy are not ready to be acted on.

## Future Facilities

A March 28, 2025 Exchange Monitor articles states:

> Wright directed that DOE Order 413.3B, which provides DOE and NNSA with the funds necessary to deliver projects on schedule and within budget, be revised. Specifically, he directed that the delegated project authority for management and operating contracts be expanded to $300 million from $50 million, and tailor that order to only require project reviews at "critical decision points" on projects between $300 million and $1 billion. "Unfortunately, over the years, burdensome regulations delayed the important work being done at our national labs," Wright said in a press release. He added many of the weapons development sites rely on facilities that date back to the 1940s Manhattan Project. "By reforming DOE's permitting rules and regulations for our National Labs, we can speed up critical infrastructure improvements and make the Energy Department a better steward of taxpayer dollars," Wright said.

The above will allow DOE to build ever-larger facilities without Congressional oversight. **The impacts of larger facilities must be analyzed. The impacts of speeding up critical infrastructure improvements with less Congressional oversight must be analyzed.**

To give the nuclear weapons labs nearly unilateral budget authority for projects up to $300 million rewards the already guilty. The American taxpayer is being asked to foot the bill for $4 trillion in tax cuts for the ultra-rich while non-military programs are being eviscerated. Imagine what $300 million could do for New Mexico's public education system, which is rated dead last in the country! Instead, we're going to have a bunch of just-under-$300 million new facilities at LANL. **The impacts of this dedicated increase in production of weapons of mass destruction and artificial intelligence, while not spending on New Mexico's public education system, must be analyzed.**

This increased lack of oversight is a recipe for more waste of taxpayers' dollars. The Department of Energy and the National Nuclear Security Administration and its predecessors have been on the independent Government Accountability Office's "High Risk List" for project mismanagement ever since the list was started in 1991. Massive cost overruns are the rule, not the exception. Moreover, the NNSA constantly ignores GAO's recommendations for basic good governance, such as an "Integrated Master Schedule" for plutonium "pit" bomb core production, its most expensive and complex program ever. **This SWEIS must compare the impacts of LANL being on the GAO "High Risk List" compared to not being on that List.**

Future pit production is likely to cost more than $60 billion, but we don't really know because the NNSA does not have credible cost estimates. Future pit production is not even to maintain the safety

and reliability of the existing stockpile. Instead, it is for new-design nuclear weapons that can't be tested because of the current testing moratorium, thereby perhaps eroding confidence in stockpile reliability. Or new-design pits could prompt the U.S. to resume testing, which would have severe international proliferation consequences. **The impacts of resuming nuclear testing must be analyzed.**

**The No Action Alternative Must Not Include Projects That Do Not Have NEPA Coverage.**
The draft SWEIS states, "The No-Action Alternative reflects continuation of current, ongoing operations and implementation of approved projects (those with current, or in-process, NEPA coverage), which include decisions NNSA made based on the 2008 LANL SWEIS and subsequent SAs." (Draft SWEIS, Vol 1, Pg. 3-5) **DOE must state which current, ongoing operations and implementation of approved projects have current, or in-process, NEPA coverage and which ones don't.**

**The Locations of Future Generic Facilities Are Difficult to Understand and Must Be Clarified.**
This SWEIS claims that Figures A.3.2-10 through A.3.2-14 "can be used to find the approximate location of new facilities for the No-Action Alternative using the grid coordinates provided in Chapter 3, Tables 3.2-1 and 3.2-2. The Map ID numbers are used in the figures to indicate the proposed location of the projects. In some cases (e.g., offices, warehouses), the Map ID numbers will show up in multiple locations, indicating multiple instances of the same project type." (Draft SWEIS, Vol 2, Pg. 92)

**For instance, the counts of facilities in Table 3.2-1 do not match the counts on Figure A.3.2-10 All facilities must be listed individually in Table 3.2-1.**

**All Future Buildings Must Be Specifically Located, Named, And Described.**
Multiple proposals for similar facilities in different locations must not be allowed. Over 130 new facilities, representing a development footprint of almost 1.5 million square feet are being constructed under the No-Action and the Modernization Alternative. Many of these projects represent multiple proposals for similar facilities in different locations.

This SWEIS lumps all facilities of the same type into generic categories. For instance, in the No-Action Alternative and the Modernization Alternative, DOE projects 68 warehouses, totaling 450,400 square feet, and 56 office buildings totaling 1,139,900 square feet. So, DOE is just doing a generic analysis by the square foot. Not all square feet are the same. **The public must know the actual size of any building, what the use will be, and where it will be located.**

Proposed for DD&D under the No-Action Alternative:

> "• There are 13 facilities that are radiologically contaminated (about 954,000 square feet, 58 percent of the total footprint);
> • There are 17 facilities that are chemically contaminated (about 67,000 square feet, 4 percent of the total footprint);
> • There are 27 facilities that have some level of asbestos contamination (about 334,000 square feet, 21 percent of the total footprint)…" (Draft SWEIS Vol 2 Pg. 60)

**All buildings scheduled for DD&D must be individually located, named, and described.** A total of 186 facilities, with a total footprint of 1,630,000 square feet, would be scheduled to undergo decontamination, decommissioning, and demolition (DD&D) of excess and aging facilities under the No-Action Alternative. (5-64) Proposed programs, operations, DD&D, and facilities cannot be 'no action.' **Once again, the public must know the actual size of any building, what the use was, and where it is located.**

## Seismic Concerns

A recent report states, "The subsurface geology beneath the Pajarito Plateau is critical to understanding the seismic hazard of the Pajarito Fault System, yet our understanding of this geology is relatively poor."[98]

**DOE must finalize the updated probabilistic seismic hazards assessment (PSHA) and include the findings in a new Draft LANL SWEIS.**

> "DOE requires a site-specific probabilistic seismic hazards assessment (PSHA) for the design of critical facilities, including high-risk structures. The site-specific PSHA involves extensive field work including geologic mapping, fault excavation, geophysics, geologic age dating, evaluation of seismic (vibratory ground motion) wave propagation through rock and soil layers, expert judgement, and peer review. Many parameters for specific siting of facilities are evaluated including PGA, peak ground velocity, and peak ground displacement to define potential hazards. The development of these values is achieved by developing seismic source models and ground motion models. These parameters, and subsequent models, are affected by local variables such as bedrock type, depth to bedrock, and local soil thickness." [99]

Seismic concerns played a major role in causing massive cost overruns involving billions of taxpayer dollars and related complete redesigns of both the Chemistry and Metallurgy Research Replacement Project at the Los Alamos National Laboratory and the Uranium Processing Facility at the Y-12 Site. **This LANL SWEIS should incorporate the freshest seismic data possible for expanded plutonium pit production at the Lab, especially given that it is not clear that PF-4 can ever be brought up to modern seismic codes.**

This is underscored by the fact that one of the main reasons that the CMRR-Nuclear Facility was ultimately cancelled was because of its dramatically increasing costs. This was largely due to the need to pour a concrete "base mat" to replace the unconsolidated volcanic sediments that underlie all of LANL's Technical Area-55. Obviously, no such fix is possible for the aging PF-4. This reinforces the need for a new or supplemental PEIS and LANL SWEIS to consider, among other issues, the safety and environmental risks associated with continuing to use this aging, vulnerable facility well beyond its intended design life.

NNSA stated:

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98 *3D Geologic Framework Modelling of the Los Alamos National Laboratory Site and Pajarito Plateau: Integrating a realistic 3D fault network and modelling subsurface relationships in a sparsely sampled and complex geologic region, Erik Alberts, Los Alamos National Laboratory*, Pg. 1 https://www.osti.gov/biblio/2472554

99 *2020 Final Supplemental Analysis of the 2008 SWEIS for LANL for Plutonium Operations, DOE/EIS-0380-SA-06* Pg. 39

> "LANL's ongoing Seismic Analysis of Facilities and Evaluation of Risk project is conducting a detailed, multi-year analysis of the seismic design loads on existing facilities within the Plutonium Complex. This comprehensive seismic hazard analysis will provide a better understanding of the stresses on PF-4 and how it might react during a seismic event."
> (Complex Transformation SPEIS SA Pg. A-14)

NNSA requires Probabilistic Seismic Hazard Analyses (PSHAs), yet LANL's most recent PSHA is from 2009. NNSA is proceeding with expanded plutonium pit production at LANL's Technical Area-55 with a deficient understanding of seismic risks. This is not a mere academic exercise in that the Defense Nuclear Facilities Safety Board has postulated offsite radioactive doses in the few hundred rems in the event of a seismically-induced fire.

In an August 15, 2023 letter to DOE Secretary Jennifer M. Granholm, DNFSB chair Joyce Connery clarified that the DNFSB was waiting for the updated PSHA:

> "The Defense Nuclear Facilities Safety Board (Board) has been engaged with the Department of Energy (DOE) on seismic safety of the Plutonium Facility (PF-4) at Los Alamos National Laboratory (LANL) since laboratory personnel first identified elevated seismic hazards in 2009.
>
> A LANL project team recently completed a probabilistic risk analysis and concluded that ***the seismic safety risk of PF-4 is acceptable until LANL updates the site-specific probabilistic seismic hazard analysis in 2025***. The Board finds that the conclusions of the LANL project team were technically defensible and that the accompanying peer review process was robust. However, DOE would benefit from improving documentation of the effort. Currently, there is no single integrated report that comprehensively documents the probabilistic risk analysis effort and overall conclusions. Improving the formality of documentation would enhance transparency and facilitate better understanding and dissemination of the analysis." [100]

The DNFSB is provisionally accepting NNSA's claim that PF-4 is seismically safe only until the new 2025 PSHA is completed. NNSA must have a new PSHA in hand before continuing with this LANL SWEIS. This PSHA provides some USGS data on probable ground acceleration and spectral acceleration at 2% probability in 50 years. These are published generic criteria used for many purposes, but actual intensity measures must be related to risk tolerance of the specific target. (SWEIS PDF Pg. 4-24)

DOE requires a site-specific Probabilistic Seismic Hazard Analysis (PSHA) for PF-4. A comprehensive update to the 1995 seismic hazard analysis of LANL was completed and incorporated in the 2008 SWEIS analysis. The 2007 comprehensive update indicated that the seismic hazard was higher than previously understood from the initial 1995 PSHA. The 2007 seismic hazard study was updated in 2009 to incorporate a new set of ground motion attenuation relationships and to examine potential conservatism in the 2007 study (LANL 2009). LANL is currently engaged in an update to the 2007 PSHA, which is scheduled for completion in 2025. **The public will not have an opportunity to comment on the 2025 PSHA impacts in this SWEIS but must have a chance to**

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100 *August 15, 2023 letter to DOE Secretary Jennifer M. Granholm, DNFSB chair Joyce Connery* https://www.dnfsb.gov/sites/default/files/document/29006/LANL%20PF-4%20Interim%20Seismic%20Risk%20Closeout%20%5B2023-100-023%5D.pdf

**see the 2025 PSHA analyzed. Will DOE have to recalculate all the seismic risks to LANL after the 2025 PSHA is completed?**

**LANL SWEIS should fully analyze seismic concerns and possible mitigation strategies to lower public risks from future expanded plutonium pit production.** The DNFSB has postulated high doses to the public in the event that PF-4 at LANL was seriously damaged by a seismic event.

## Specific Comments

**The final state of any cultural resources must be provided**
Under the Modernized and Expanded Operations alternatives, as many as 33 known cultural resources could be physically impacted or damaged by the proposed projects. Of these resources, 19 are considered significant and would likely require mitigation prior to construction. In addition, several projects could impact the settings of traditional cultural properties. Consultation with tribes would be needed on specific projects to determine the potential for physical impacts, setting impacts, and access impacts to traditional cultural properties."

**DOE wants to determine the potential for impacts but wants to mitigate the impacts while not avoiding them. It looks like the mission is more important than the traditional cultural resources.**

**The potential impacts of a microreactor must be specified.**
Buried in the SWEIS is the plan to bring microreactors to LANL to power the proposed photon x-ray operation for the nuclear weapons program. The SWEIS states that microreactors are "factory manufactured, easily transported, and designed to produce up to 20 megawatts thermal (MWth) energy (approximately 1–5 MW of electrical power) for at least 3 years in full operation. This power limit allows microreactors to be classified as [hazard category 2] HC-2 nuclear facilities...

All reactors are supposed to be classified as hazard category one (HC-1), even the small ones. This has to do with the requirements for safety, operations, and containment. Second off, **LANL has plenty of electricity and is planning to get more. The exact purpose and need must be stated. What containment, if any will it have must be analyzed. The impacts of accidents must be specified.**

**The potential impacts of a Low-Enriched Uranium Fuel Fabrication Facility (LEFFF) must be specified.** The LEFFF would fabricate high- assay low-enriched uranium (HALEU) fuels at the scale of hundreds of kilograms per year. **Transportation routes and impacts must be specified both for the feedstock and the HALEU. The impacts of accidents must be specified.**

**Inadvertent Criticality, Mixed Fission Product Releases must be analyzed**
The SWEIS claims that facility and co-located workers are protected from inadvertent criticality by the LANL Nuclear Criticality Safety Program and engineered safety features. But LANL has a long history of criticality accidents.

> "Because of the quantity of fissionable material present within some LANL radiological facilities, the potential for inadvertent nuclear criticality is credible. Detailed evaluations of criticality hazards and controls are an integral part of all operations, processes, and activities at these facilities. The implementation of the LANL Nuclear Criticality Safety Program (LANL 2021f) requires that a

> specific Criticality Safety Evaluation Document (CSED) be prepared for a process or activity whenever fissionable materials are present. The CSED delineates the necessary controls for all normal and credible abnormal conditions (credible contingencies).
>
> Although inadvertent criticality was not selected for analysis as a DBA in this SWEIS due to the low consequence to the MEI and public, the discussion from the safety basis documents (i.e., DSAs, BIOs, PDSAs, and SADs) is presented here for public awareness. It should be noted that facility and co-located workers are protected from inadvertent criticality by the LANL Nuclear Criticality Safety Program and engineered safety features." (PDF Pg. D-62)

A program alone cannot totally protect workers from an inadvertent criticality. **DOE must use all protections available when the possibility of a criticality is present.** Programs are run by humans and humans are not perfect (even activist humans).

**Approximately 20% of listed reference documents are not available.** In our October 2022 scoping comments for the draft LANL SWEIS we explicitly stated that "All reference documents for the LANL SWEIS should be made electronically available to the public on the internet." Despite this, many links are entirely absent, many are "404: Page Not Found," a number of documents require purchase, and many require a Freedom of Information Act request for which the NNSA can take years to honor. This is inexcusable in the information age and is a serious impediment to the serious researcher and commenter. The draft LANL SWEIS is substantively reliant upon justifications given by reference documents. As such, all unclassified reference documents in all NNSA NEPA processes should be readily online to the public. There are 78 reference documents, out of 370, that are unavailable. See Appendix below.

- End of Comments -

These comments respectfully submitted,

Jay Coghlan, Executive Director
Scott Kovac, Research Director,
Sophia Stroud, Communications Director

# Appendix

**The 78 unavailable references in this draft SWEIS, Volume 1, Chapter 7**

| NAME | LINK | Problem |
|---|---|---|
| Allen, C.D., M. Savage, D.A. Falk, K.F. Suckling, T.W. Swetnam, T. Schulke, P.B. Stacey, P. Morgan, M. Hoffman, and J.T. Klingel. 2002. "Ecological Restoration of Southwestern Ponderosa Pine Ecosystems: A Broad Perspective." Ecological Applications 12 (5): 1418- 1433. Available online: | https://esajournals.onlinelibrary.wiley.com/doi/abs/10.1890/1051-0761%282002%29012%5B1418%3AEROSPP%5D2.0.CO%3B2 | **Has Abstract - Must Purchase pdf** |
| Allison, L.J.; C.E. Paradzick; J.W. Rourke; and T.D. McCarthey. 2003. "A characterization of vegetation in nesting and non-nesting plots for southwestern willow flycatchers in central Arizona." Studies in Avian Biology 26:81–90. Available online: | https://pubs.er.usgs.gov/publication/1017392 | **The Publications Warehouse does not have links to digital versions of this publication at this time** |
| Berryhill, J.T.; J.E. Stanek; E.J. Abeyta; and C.D. Hathcock. 2020. Sensitive Species Best Management Practices Source Document. Revision 1. LA-UR-20-24514. Los Alamos National Laboratory. July 9. Available online: | https://permalink.lanl.gov/object/tr?what=info:lanl-repo/lareport/LA-UR-20-24514 | **You need to make a DOE NNSA FOIA request for this document.** |
| CEQ (Council of Environmental Quality). 1997. Environmental Justice Guidance under the National Environmental Policy Act. Washington D.C. December. Available online: | https://www.energy.gov/node/256081 | **Notice of Court Order. Click here to read.** |
| Ditmanson, E.J. and A.A. Sanchez. 2022. LANL Prelisting Conservation Program: A White Paper on At-Risk Species Mitigation. LA-CP-22-20907. Los Alamos National Laboratory. November 21. | | **OFFICIAL USE ONLY** |
| DOE (U.S. Department of Energy) 1994. "Benefits of Site-wide National Environmental Policy Act (NEPA) Review." Memorandum from the Office of NEPA Oversight. December 15 | | **No Link given** |
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| DOE (U.S. Department of Energy) 2012. NEPA Source Document for Pit Disassembly and Conversion (PDC) Project, Revision 1. SRB-25.02-12-0001. Prepared by Savannah River Nuclear Solutions. June 18. | | **No Link Given** |

| | | |
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| DOE (U.S. Department of Energy) 2016a. Final Environmental Impact Statement for the Disposal of Greater-Than-Class C (GTCC) Low-Level Radioactive Waste and GTCC Like Waste. DOE/EIS-0375. January. Available online: | | **Page Not Found** |
| Drakos, P.G., S.L. Reneau, and G.S. Morgan 2007. "Bison Antiquus occurrence and Pleistocene- Holocene stratigraphy, Canada del Buey, Pajarito Plateau, New Mexico." In Geology of the Jemez Region II; Kues, Barry S., Kelley, Shari A., and Lueth, Virgil W. [eds.]. New Mexico Geological Society 58th Annual Fall Field Conference Guidebook, pp. 441-448. Available online: | https://doi.org/10.56577/FFC-58 | **Downloads of the papers below are free. Road logs, mini-papers, and some other sections of recent guidebooks are only available in print** |
| EPA (U.S. Environmental Protection Agency) 2018a. "Biennial Report Summary – 2017 Results for Utah – 2017 Site Listing for Utah (Waste Received)." Searchable dataset available online: | https://rcrapublic.epa.gov/rcrainfoweb/action/modules/br/search/searchDetail/true | **HTTP Status 403 – Forbidden** |
| EPA (U.S. Environmental Protection Agency) 2018b. "Biennial Report Summary – 2017 Results for Tennessee – 2017 Site Listing for Tennessee (Waste Received)." Searchable dataset available online: | https://rcrapublic.epa.gov/rcrainfoweb/action/modules/br/search/searchDetail/true | **HTTP Status 403 – Forbidden** |
| Executive Order 13985. "Further Advancing Racial Equity and Support for Underserved Communities Through the Federal Government." February 16, 2023. Available online: | https://www.whitehouse.gov/briefing-room/presidential-actions/2023/02/16/executive-order-on-further-advancing-racial-equity-and-support-for-underserved-communities-through-the-federal-government/ | **404 Page Not Found** |
| Executive Order. 13990. "Protecting Public Health and the Environment and Restoring Science to Tackel the Climate Crisis." January 20, 2021. Available online: | https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/20/executive-order-protecting-public-health-and-environment-and-restoring-science-to-tackle-climate- crisis/ | **404 Page Not Found** |
| Executive Order 14008. "Tackling the Climate Crisis at Home and Abroad." January 27, 2021. Available online: | https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/27/executive-order-on-tackling-the-climate-crisis-at-home-and-abroad/ | **404 Page Not Found** |
| Executive Order 14057. "Catalyzing Clean Energy Industries and Jobs Through Federal Sustainability." December 8, 2021. Available online: | https://www.whitehouse.gov/briefing-room/presidential-actions/2021/12/08/executive-order-on-catalyzing-clean- | **404 Page Not Found** |

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