SRS WATCH

Savannah River Site Watch

July 10, 2025

Scoping Comments by SRS Watch on NNSA's "Notice of Intent To Prepare a Programmatic Environmental Impact Statement for Plutonium Pit Production," of May 9, 2025
(in Federal Register: https://www.govinfo.gov/content/pkg/FR-2025-05-09/pdf/2025-08140.pdf)

I hereby submit the following plutonium pit Programmatic Environmental Impact Statement (PEIS) scoping comments, with these comments and attachments also sent by mail. I expect all the comments raised here and in the attachments to be addressed in the draft PEIS and associated Record of Decision (ROD) that are required to be issued a maximum of 2.5 years from January 16, 2025.

Please confirm receipt of these comments. All mentioned documents have a URL and will be mailed in printed form along with these printed comments, to ensure receipt for the record.

I request that I be added to the PEIS mailing list: srswatch@gmail.com.

Note: The Pit PEIS is being Prepared Due to a Federal Court Victory by Public Interest Organizations and not Strictly Due to an Independent Decision by NNSA. This Must be Explained in the Draft PEIS

Of great significance, it should be made clear in the draft PEIS that the document is being prepared under a federal court-mandated "settlement agreement," dated January 16, 2025, between the U.S. Department of Justice/National Security Administration (NNSA) and plaintiffs in the federal lawsuit demanding that a PEIS on pit production be prepared. Plaintiffs are Tom Clements, Savannah River Site Watch (Columbia, SC), Nuclear Watch New Mexico (Santa Fe, NM), Tri-Valley CAREs (Livermore, CA) and the Gullah/Geechee Sea Island Coalition (South Carolina), with expert legal representation by the South Carolina Environmental Law Project (SCELP)

Thus, it is not NNSA's unmotivated choice to prepare the current PEIS now being considered. Rather, it was due to a legal intervention and ruling by the federal judge in Columbia, SC on September 30, 2024 that NNSA had violated NEPA by not preparing the PEIS. As us groups wrote to NNSA on several occasion well in advance of filing the lawsuit, the PEIS, as we noted in our letters, was required and could have been prepared at any time after the May 2018 DOD-NNSA announcement about expanded pit production. If NNSA had complied with NEPA 7 years ago, the current PEIS process would not be necessary and would likely have been concluded years ago.

It is thus mysterious way NNSA chose the track it did. It is interesting to note that it has not been NEPA that has impacted the timeline for the pit-production plans but rather the avoidance by NNSA of the NEPA requirement to prepare a PEIS that has impacted the program. If not for NNSA's avoidance of NEPA's PEIS requirement we would not now be engaged in the current PEIS process. Preparation of the

PEIS beginning in 2018 would have resulted in a NEPA review that was "faster, more flexible, and more efficient," something NNSA has sought to avoid until now.

Thus, what caused the PEIS to now be prepared should be explained in the draft PEIS. In any event, these scoping comments and attachments document for the record what happened.

The settlement agreement mentioned in the first paragraph above is clear in that there is no restriction to plaintiffs or anyone else who might challenge the final pit-production PEIS and ROD if those documents are inadequate or do not conform with laws and regulations:

> The Parties acknowledge that nothing in this Agreement limits Plaintiffs' rights to challenge subsequent agency actions, including new NEPA analyses and/or decision(s), in a separate administrative or judicial action including, but not limited to, the judicial review provisions of the Administrative Procedure Act, 5 U.S.C. §§ 701-706, and that nothing in this Agreement limits DOE's or NNSA's rights to assert any applicable defenses.

It must be pointed out that while there are efforts by the current administration to weaken NEPA in many ways - for example, see Federal Register Notice, July 3, 2025, "Revision of National Environmental Policy Act Implementing Procedures," https://www.govinfo.gov/content/pkg/FR-2025-07-03/pdf/2025-12383.pdf - what is most needed is a requirement for prompt compliance by NNSA with NEPA. If NNSA had promptly complied with NEPA in 2018 when the dual-pronged pit-production plan was announced, the PEIS would have been prepared beginning then and we would not be engaging in the inexplicable, lengthy delay associated with NNSA's attempt to avoid compliance with NEPA. If common sense and law and regulation had guided the NNSA on this matter, the self-induced paralysis and lack of efficiency in carrying out NEPA could have been easily avoided and a lengthy legal challenge would have been avoided.

Pertaining to the federal court involvement in requiring the PEIS, the content of the documents below must be reviewed for response in the draft PEIS:

- Group news release "Court Rules U.S. Nuclear Weapons Production Plan Violates Federal Law," October 3, 2024, https://srswatch.org/wp-content/uploads/2024/10/Plutonium-pit-NEPA-decision-news-release-Oct-3-2024-1.pdf

- Link to the federal court's "MEMORANDUM OPINION AND ORDER GRANTING JUDGMENT IN FAVOR OF PLAINTIFFS AS TO CLAIM ONE AND DISMISSING WITHOUT PREJUDICE CLAIMS TWO, THREE, FOUR, AND FIVE FOR LACK OF STANDING, September 30, 2024, https://srswatch.org/wp-content/uploads/2024/10/SRS-Final-Order-Sept-30-2024.pdf

- Group new release "Historic Settlement Reached in NEPA Lawsuit Over Plutonium "Pit" Bomb Core Production," January 17, 2025, https://nukewatch.org/wp-content/uploads/2025/01/Settlement-Reached-in-Historic-NEPA-Lawsuit-Over-Plutonium-Pit-Bomb-Core-Production.pdf

- Settlement Agreement between DOJ/NNSA and the plaintiffs, U.S. District Court for the District of South Carolina, Aiken Division, first 12 pages of the 125-page agreement and attachments, January 16, 2025, in which NNSA agreed to prepare the PEIS, https://nukewatch.org/wp-content/uploads/2025/01/Settlement-Agreement-and-Exhibits.pdf

"No Action Alternative" in Draft PEIS Must be Disarmament

In the draft PEIS, the "No Action Alternative" must be disarmament and not production of new plutonium pits for new warheads. Article 6 of the Nuclear Nonproliferation Treaty (NPT), to which the U.S. is a signatory, requires disarmament of nuclear weapons and is U.S. policy and law. Production of new warheads using new pits run counter to the NPT and will contribute to a budding nuclear arms race. How does production of new pits for new warheads for new nuclear weapons comport with the NPT?

Additionally, an alternative that could be reviewed is pit reuse without new pit production.

Pit Reuse Consideration

The matter of reusing existing pits must be considered as an alternatives before new pits are produced. DOE claimed in the 2020 EIS on SRS pit production that there would be "judicious reuse" of pits. Such judicious reuse has not been explained and must be thoroughly addressed in the draft PEIS. The environmental implications of production of new pits vs pit reuse must be discussed.

As there are somewhere around 20,000 pits in storage at DOE's Pantex site, reuse of existing pits is feasible and must be addressed. The JASON report of 2007, entitled *Pit Lifetime* – (at https://irp.fas.org/agency/dod/jason/pit.pdf) - stated that "Most primary types have credible minimum lifetimes in excess of 100 years as regards aging of plutonium; those with assessed minimum lifetimes of 100 years or less have clear mitigation paths that are proposed and/or being implemented." This key conclusion appears to remains the case. DOE's Rocky Flats produced pits until 1989, so most pits are maybe an average of around 45 years old.

Please provide updated evidence of pit lifetimes and why new pits or different varieties might be needed for different warheads.

Please explain why there is a rush to new pit production, especially lacking a definitive report on need and a report on plutonium and pit aging. Please provide for the PEIS record a redacted copy of any current plutonium and pit aging study completed by or for NNSA.

More on why pit aging and pit reuse studies needed

NNSA is pushing forward with pit production absent a public report on why new pits are needed or can't be reused. Proceeding with a costly new pit production program without results of aging studies is an on-going mistake by NNSA.

The Government Accountability Office, in a February 2024 report entitled *Nuclear Weapons: Information on the National Nuclear Security Administration's Research Plan for Plutonium and Pit Aging*, (https://www.gao.gov/assets/870/867665.pdf), pointed out the need for pit-aging study:

> Following these reports, Congress directed NNSA to develop a comprehensive, integrated 10-year research program plan for pit and plutonium aging. NNSA submitted such a plan to Congress in September 2021. The plan includes areas of study, planned experiments, mid- and long-term goals, and estimated costs.

A heavily redacted version of the "program plan" was obtained via a FOIA by groups in the Alliance for Nuclear Accountability - Savannah River Site Watch, Nuclear Watch New Mexico and Tri-Valley CAREs - and is attached. The plan is of little use given redactions and is late in coming. The research plan outlined in it should have completed well before NNSA rushed into pit production. Without that plan and resulting research, NNSA has presented little to the public as to why new pits are needed and has thus undermined public confidence in its decision making.

See group news release, *NNSA Delays Urgent Research on Plutonium "Pit" Aging While Spending Billions on Nuclear Weapons Bomb Core Production*, April 17, 2024, https://srswatch.org/nnsa-delays-urgent-research-on-plutonium-pit-aging-heavily-redacted-plutonium-pit-aging-plan-to-congress-obtained-via-tardy-doe-foia-response/

The GAO goes on to point out:

> House Report 117-397, accompanying a bill for the National Defense Authorization Act for Fiscal Year 2023, includes a provision for GAO to assess NNSA's plan to study plutonium aging. Our review examined (1) the current age and estimated lifetimes of pits in the stockpile; (2) key goals, milestones, program elements, enabling capabilities, and budgetary requirements of NNSA's research plan; and (3) the impact that lifetime estimates may have on stockpile management and pit production. This report provides an unclassified summary of our November 7, 2023, classified briefing to you on the results our review.

Yet, NNSA has provided little or no information for the public record about the above-mentioned study on plutonium aging. The report should have been prepared prior to the NNSA announcement in May 2018 of pursuit of dual pit-production facilities. The PEIS must examine how unknowns about pit aging and pit reuse hold potential environmental impacts, or avoidance of impacts.

The issuance of a final PEIS and Record of Decision should be put on hold until proper information on plutonium and pit aging can be entered into the public record. NNSA's lack of this essential information reflects poor planning and foot dragging on NNSA's part and it is wholly the fault of NNSA not to have done necessary research on pit aging and pit reuse before setting out on the costly, complex plan to produce pits at two DOE sites (one of which, SRS, has no pit handling or production experience).

Failure to prepare a publicly releasable study on plutonium and pit aging reflects NNSA's decision-making paralysis, inefficiency and needless and costly delay.

If the JASON group is now conducting a study on pit aging, a publicly releasable version of that report should be made part of the PEIS record.

It appears that NNSA has recently decided to reuse at least some pits for the Sentinel's W87-1 warhead. Information supporting that decision should have been available many years ago and not when both the troubled Sentinel program and new pit production have proceeded. Pit reuse for the W87-1 will preclude some or all pit production at LANL, which has positive cost, environmental and health implications. Pease explain why pits for the W87-1 warhead could consist of reused pits.

What pits will be used for needs explanation in the PEIS

What is the time horizon for pit production? It has been reported that DOE aims to not only produce new pits for new warheads but also replace all pits in the approximately 3800 deployed and reserve warheads. Is this the case? This must be revealed, if accurate, in the draft PEIS. Why are new pits needed for existing weapons and what are the additional environmental impacts for such a major undertaking?

Please comment on the reality that DOE will not reach 80 pits per year by 2023. This will, obviously, lower environmental impacts at Los Alamos and this must be addressed in the draft PEIS.

To repeat, please comment on the apparent plan to reuse existing pits for the Sentinel warhead. Such reuse will reduce environmental and safety impacts at Los Alamos

In fact, pit reuse for the W87-1 warhead for the over-budget Sentinel missile points the way to the possibility of more pit reuse in new and existing weapons and no need for new pit production, which will mean fewer environmental and health impacts. This reduction in impacts due to pit reuse must be reviewed in the draft PEIS.

Please explain the role of new plutonium pits in "deterrence." Please define deterrence. As seems clear in the last Nuclear Posture Review, deterrence includes preparation for full-scale nuclear war and has become a buzz word justifying new nuclear weapons and increased nuclear weapons spending. If deterrence, as some might define it, were to be a few hundred weapons, why are new pits needed?

No future pit production is to maintain the safety and reliability of the existing nuclear weapons stockpile. Instead, initial pit production is for new design nuclear weapons. Will this help fuel a new nuclear arms race? Could new design nuclear weapons with new pits prompt the U.S. to resume testing?

Please discuss any environmental-impact related roles and decisions by the pit-production management, including the SRNS Pit Production Operations and Programs (PPOP) Mission Development and Los Alamos National Laboratory (LANL)'s Production Analysis and Transformation (PAT) Directorate.

What will SRS Pits be Used for?

It has been reported that the first pits to be produced at SRS would be for the W93 warhead for the U.S.-UK Submarine Launched Ballistic Missile (SLBM). As the Sentinel ICBM is so far behind schedule and greatly over cost estimates, could pits for the Sentinel's W87-1 warhead also be produced at SRS?

Please discuss which pit for which warheads would be produced at both SRS and LANL and how any waste streams might vary for different pit types. How would such waste be managed and disposed of?

Please discuss the amount of plutonium stored at SRS and how much of that would go to pits. Some plutonium, earlier destined for downblending and disposal in WIPP, now seems to have gone into a plutonium stockpile for possible future use. Please explain what will happen to all plutonium now at SRS and if more plutonium will be shipped to SRS for possible long-term, non-pit use, such as storage in a plutonium stockpile for use as nuclear power fuel. (I note that DOE's efforts to build a plutonium fuel plant to produce MOX fuel failed in 2017 and there are no credible plans to use plutonium fuel in currently unlicensed, non-existent fast reactors.)

What is the schedule of plutonium shipment into LANL and SRS for pit production, the shipment schedule out of the sites and how much plutonium for pit production will be at the sites at any one time?

Impacts of Nuclear War & Use of Product (New Pits) from Processing to Production to Use

The National Academies of Sciences, Engineering and Medicine on June 25, 2025 released a report entitled *Potential Environmental Effects of Nuclear War*. (https://nap.nationalacademies.org/catalog/27515/potential-environmental-effects-of-nuclear-war)

According to the NAS website the report was prepared due to a congressional request:

> In response to the buildup of U.S. and Russian nuclear arsenals during the Cold War, a series of major scientific studies conducted in the 1980s issued warnings about the potential for a "nuclear winter" scenario - the possibility that a large-scale nuclear exchange could inject massive amounts of soot and particulates into the upper atmosphere that would block incoming solar radiation and cause major ecosystem and societal disruptions. In the decades since that concept emerged, profound military, political, and technological changes have reshaped the nuclear landscape, while scientific advances have deepened the understanding of, and ability to model, Earth system processes. It is in this context that the U.S. Congress asked for this report to re-examine the potential environmental, social, and economic effects that could unfold over the weeks to decades after a nuclear war.
>
> The effects of any given nuclear exchange would depend on key processes and interactions along a causal pathway with six stages: weapon employment scenarios and effects; fire dynamics and emissions; plume rise, fate, and transport; physical Earth system impacts; ecosystem impacts; and socioeconomic impacts. Impacts of radioactive fallout were not

included in the assessment. Potential Environmental Effects of Nuclear War identifies major uncertainties and data gaps at each stage of the causal pathway that currently limit researchers' ability to understand and model the effects of a nuclear war. This report recommends that relevant U.S. agencies coordinate the development of and support for a suite of model intercomparison projects to organize and assess models to reduce uncertainties in projections of the climatic and environment effects of nuclear war.

NNSA's end use of its product, new pits, for a host of new weapons designs would play a key role in any U.S. use of nuclear weapons or in nuclear war. As all impacts of use of nuclear weapons using new U.S. pits would be of paramount concern, please discuss in the draft PEIS the health and environmental impacts of nuclear detonation of pits to be produced by NNSA.

Environmental Justice and Climate Change

The Trump Administration is seeking to exclude review of environmental justice and climate change issues. I request a full discussion of these issues as they relate to pit production in the draft PEIS Concerning SRS, the impacts to minority communities across the river in Georgia and ne ar Barnwell, SC, as well as potential downriver impacts to the Gullah/Geechee community, must be discussed.

At Los Alamos, potential environmental and health impacts to nearby pueblos must be discussed.

As SRS may be targeted for a "small modular reactor" complex - such reactors are not licensed by the NRC and only in the design phase - if NNSA is proposing them for electricity generation for pits must be discussed. If so, what's the schedule for SMR licensing, construction and operation? Or, would DOE/NNSA pursue use of unlicensed, experimental reactors? Use of fossil-fuel generated electricity from Dominion Energy must be discussed.

Pit Production at SRS Not Mandated by Law

While National Defense Authorization Acts (NDAAs) have stipulated that 30 pits per year would be produced at Los Alamos National Lab and that DOE would produce "during 2030….not less than 80 war reserve plutonium pits" - a date that can't be met - there is no legal requirement for pit production at SRS. Thus, production of not less than 50 pits per year at SRS has no legal authority but rather is an administrative decision that could be reversed or put on hold now or in the future.

Please provide NNSA guidance and the legal basis for the administrative determination regarding production of 50 or more pits per year at SRS. If pit production at a second production site, SRS, is so important please explain why this has not been required by law.

Though all new pit production would be halted under the correct no-action alternative, why can't all pit production take place at the only site - Los Alamos - with pit-production experience? How much additional risk will there be by involving a new site with - SRS - with no pit production or pit handling experience? In fact, SRS, where the last plutonium-production reactors were shuttered by the late

1980s, at this point has very little plutonium handling experience beyond a small amount of plutonium "dilute and dispose" activities (with the overall program apparently now on hold).

To underscore, please clarify why SRS was chosen as the second pit-production site. SRS has no pit-production experience and essentially no staff knowledgeable about pit production and few staff with any kind of plutonium-handling experience. How will risks of no pit experience at SRS be overcome? (Yes, a few SRS staff are being trained at LANL but is this enough to transfer the depth of knowledge and technical skill required for pit production?)

The draft PEIS must review all DOE sites suitable for pit production, including Pantex and Y-12, which have far more nuclear weapons and nuclear weapons component experience that SRS.

The draft PEIS should review if SRS poses a rising security threat in South Carolina given the pit-production mission and what the potential impacts of those threats might be. Will increased plutonium handling and pit production increase risks of plutonium theft or diversion of plutonium, increase risks of insider sabotage or increase the possibility of attack by nefarious actors?

Impacts of releases from the sand filtration system at SRS and potential impacts in event of sand filter malfunction or failure must be discussed.

Likewise, impacts of earthquakes to LANL and SRS facilities much be discussed in details.

Operational Life of Pit Facilities and their Closure?

What is the time horizon for pit-production facilities? 50 years? Why?

After operations have ceased, or if operations are interrupted and facilities shuttered, what is the decontamination and decommissioning plan for pit-production and associated waste handling facilities? What waste will be produced in event of abrupt or phased-in closure or during D&D activities and what costs will be incurred? What guarantees can be give the states of South Carolina and New Mexico or any other state that weapon-grade plutonium will not be stranded at DOE sites in such states?

Low-level waste from SRS pit production

The amounts and types of low-level nuclear waste, both solid and liquid, generated from pit production at SRS and LANL must be discussed in detail, as well as plans for LLW disposal and impacts of such disposal, whether onsite or offsite.

The *Final Environmental Impact Statement for Plutonium Pit Production at the Savannah River Site in South Carolina* (SRS Pit Production EIS) (DOE/EIS-0541), from September 2020, says that "SRS has existing LLW disposal facilities...that would typically be used for LLW disposal; however, LLW could also be disposed of at the Nevada National Security Site (NNSS) northwest of Las Vegas, Nevada, or a commercial facility (e.g., Waste Control Specialists near Andrews, Texas, or Energy *Solutions* near Clive,

Utah)." That document was inadequate in respect to LLW management and disposal and reviewed neither the impacts of disposal at SRS in unlined slit trenches, engineered trenches or E-Area vaults nor the impacts at an off-site DOE or commercial facility.

Exact disposal plans for LLW storage and disposal and associated impacts, including possible groundwater contamination, must be discussed in detail and not left vague as was the case with the EIS mentioned above.

Additionally, "low-level waste" must be clearly defined in the draft PEIS in order to make a case that such radioactive waste is actually LLW under U.S. law and regulation. As we have seen with the dumping into SRS LLW trenches of plutonium-contaminated soil, materials and equipment from the Broken Arrow accidents at Palomares, Spain and Thule, Greenland, it appears that DOE could dump TRU into the SRS LLW trenches, especially under emergency situations.

It is worthy of mention to point out that I visited Palomares in June 2025 and saw areas, adjacent to agricultural fields, still fenced off from the loss of 4 nuclear bombs from a U.S. B52 crash in 1966. 8000 barrels of plutonium-contaminated soil from plutonium dispersal from two warheads from the Palomares accident were dumped at SRS. So, what might legally go into the SRS LLW trenches from pit production, and associated impacts, is of public concern and requires full explanation.

Plutonium purification at SRS

The 2020 EIS on SRS pit production was vague as to how plutonium intended to be made into pits would be purified. SRS has never handled or processed pits in any way, which poses a daunting challenge full of risks. SRS stores a certain amount of plutonium that might be made into pits and the amount of this material must be specified. The amount of plutonium now stored at Pantex, in the form of pits, that would come to SRS must also be clarified. The timing of plutonium shipments into SRS and LANL and pits out of SRS and LANL, for assumed shipment to Pantex, must also be discussed.

While DOE may have claimed that the plutonium for pit production at SRS would be purified via "pyrochemical processing" or "pyrochemical furnaces" there must be greater discussion of the exact technology involved, the environmental and health risks such technology poses, especially in case of an accident involving furnace explosions, incidents or leaks, and how much radioactive waste would result.

DOE said in the 2020 SRS EIS that "nonaqueous plutonium metal purification operations could include a combination of three primary processes: (1) direct oxide reduction, which uses calcium metal to reduce plutonium oxide to plutonium metal; (2) molten salt extraction, which uses chloride salts to remove americium-241 from the plutonium; and (3) electrorefining, which uses sodium, potassium, and calcium chloride salts to remove other key impurities from the plutonium metal."

The specific purification technology planned to be used, along with its risks, environmental impacts and waste streams and waste storage and disposal methods must be clearly stated and not left vague as in the EIS mentioned above. Likewise, the risks and impacts of a nuclear criticality involving

plutonium during both the purification and casting processes must be discussed, including potential impacts to workers.

Additionally, if the ARIES plutonium oxide production technology, now located at Los Alamos, is under consideration to be brought to SRS for use in plutonium purification for pit production that must be discussed, along with associated environmental and health impacts and by-product waste produced.

In summary, please review all health, safety and environmental impacts, including criticality risks, risks of potential plutonium leakage and waste generation from operation of the Main Process Building, including from plutonium casting, and operation of the Waste Characterization Lab. Please review potential accidents and possible leaks within and out of the facilities. How long will special nuclear material be stored or processed in those facilities, how long will TRU waste be stored before off-site shipment and what is the expected life of those facilities?

As NNSA facilities will not be regulated by the U.S. Nuclear Regulatory Commission, which regulates commercial nuclear facilities, please explain just what DOE or other entity will regulate pit-production and radioactive waste handling operations at involved DOE sites. What are the different environmental-impact requirements for such self-regulated operation? How the public will be able to access regulatory information related to pit plant operation and inspection and environmental impacts, including and problems and waste generation?

What are the roles of other DOE sites not directly involved in pit production? These would include plutonium pit research at the Lawrence Livermore National Lab in California, pit-related warhead component equipment from the Kansas City National Security Campus, any support activities at NNSA's Y-12 facility in Oak Ridge, TN and the key role of the Waste Isolation Pilot Plant (WIPP) in New Mexico in disposal of transuranic waste from pit production. Additionally, the role of DOE's Pantex site in storing old and new pits, possible involvement in turning pits into declassified shapes and possible plutonium purification of plutonium from older pits must be discussed.

Will unirradiated FFTF MOX fuel stored at SRS or surplus, unirradiated Lead Test Assembly MOX stored at LANL - possibly to be directly disposed of in WIPP - be processed to remove plutonium for pit production? If so, please outline the process to be used and environmental risks and impacts.

Cost Estimate for SRS Pit Plant?

What is the CD-2/3 cost estimate for the pit plant and when will it be released? In a declaration filed in the PEIS federal lawsuit, a NNSA official said that CD-2/3 was coming in December 2025; is this date correct?

The Government Accountability Office, in the December 2024 report entitled "NATIONAL NUCLEAR SECURITY ADMINISTRATION - Assessments of Nuclear Weapon Acquisitions," (GAO-25-106048, https://www.gao.gov/products/gao-25-106048) it was stated on page 29:

> In addition, according to NNSA's estimates, the overall Savannah River Plutonium Processing Facility will enable production of 50 plutonium pits per year at the Savannah River Site by as late as the end of fiscal year 2038 and at a cost of potentially $18 billion to $25 billion. At the project's alternative selection milestone in June 2021, NNSA estimated that the project would be completed by fiscal year 2035 at a cost ranging from $6.9 billion to $11.1 billion.
>
> We reported in 2023 that NNSA had not developed a cost estimate for its pit production activities that provided a complete and structured accounting of all resources required to develop and sustain a complete scope of work. We also reported that NNSA's pit production schedule does not meet minimum qualifications to be considered an integrated master schedule, according to GAO's best practices for scheduling

What will be the environmental impact if the cost is soaring as GAO cites and as was stated in the NNSA's Fiscal Year DOE budget presentation? Will such a high facility cost mean corners will be cut in operations or waste management? Given budget pressure, with Congress adequately fund pit-waste management?

At a price tag of the bulk of the $25 billion estimate, will the SRS pit plant be the most expensive building in U.S. history? Including the sunk cost of the failed MOX project, the SRS pit plant could have a price tag of around $30 billion, correct?

Plutonium Criticality Risk & More

All aspects of plutonium handling and processing, including criticality safety measures and impacts of a criticality incident or an inadvertent plutonium release must be reviewed as to environmental impacts and worker impacts.

The draft PEIS analysis must include reviews of plutonium receipt and packaging, plutonium storage, aqueous recovery, analytical chemistry, material characterization and actual processing into pits via casting or other methods.

A review of normal and "abnormal" credible and beyond design basis events with plutonium must be analyzed. This would include operations with metal preparation, foundry operation, aqueous recovery, any operation of recovery furnaces and process development.

Operations, include pit disassembly and removal of Americium-241 and other impurities, pyrochemistry furnace operations, including molten salt extraction, electrorefining, salt scrub, salt oxidation and multicycle direct oxide reduction must be reviewed.

All aspects of aqueous recovery, including such things as nitrate dissolution, ion exchange, precipitation, filtration, calcination and solidification of plutonium must be reviewed in the draft PEIS. All waste streams and potential worker safety associated with aqueous processing must be noted.

In addition, pertaining to the operations named above, all waste streams produced and their management must be analyzed, including TRU volumes destined for the Waste Isolation Pilot Plant (WIPP) in New Mexico.

Risk of plutonium storage in the SRS and LANL plutonium vaults and processing in the foundries must be analyzed.

Abnormal conditions and unplanned or beyond design basis events related to material holdup, glovebox leakage, processing of an excess of material at one time, plutonium spillage from storage containers, loss of reflection/moderation must be reviewed. Casting operations and machining must be reviewed for environmental and worker impacts and waste generation.

A review of scenarios that could result in building or area evacuation must be presented. Impacts to and from co-located processes, such as plutonium-238 processing at LANL must be discussed. Accidents with potential impacts to the facilities and at the site boundary or beyond must be discussed.

The Defense Nuclear Facilities Safety Board (DNFSB) says in a report about SRS pit plant safety issues that "Pyrophoric plutonium and plutonium oxide pose particular hazards to the facility worker. Pyrophoric plutonium can initiate fires that release plutonium, while oxide is dispersible (i.e., it can easily be made airborne, leading to worker exposure)." As we saw with the bungled operation of DOE's Rocky Flats pit production facility, buildup of plutonium in ductwork and the reality of plutonium fires were unfortunately demonstrated. Inadvertent criticality and plutonium fire risk at the SRS and LANL pit plants must be discussed. Controls over the amount of plutonium handled at one time and what limits are on material unaccounted, inventory differences or loses must be discussed.

The DOE report from 1996, *Plutonium: The First 50 Years* (https://fissilematerials.org/library/doe96.pdf), documented problems associated with plutonium production at SRS and other sites presents information on "plutonium inventory differences" and "normal operating losses" at SRS and other DOE sites. The draft PEIS must review how plutonium and the amounts of plutonium involved will be protected from loss, theft and diversion and how much material is expected to be "lost" during processing. Use of safeguards and other controls to reduce loss, theft or diversion and associated environmental and health risks must be discussed.

See this report for some discussion of SRPPF criticality issues; please respond to issues raised in the document: *Overview of SRS NNSA Projects in the Eyes of Criticality Safety*, February 2024, Savannah River Nuclear Solutions (pit plant contractor), https://www.osti.gov/servlets/purl/2318700

Waste Isolation Pilot Plant (WIPP) Impacts

NNSA assumes that the Waste Isolation Pilot Plant (WIPP) will be prioritized for disposal of pit production transuranic (TRU) radioactive wastes. But, the New Mexico Environment Department's state permit for WIPP requires prioritization of Los Alamos National Lab cleanup wastes to go into

WIPP first and that DOE start looking for a new out-of-state TRU dump. How do goals of NNSA and NMED contrast or conflict as to WIPP licensing and operation and volume of TRU disposed?

In addition to discussing all TRU waste from pit production at SRS and LANL, or any other site, NNSA needs to fully analyze and project plutonium pit waste volumes planned for disposal in WIPP for the next 50 years. When does the current NMED license for WIPP expire? What plan does NNSA have if NMED does not renew the WIPP license? When will a new TRU disposal facility be pursued?

In addition, where would TRU waste be prepared at LANL or SRS to ship to WIPP, where would it be stored and what is the annual shipment from SRS to WIPP?

What would happen to pit production and associated TRU processing and storage if WIPP were to close temporarily, as happened in 2014, or permanently due to such things as accidents? What are the environmental and health implications associated with any length of WIPP closure?

Defense Nuclear Facilities Safety Board (DNFSB) Concerns

The DNFSB, an independent agency these DOE facility operation, has pointed out safety concerns related to the following parts of pit production at SRS:

Lessons Learned for Safety-in-Design are Needed

Laser Welder Glovebox Requires Safety Significant Alarms

Pyrophoricity of Briquettes Should Be Reevaluated

Work Should Only Be Performed in Gloveboxes with Appropriate Controls

The Safety Analysis Should Address the Transfer of Additional Forms of Plutonium

Spray Leak Hazards Should Be Reevaluated

Oxidation Events at Los Alamos National Laboratory (LANL) Should Be Evaluated

Credited Controls for Accidental Weapons Discharges Should Be Reevaluated

Design Opportunities Exist to Strengthen Protections for Facility Workers

All of those areas of DNFSB concern, including environmental and potential health impacts beyond what the DNFSB mentions, must be reviewed in the draft EIS.

The most recent DNFSB communication on the above-mentioned processes is covered in DNFSB cover letter and report *Facility Worker Safety at the Savannah River Plutonium Processing Facilit*y, dated May 21, 2025, https://www.dnfsb.gov/sites/default/files/2025-05/Facility%20Worker%20Safety%20at%20the%20Savannah%20River%20Plutonium%20Processing%20Facility%20%5B2025-100-015%5D.pdf.

Please review this document by the Savannah River National Lab, entitled *Plutonium Pit Production Program* - https://www.srnl.gov/research-areas/national-security/plutonium-pit-production-program/ - and assess impacts of these mentioned processes:

- Hydride-Dehydride Casting, a system that will be used to recover valuable plutonium metal from legacy pits;
- Pyrochemical Processing, a system that will be used to remove decay products and purify plutonium metal for subsequent use;
- Vacuum Induction Casting, a system that will be used to produce metal components to predetermined specifications ;
- Material Transfer System, which will be depended upon for all movements between confinement within the facility;
- Investigation into the rate of corrosion of components within the Aqueous Recovery System and potential associated environmental impacts;
- Machining studies to facilitate collection and compaction of turnings and management and disposal of such turnings.

Please review these documents in the draft PEIS and respond to potential environmental- and health-impact issues raised in them and provide the documents for the PEIS record:

Savannah River Nuclear Solutions, LLC, *Preliminary Consolidated Hazards Analysis for the Savannah River Plutonium Processing Facility (SRPPF) Project*, S-CHA-F-00024, Revision 8, August 2024

National Nuclear Security Administration Office of Environment, Safety, and Health, *Review Report for Savannah River Plutonium Processing Facility (SRPPF) Project Facility Worker Safety*, September 7, 2023

Savannah River Nuclear Solutions, LLC, *Preliminary Consolidated Hazards Analysis for the Savannah River Plutonium Processing Facility (SRPPF) Project*, S-CHA-F-00024, Revision 7, February 2024

National Nuclear Security Administration, *Safety Review Letter for Savannah River Plutonium Processing Facility Preliminary Safety and Design Results/Draft Preliminary Documented Safety Analysis*, U-DSA-F-00004, Revision A, February 2025.

National Nuclear Security Administration, *Research Program Plan for Plutonium and Pit Aging, Report to Congress*, September 2021, heavily redacted version obtained via FOIA, which was provided in 2024: https://srswatch.org/wp-content/uploads/2024/04/Doc-1.-U-Research-Program-Plan-for-Plutonium-and-Pit-Aging-Report-to-Congress-NNSA-September-2021-28-pgs. Redacted.pdf. (It should be noted for the record that after an appeal of the redactions in the above-linked document that a second redacted copy of the report was provided in 2025 with the same redactions but with different citation of DOE exemptions being used to withhold the information. A lesser, legitimately redacted version is essential to be placed in the public record as part of the draft PEIS.)

Defense Programs Advisory Committee, *Assessment of the State of Understanding of Pu Primary Aging*, and JASON Defense Advisory Group, *Pit Aging*, 2018 and 2019

Thank you for responding in the draft PEIS to all points mentioned above and all issues raised in the mentioned documents from NNSA, GAO and the DNFSB.

Comments submitted by:

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Attachment A: printed documents mailed on July 10, 2025; cited by name, with URL, in the emailed PEIS scoping comments of Tom Clements, SRS Watch

1. Group news release *Court Rules U.S. Nuclear Weapons Production Plan Violates Federal Law*, October 3, 2024, https://srswatch.org/wp-content/uploads/2024/10/Plutonium-pit-NEPA-decision-news-release-Oct-3-2024-1.pdf

2. *MEMORANDUM OPINION AND ORDER GRANTING JUDGMENT IN FAVOR OF PLAINTIFFS AS TO CLAIM ONE AND DISMISSING WITHOUT PREJUDICE CLAIMS TWO, THREE, FOUR, AND FIVE FOR LACK OF STANDING*, U.S. Federal Court, Columbia, SC September 30, 2024, https://srswatch.org/wp-content/uploads/2024/10/SRS-Final-Order-Sept-30-2024.pdf

3. Group new release *Historic Settlement Reached in NEPA Lawsuit Over Plutonium "Pit" Bomb Core Production*, January 17, 2025, https://nukewatch.org/wp-content/uploads/2025/01/Settlement-Reached-in-Historic-NEPA-Lawsuit-Over-Plutonium-Pit-Bomb-Core-Production.pdf

4. "Settlement Agreement" between DOJ/NNSA and the plaintiffs, U.S. District Court for the District of South Carolina, Aiken Division, first 12 pages of the 125-page agreement and attachments, January 16, 2025, in which NNSA agreed to prepare the PEIS, https://nukewatch.org/wp-content/uploads/2025/01/Settlement-Agreement-and-Exhibits.pdf

5. Government Accountability Office, *Weapons: Information on the National Nuclear Security Administration's Research Plan for Plutonium and Pit Aging*, February 2024, https://www.gao.gov/assets/870/867665.pdf

6. Savannah River Nuclear Solutions (pit plant contractor), *Overview of SRS NNSA Projects in the Eyes of Criticality Safety*, February 2024, https://www.osti.gov/servlets/purl/2318700

7. Defense Nuclear Facilities Safety Board, cover letter and report *Facility Worker Safety at the Savannah River Plutonium Processing Facility*, dated May 21, 2025, https://www.dnfsb.gov/sites/default/files/2025-05/Facility%20Worker%20Safety%20at%20the%20Savannah%20River%20Plutonium%20Processing%20Facility%20%5B2025-100-015%5D.pdf

8. Group news release, *NNSA Delays Urgent Research on Plutonium "Pit" Aging While Spending Billions on Nuclear Weapons Bomb Core Production*, April 17, 2024, https://srswatch.org/nnsa-delays-urgent-research-on-plutonium-pit-aging-heavily-redacted-plutonium-pit-aging-plan-to-congress-obtained-via-tardy-doe-foia-response/

9. National Nuclear Security Administration, *Research Program Plan for Plutonium and Pit Aging, Report to Congress*, September 2021. Heavily redacted version obtained via FOIA, belatedly provided in April 2024. https://srswatch.org/wp-content/uploads/2024/04/Doc-1.-U-Research-Program-Plan-for-Plutonium-and-Pit-Aging-Report-to-Congress-NNSA-September-2021-28-pgs. Redacted.pdf

10. NNSA initial response to SRS Watch FOIA request on report required by Congress on moving the ARIES plutonium purification facility from Los Alamos to SRS, September 25, 2020. Note: Due to NNSA foot dragging there has been no response to this request. https://srswatch.org/wp-content/uploads/2023/05/initial-NNSA-reponse-on-moving-ARIES-to-SRS-Sep-25-2020.pdf

11. Savannah River National Lab, *Plutonium Pit Production Program*, https://www.srnl.gov/research-areas/national-security/plutonium-pit-production-program/