



Savannah River Site Watch

Comments at EIS Scoping Meeting on Plutonium Bomb Plant (PBP) Proposed for Savannah River Site, North Augusta, South Carolina, June 27, 2019

We support the “No Action Alternative” – Don’t Build the Unjustified PBP at SRS

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These comments on the proposed Plutonium Bomb Plant (PBP) at the Savannah River Site are submitted for the record at the June 27, 2019 “scoping” meeting, as noticed in the Federal Register on June 10, 2019 - *Notice of Intent To Prepare an Environmental Impact Statement for Plutonium Pit Production at the Savannah River Site*.

These comments are made on my own behalf and for the non-profit public interest organization Savannah River Site Watch (SRS Watch). I have participated in various iterations of DOE’s past failed attempts to locate new plutonium pit facilities at the Savannah River Site or other DOE sites – including Environmental Impact Statement processes such as for *Complex-21*, the *Modern Pit Facility* and *Complex Transformation*.

Given the importance of the issue at hand and that it appears that decisions on new plutonium pit-production facilities are being rushed – a recipe for failure – I hereby request that the comment period be extended for 30 days past the current July 25, 2019 date. I reserve the right to submit more written comments before the end of the comment period. I request to be added to the email list concerning the EIS process.

The location of a Plutonium Bomb Plant at SRS must not be driven by the issue of jobs or contracts but that appears to be a main motivator for DOE and local politicians. Those issues should have no bearing on a national security program of this sort. Making this project into a parochial jobs project is also part of DOE’s recipe for failure.

The proposed Plutonium Bomb Plant has not been authorized or funded by Congress so pursuit of it is premature. Funds to convert the MOX plant into a pit facility are coming out of NNSA's "plutonium sustainment" account and it is unclear at what level that will be funded for Fiscal Year 2020. The House has cut the funding level and if that level is adopted the PBP could be stopped in its tracks.

I anticipate a DOE response to every point raised in these comments, including attachments.

1. Legal requirement for a Programmatic Environmental Impact Statement (PEIS) on plutonium pit production before a site-specific EIS is prepared

On October 31, 2018, Savannah River Site Watch, Nuclear Watch New Mexico (Santa Fe, NM) and Tri-Valley Communities Against a Radioactive Environment (Livermore, CA) wrote to the National Nuclear Security Administration outlining why a Programmatic Environmental Impact Statement (PEIS) was required on pit production. Following the preparation of the initial PEIS, site-specific EISs at SRS and Los Alamos National Lab could be prepared. We received no response to our letter (which is being submitted for the record).

On May 17, 2019, a letter was sent to NNSA by our legal counsel with Meyer Glitzenstein & Eubanks LLP and legal counsel of the Natural Resources Defense Council (NRDC). The letter laid out in great detail why a PEIS was required. There still has been no direct response from NNSA to that letter (which is being submitted for the record).

The Alliance for Nuclear Accountability (ANA) also wrote a letter to NNSA, dated December 7, 2018, calling for the required PEIS. There was no response to that letter, which is attached.

On June 10, NNSA announced that it was conducting an EIS on the SRS Plutonium Bomb Plant. NNSA has thus put the EIS cart before the PEIS horse. That DOE is proceeding in this rushed and incomplete manner does not relieve NNSA of the legal obligation to prepare the PEIS.

2. DOE has not established a need for expanded pit production nor need for new nuclear weapons that would contain new pits

It appears that DOE is relying on the National Defense Authorization Act of Fiscal Years 2015 and 2019 and the Nuclear Posture Review of 2018 and a DOE-Department of Defense "joint statement" of May 10, 2018 to make the proposal that production capability of 80 or more pits per year be established by 2030.

But what are the 80+ pits per year for? DOE has not revealed what new or refurbished warheads might need new pits.

A June 4, 2019 article, which is attached, in the Exchange Monitor - *HASC Panel's Bill Could Slow-Roll NNSA's Planned S.C. Pit Plant* - about a House Armed Services Committee hearing - stated that all the new pits were for a new warhead:

"The House panel's pit proposal is part of a broader effort by House Democrats to slow deployment of next-generation, silo-based intercontinental ballistic missiles called Ground Based Strategic Deterrent. The 80 pits a year NNSA plans to produce by 2030 and beyond are all for the W87-1-style warheads that will tip Ground Based Strategic Deterrent missiles."

Desire to produce a new warhead and new pits for it do not justify new pit fabrication facilities. New warheads have proliferation and disarmament implications that have not been analyzed. Nor has the "W87-1-style" warhead been approved by Congress.

Likewise, with up to 20,000 pits in storage at DOE's Pantex site in Texas, DOE has not disputed that such stored pits can be reused. In a 2006 "Pit Lifetime" report for DOE by the JASON group of experts, it was stated "that most plutonium pit types have credible lifetimes of at least 100 years." DOE has presented nothing to counter this finding in the report, which must be made part of the EIS record. We will look with interest if DOE presents a new study on pit aging as part of this PEIS-EIS process.

So, what is DOE's explanation of need for new pit production or why old pits can't be reused? Such an explanation is sorely lacking.

Of great concern is that new pits in new weapons may be used by some to push for renewed underground testing of nuclear weapons, which if such testing were to be renewed could stimulate others to likewise test. Does DOE aim to test new pits via underground nuclear testing?

DOE has said it needs the capacity to produce 80 "or more" pits per year or "no fewer" than 80 pits per year. This has also been called a "surge capacity" by DOE. What does this mean? How many actual pits does DOE intend to produce per year or what actual capacity does DOE intend to establish? What type of pits would be made by the new pit-production capacity?

As the US has around 1750 deployed weapons and another 2000 in active reserve, what is the need for new nuclear weapons? How will deployment of new weapons with new pits in them meet the legal obligations of the Nuclear Nonproliferation Treaty for disarmament of nuclear weapons?

- 3. Before "repurposing" of the bungled plutonium fuel (MOX) plant is considered, there must be investigations into fraud, waste, abuse and mismanagement with the MOX project and partially constructed building**

DOE wasted over \$5 billion on construction and perhaps another \$1 billion on administration of the failed MOX project. We are left with a partially constructed building which, according to various DOE reports and information from former MOX workers, is rife with construction problems.

Investigations by Congress, DOE and other agencies into fraud, waste, abuse and mismanagement are essential before there is any consideration of reuse of the MOX building. Given a few federal cases brought for fraud, indications in DOE documents, and indications from former MOX workers there is much to be investigated as to how the project was administered by NNSA, CB&I Areva MOX Services and other contractors - such as Superior Air Handling, believed to have botched the HVAC installments, and Intermech (see attachment).

What happened at the MOX plant must not be swept under the rug as it now appears DOE is trying to do. As we have been burned by what happened at the MOX boondoggle, simply ignoring that instills no faith in DOE's ability to carry out another large, complex, costly project. Given what happened at MOX, we can only expect massive cost overruns, big schedule delays and a host of problems related to repurposing the MOX plant.

I request that any DOE "lessons learned" analysis of the MOX project's failure be placed into this EIS record. Likewise, recognizing construction flaws and that HVAC and other installations may have to be entirely torn out, I request that a report on the status of construction as it was left be placed into this EIS record.

As the Nuclear Regulatory Commission no longer has a regulatory role concerning construction and quality of installations, who will now take on that regulatory and oversight role? Who will document the status of construction to date and such things as pending "rework" when the construction was stopped? Does DOE have access to all the NRC inspection and oversight records of the MOX construction project? If any installations and equipment are to be reused, how will quality and status of them be established?

If DOE/NNSA will self-regulate itself concerning repurposing of the MOX plant into the Plutonium Bomb Plant, will any external agency have any oversight role? What does DOE/NNSA think that the role of the Defense Nuclear Facilities Safety Board (DNFSB) will be in repurposing and operation of the facility? Will DOE/NNSA allow full access by the DNFSB to documents and meetings?

The report on pit production by the Institute for Defense Analysis (IDA) noted that "No available option can be expected to provide 80 ppy by 2030. DoD should evaluate how to best respond to this requirement shortfall." And, that the IDA investigators "could find no successful historical major project that both cost more than \$700 million and achieved CD-4 in less than 16 years."

Thus, it appears that DOE's rushed plans for the Plutonium Bomb Plant are setting the pit project up for failure, al la MOX.

Given its importance to the matter at hand, I request that the full IDA report be released into this EIS record.

DOE has failed to reveal how it plans to "repurpose" the MOX plant into a plutonium pit-production facility, for which it was not designed. Early in 2019, I filed Freedom of Information Act requests for the "statement of work" of Savannah River Nuclear Solutions to plan for conversion of the MOX plant – see FOIA request attached - but have received no responsive documents.

I request that all plans, preliminary or otherwise, on conversion the MOX pants to pit production be provided for the EIS record. DOE must be held responsible to make a case, if it can, that the pit job can be carried out in the MOX building.

It must be noted that funding the Plutonium Bomb Plant is being taken out of DOE's "plutonium sustainment" account. Congress has not specifically authorized or funded the PBP facility, which calls into question any efforts DOE may undertake to move beyond the planning stage for the facility.

If Congress were to act in calendar year 2019 or 2020 to eliminate or withhold funds for planning for the PBP, activities related to MOX plant conversion and pursuit of this EIS process would likely have to be immediately halted. How the EIS would be halted in mid-stream or if the courts were to require a PEIS on pit production before things further progressed must be explained.

How much would "repurposing" of the MOX plant costs?

How much would operation of the Plutonium Bomb Plant cost?

What is the estimated life-cycle cost of the Plutonium Bomb Plant be, from its inception (around October 2018, when MOX was finally and officially terminated) to the end of its operational life?

How long would the Plutonium Bomb Plant operate and what is the overall pit production goal from the facility over its lifetime? What would all those pits be used for?

How much would decontamination and decommissioning of the Plutonium Bomb Plant be carried out, where would the facility be disposed of and how much would it cost?

4. Plutonium handling challenges – lessons from Rocky Flats, PF-4 at Los Alamos

SRS has little necessary technical experience in handling plutonium as it would be produced into pits. The last casting of plutonium ingots, from plutonium produced in the SRS defense reactors, took place in the 1980s. That plutonium was shipped to the ill-fated Rocky Flats plant for possible machining into pits.

A relatively few personnel have experience handling plutonium. Around 12 metric tons of non-pit surplus weapon-grade plutonium is stored in the old K-Reactor, where a work crew has been engaged in examining 3013 plutonium storage cans and downblending very small amounts of plutonium for disposal in the Waste Isolation Pilot Plant (WIPP). Additionally, a few personnel were involved in recent efforts to produce plutonium oxide in the HB-Line. That work has been terminated.

Thus, experience in the handling and processing of plutonium at SRS is far below the technical expertise required for pit production. There is essentially no track record at SRS, which has never produced or stored pits, in handling liquid plutonium for casting.

What are the risks of not having an adequately trained staff or a staff have little or no experience with pit production? How great are the associated risks of project delays or failure to staffing issue?

What is the risk to workers and the public of nuclear criticality accidents involving plutonium?

What is the risk to workers and the public of fires involving plutonium?

What are the potential impacts of spills involving liquid plutonium or dispersal of plutonium as an oxide or solid?

Where will plutonium purification take place and how? Will this take place inside a repurposed MOX plant? Will ARIES at Los Alamos be involved?

The risks of transport of plutonium to SRS from such sites as Pantex and Los Alamos must be addressed in the draft EIS.

At Los Alamos, plutonium handling activities have recently faced significant challenges. Activities at the PF-4 facility were closed for years due to inability to properly handle plutonium. What are the “lessons learned” from that Los Alamos situation, and from the Rocky Flats disaster? How do such “lessons learned” apply to plutonium handling at SRS?

What will be the constraints and risks in storing and handling plutonium inside a facility (shuttered MOX building) that was not designed for pit production and that has high humidity?

Rocky Flats operations were located in many buildings. Likewise, PF-4 has numerous buildings. Would all pit activities be located in the single MOX building? If so, what are the risks of co-locating dangerous activities involving plutonium processing under one roof? Does location under one roof increase the potential impacts of an accident or have facility wide implications?

5. Impact of chemical and radioactive waste streams at SRS – their generation and disposal?

What are the radioactive waste streams and how will they be disposed of?

What are the chemical waste streams and how will they be disposed of?

What are potential impacts to workers, the public and the environment from the various waste streams?

List in detail the transuranic waste, low-level waste and chemical wastes.

Identify all chemical waste streams - such as gallium, beryllium, solvents, nitric acid, tributyl phosphate, various acids and aqueous reagents to purify plutonium.

How much additional plutonium would be brought to SRS and from where?

What will be the purity of plutonium involved in the project?

Under what circumstances and at what temperature can plutonium ignite?

How much plutonium will be stored in the PBP at any one time? Will there be additional plutonium storage or staging areas at SRS?

What would be the plan if the pit project is curtailed after plutonium is shipped into South Carolina but not process into pits? How would it be disposed of? Would it be shipped back to the point of origin?

How will TRU waste streams from the PBP impact the volume cap of the waste Isolation Pilot Plant (WIPP) in New Mexico?

In conclusion: Due to the host of problems facing the Plutonium Bomb Plant and due to its potentially negative environmental and health impacts and that no need for it has been

established, I thus support the “No Action Alternative” and request the EIS process be halted at least as such time as legal questions concerning compliance with the National Environmental Policy Act (NEPA) are properly addressed by DOE and the federal courts.

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Attachments submitted as part of my comments, thus meriting response in the draft EIS to points raised in them - attachments not to be separated from above comments:

1. Group letter to NNSA by SRS Watch, Nuclear Watch News Mexico and Tri-Valley CAREs on need for Programmatic EIS on pit production, October 31, 2018; NNSA did not respond – why not?
2. Letter to NNSA by Alliance for Nuclear Accountability (ANA) on need for PEIS on pit production, December 7, 2018; NNSA did not respond – why not?
3. Letter to NNSA for public interest groups by lawyers from Meyer Glitzenstein & Eubanks LLP and Natural Resources Defense Council (NRDC) on need for PEIS on pit production, May 17, 2019; NNSA did not respond – why not?
4. Article from Exchange Monitor, “HASC Panel’s Bill Could Slow-Roll NNSA’s Planned S.C. Pit Plant,” June 4, 2019 – at House Armed Services revealed that all new pit production is for a new warhead (W87-1-style”). As far as known, DOE has not said what the new pits would be for.
5. NNSA initial Freedom of Information Act response to SRS Watch request for Savannah River Nuclear Solutions “statement of work” to convert MOX plant to pit production, January 24, 2019; no documents have yet been provided. When will they be provided? They must be placed into the EIS record.
6. NNSA initial Freedom of Information Act response to SRS Watch request for “statement of work” to convert MOX plant to pit production, January 24, 2019; no documents have yet been provided. When will they be provided and placed in the EIS record?
7. “Guest Editorial: New Plutonium Warhead Mission at SRS is the Pits,” by Tom Clements, SRS Watch, Aiken (South Carolina) Standard, June 26, 2019 – points out problems of pit production at SRS and why it’s a bad idea, draft EIS must address each point raised in the “guest editorial.” https://www.aikenstandard.com/opinion/guest-column-new-plutonium-mission-at-srs-is-the-pits/article_96f50aa0-9471-11e9-900e-734cc97b0a5e.html

- 8. SRS Watch news release “Review of “Accuracy” of CB&I Areva MOX Services Payments to HVAC Contractor Intermech by DOE’s NNSA Reveals “Lack of Due Diligence,” Questionable Payments, Faulty Work; Document Obtained by SRS Watch Raises Similar Concerns as Federal Fraud Case involving MOX Services and Wise Services, March 29, 2019. Do these construction issue impact “repurposing” of the MOX building to the Plutonium Bomb Plant?**
- 9. SRS Watch factsheet on “Obstacles and concerns Related to “repurposing” of the Abandoned Mixed Oxide Fuel Fabrication Facility (MFFF) at the Savannah River Site to Production of Plutonium Pits for Nuclear Weapons,” January 2019, draft EIS must address each point raised in the factsheet.**
- 10. SRS Watch news release entitled “Initial DOE Decision Expected on new Nuclear Bomb Plant at Savannah River Site would Lead to More Plutonium and Nuclear, Toxic Waste at SRS & Magnify Risks of Arms Race,” May 10, 2018.**
- 11. Summary of Institute for Defense Analysis report “Independent Assessment of the two-Site Pit Production Decisions: Executive Summary,” May 2019 – points out production of 80 pits per year by 2030 is not achievable.**
- 12. Initial FOIA response to SRS Watch request for entire IDA report, May 2, 2019; report has not been provided or publicly released – must be made part of the EIS record.**
- 13. Article “Senate NDAA set a plutonium targets experts deem a ‘fantasy’ – CBO: Proposal by Senate to surge production of key building blocks for new nuclear weapons would cost about \$17 billion over a decade,” Roll Call, June 26, 2019 – underscores difficulty of the 80 pits per year goal & that opposition exists in Congress.**