



Savannah River Site Watch

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**Comment on *Draft Environmental Impact Statement for High-Assay Low-Enriched Uranium (HALEU) Availability Program Activities in Support of Commercial Production of HALEU Fuel* – posted at: <https://www.energy.gov/ne/haleu-environmental-impact-statement>**

To Whom it Concerns:

I hereby send in these comments on the draft EIS on HALEU production and availability. I submit these comments on behalf of the public-interest group Savannah River Site Watch (SRS Watch), based in Columbia, South Carolina, and request that be made part of the EIS record and also be made publicly available.

Volume 1 of the draft EIS in section 3.9 “Nonproliferation and Terrorism Concerns,” states:

“DOE acknowledges that the widescale deployment of HALEU fuels in U.S. reactors, which could be facilitated by the Proposed Action, does present different proliferation concerns than the use of LEU, but believes that (1) adequate controls are in place to reduce the proliferation concerns to acceptable levels and that (2) the benefits of use of HALEU in advanced reactors outweighs the potential proliferation risks.”

While getting HEU out of commerce is a positive step the question at hand concerns proliferation and security risks of HALEU.

The draft EIS goes on to point out proliferation and security concerns related to HALEU and says “DOE expects that any new assessment would affirm the conclusion that the merits of the use of HALEU outweigh the nonproliferation risks involved.”

Likewise, the draft EIS confirms a Nonproliferation Impact Assessment (NPIA) was requested in the scoping comments as part of the EIS process but then does not affirm that a NPIA will be

prepared and does not explain why it won't be prepared. No conclusion can be made concerning a proliferation "assessment" about HALEU if no such document exists. How can DOE conclude that "merits of the use of HALEU outweigh the nonproliferation risks involved" if there is no DOE analysis of those risks?

I reiterate that as part of the EIS process and for the record that DOE must prepare a Nonproliferation Impact Assessment on the "proposed action" and on any alternatives to it. I below repeat some of the things I submitted in my scoping comments.

In order to assess the potential proliferation impacts of production and use of uranium fuel enriched to the 20% level, just below the amount of enrichment defined as being HEU (bomb-grade uranium), a NPIA must be prepared. This would assess not only the ability of the enrichment process to exceed the 20% level but also the usability of HALEU, enriched to 20% and lower, to be used in some form of nuclear explosive device.

Such a NPIA would be used by DOE, other agencies and the public to assess and potential proliferation impacts of the technology reviewed in the "proposed action." Such a NPIA would be integral to supporting U.S. non-proliferation policies aimed at halting the spread of nuclear weapons materials and technologies. Absent a NPIA, DOE will not be able to demonstrate that HALEU use is acceptable from a proliferation viewpoint.

As an example of what must be done in this case, DOE has many times in the past conducted, as part of environmental analyses, NPIAs on programs that hold potential proliferation impacts, including:

*Nonproliferation Impacts Assessment for the Treatment and Management of Sodium-Bonded Spent Nuclear Fuel.* USDOE. July 1999.

*Nonproliferation Impacts Assessment for the Management of Savannah River Site Spent Nuclear Fuel.* DOE/NN-99001919. USDOE. December 1998.

*Nonproliferation and Arms Control Assessment of Weapons-Usable Fissile Material Storage and Excess Plutonium Disposition Alternatives.* DOE/NN-0007. USDOE. January 1997.

*Draft Nonproliferation Impact Assessment: Companion to the Global Nuclear Energy Partnership Programmatic Environmental Impact Statement, 2008.*

If no NPIA is to be prepared as part of the EIS process please explain why not. Further, if no NPIA is to be prepared, please explain how decisions can be made that conform with U.S. nuclear non-proliferation policies without the information that such an essential analysis would provide.

I repeat, a NPIA must be prepared as part of the EIS process.

And, as part of the NPIA, or in some separate analysis, it must be reviewed if any new HALEU production facility would be utilized to process unobligated uranium into fuel to use in TVA reactors that produce tritium for use in U.S. nuclear weapons. NE should work with other offices in DOE as well as the Government Accountability Office to assess the goal of production of unobligated uranium to be used as TVA fuel.

Additionally, the EIS must explain details about processing of off-spec or surplus HEU into HALEU. The draft EIS (starting on page 1-6) says this DOE HALEU production is being done, which would be for commercial use:

The potential near-term supply of HALEU will be from processing DOE materials at DOE facilities. These activities are estimated to produce HALEU as follows:

- Up to 10 MT of HALEU<sup>14</sup> produced from Experimental Breeder Reactor-II fuel at the Idaho National Laboratory (INL)
- Approximately to 2.5 MT of HALEU produced from existing HEU uranyl nitrate solution in storage at H-Canyon at the Savannah River Site
- Up to 2.4 MT of HALEU produced by BWX Technologies (BWXT)<sup>15</sup> using HEU from Y-12 National Security Complex

These DOE capabilities could supply up to a total of 14.9 MT of HALEU.

These DOE capabilities could supply up to a total of 14.9 MT of HALEU. There may be other DOE inventories that could provide some additional HALEU for advanced reactor developers, but this would not stimulate commercial development of a domestic HALEU production capability nor meet all near-term HALEU needs; therefore, it is not analyzed in this EIS.

DOE affirms that this HALEU production would be for commercial purposes. As that is the very subject of the EIS, such HALEU production should be analyzed in depth in it. That analysis would both environmental impacts, worker exposure impacts and proliferation impacts. Such HALEU production, and the associated management of the HEU to be downblended, should also be covered in the requested NPIA.

These comments are submitted by:

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