



Savannah River Site Watch

**Withdraw, Oppose the Ill-Informed, Misguided Draft Recommendation
on “Fuel Rod Recycling” – Submitted for the Meeting Record**

SRS Citizen Advisory Board’s Nuclear Materials Committee meeting, August 15, 2023

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Due to a host of reasons, some of which are highlighted below, I recommend that the draft recommendation on reprocessing in the H-Canyon at SRS of highly radioactive commercial spent fuel be withdrawn and not taken to the full CAB as doing so would be an embarrassing and inappropriate waste of time. In any event, CAB members should oppose it. There is little factual or scientific basis for the recommendation to investigate reprocessing at the Savannah River Site and no public funds should be spent on preparation of the recommended white paper.

Commercial spent fuel reprocessing leads to vast amounts of high-level nuclear waste. SRS is not prepared to manage additional large amounts of high-level waste associated with reprocessing, especially given the aging HLW tanks are on a closure track by 2037. As reprocessing, which is mislabeled as “recycling,” magnifies liquid waste and radiation exposure problems, the public will not stand for more such waste imported to SRS, which would only slow down SRS clean-up and result in more environmental and health risks at the site.

Likewise, reprocessing yields separated weapon-usable plutonium, the last thing SRS or DOE needs. SRS is already charged with disposal of 40 metric tons of surplus plutonium via dilute & dispose (in WIPP) and there is no justification to accumulate more plutonium at SRS. Public support for separation and accumulation of yet more plutonium would be rejected by the public and would only benefit a few private companies charged with managing and disposing of it.

Commercial reprocessing in the U.S. failed at the West Valley site in New York, which operated from 1966-1972. The site is still being cleaned up. The Barnwell reprocessing plant thankfully never operated and thus we did not ever receive highly radioactive spent fuel. The Barnwell facility still stands as a monument against reprocessing, which I have proudly worked against for almost 50 years.

Receipt, management and processing of commercial spent fuel and disposal of associated nuclear waste streams is not a mission stipulated for the Savannah River Site or to be addressed by the CAB. Small-scale R&D into reprocessing is something being promoted by the Office of Nuclear Energy (NE) and not the Office of Environmental Management (EM) or the National Nuclear Security Administration (NNSA). SRS thus has no business getting into any aspect of reprocessing. (And, BTW, there are about 88,000 tons of spent commercial fuel in the U.S.)

As a lesson of what happens when SRS gets into an area not within its mission, we can look back to the proposal for an “Energy Park” back into 2010. This involved reprocessing and small reactors to use separated plutonium, all of which were highly speculative. The SRS site manager, Dave Moody, got swept up in the Energy Park idea and then promoted, including to the CAB, what was called “Enterprise SRS.” This half-baked idea included “small modular reactor deployment” and “nuclear fuel cycle initiatives.” Staff were forced to engage in that ill-fated, poorly conceived project. It all came crashing down when the Office of Management and Budget looked into diversion of EM resources into the scheme. (It’s still unclear if EM was reimbursed for money wasted on the so-called Enterprise SRS project.) And the Office of Nuclear Energy wasn’t too happy either as SRS was not - and still isn’t - a DOE nuclear power site. The site manager quietly retired in 2014 and SRS got back to its mission.

The H-Canyon is 68-years old and will likely be taken out of service in the 2030s. Commercial reprocessing would take major and costly modification of H-Canyon and reprocess only a tiny amount of accumulated commercial spent fuel (which has reached 88,000 tons). Who would pay? Why would this be done if it incurs large costs to the taxpayers, while magnifying waste problems and proliferation concerns (introduction of commercial weapon-usable plutonium into commerce)? Only special interests that manage waste or plutonium or promote speculative reactors would profit.

Any receipt, storage or reprocessing of commercial spent fuel would have to be regulated by the U.S. Nuclear Regulatory Commission (NRC), a role at SRS that would be difficult at all phases of any reprocessing project. To visualize the difficulties this would pose, just how would an operating permit be considered for an aging DOE facility that has never been regulated and which is on a close-out path?

The draft recommendation makes a claim about so-called “advanced reactors” that can’t be supported and which is totally speculative: “Eventually one or more of these improved design will make their way into commercial reactors...” Those promoting the draft recommendation should provide proof to back up this statement. In any event, rather than use plutonium, speculative future reactors might use “High Assay Low Enriched Uranium” (HALEU) and not plutonium though that is also a proposal and not reality.

Finally, the French reprocessing program has created vast amounts of high-level nuclear waste, separated contaminated separated uranium and as of the end of 2020 has resulted in the stockpiling of 60.6 metric tons of weapon-usable plutonium, up from 55.2 MT the previous year. (See Information Circular 549, annual report to the IAEA for 2021 plutonium figures: <https://www.iaea.org/sites/default/files/publications/documents/infcircs/1998/infcirc549a5-26.pdf>) In addition to this domestic plutonium, France also stores a large amount plutonium owned by Japan. The French reprocessing program is essentially a plutonium-stockpiling program, given that “fast reactors” for which plutonium would be used have never developed. The French reprocessing and plutonium-stockpiling program is nothing on which to model any U.S. nuclear program.

In summary, the draft recommendation is faulty on many levels and should be rejected by the Citizens Advisory Board.

Thank you for including this comment in the official record of the meeting.