

Position Paper for the Savannah River Site's Citizens Advisory Board on Using SRS for Interim Storage of Spent Nuclear Fuel

In 1945 the nuclear age began with the first manmade nuclear explosion at White Sands, New Mexico late in Second World War. By 1958 the technology had progressed from the bomb to power generation with the first commercial nuclear power plant opening in Shippingport, PA.

The Savannah River Site began operations in 1952 and has continued until today successfully pursuing various missions including heavy water production, plutonium/uranium separation, and the production of isotopes required for the space exploration program. Current missions include processing and storage of spent nuclear fuel, other nuclear materials, and nuclear wastes. Waste forms generated from these processes are bound for eventual disposal in a deep geologic repository. A new mission is underway to convert plutonium from nuclear weapons to fuel for commercial nuclear reactors in the Mixed Oxide (MOX) program. In 1981, an environmental remediation program was begun to clean-up the environmental contamination of the site created by earlier missions. The clean-up mission included safely decontaminating and decommissioning unneeded equipment and processing the contents in to a safe state for disposal in a repository.

By the 80's it was recognized that the safe disposal of nuclear wastes from both commercial and defense sources was a national priority. The Nuclear Waste Policy Act (NWPA) of 1982, created a timetable for the creation of a permanent underground repository. The permanent repository was slated to begin receiving commercial and defense wastes by the middle of the next decade. The responsibility to site, construct and operate the repository was given to the Department of Energy (DOE). A fee was imposed on nuclear power generators to support the creation and operation of the repository.

The NWPA called for DOE to make recommendations, by 1987, for two deep geologic repositories. In 1987 the act was revised to require DOE to consider only Yucca Mountain as the repository site. In 2002 President Bush designated Yucca Mountain as the repository site and, by 2004, all legal channels for overturning the decision had been exhausted. Work to license the site began.

In 2010 President Obama ordered work on the licensing process for Yucca Mountain to cease and all funding for licensing was withdrawn. No scientific or safety reasons were given.

President Obama created and tasked a Blue Ribbon Commission on America's Nuclear Future (BRC) to find alternatives to Yucca Mountain. The BRC issued its final report in 2012, including among its recommendations:

- a. The United States should proceed promptly to develop one or more consolidated storage facilities as part of an integrated, comprehensive plan for safely managing the back end of the nuclear fuel cycle. An effective integrated plan must also provide for the siting and development of one or more disposal facilities.
- b. Ensure that all near-term forms of storage meet high standards of safety and security for the multi-decade-long time periods that they are likely to be in use; active research should continue on issues such as degradation phenomena, vulnerability to sabotage and terrorism, full-scale ask testing, and other matters.
- c. The processes used to develop and implement all aspects of the spent fuel and waste management system should be science-based, consent-based, transparent, phased, and

adaptive. They should also include a properly designed and substantial incentive program

- d. The United States should undertake an integrated nuclear waste management program that leads to the timely development of one or more permanent deep geological facilities for the safe disposal of spent fuel and high-level nuclear waste

The nation now finds itself in a situation where the Blue Ribbon Committee is recommending that the nation promptly proceed to commence consolidated interim storage designed for multi-decade use. The program to develop a permanent, deep geologic disposal facility is only to be developed on a “timely” basis. The 2013 DOE response to the BRC recommendations, Strategy for the Management And Disposal of Used Nuclear Fuel and High-Level Radioactive Waste, states that over the next ten years the Administration currently plans to implement a program that “Makes demonstrable progress on the siting and characterization of repository sites to facilitate the availability of a geologic repository by 2048”.

The need to have a deep geologic repository was identified in the 1982 NWSA and the initial target date to begin accepting wastes was 1995. At the time president Obama took office (2009), the opening date for the repository had already been delayed until 2022. No progress on developing a repository has been made during the subsequent years, despite the Congressional Act requiring the development of a deep geologic repository much earlier. This delay of more than two decades is not unprecedented for projects managed by the Department of Energy.

The Salt Waste Processing facility currently under construction at SRS was approved in 2001 with an initial completion date of 2009. The completion date was moved from 2015 to 2018 and this date is in question. This delay is despite an enforceable agreement with the State of South Carolina that requires the facility to be completed by 2015. The Mixed Oxide Fabrication Facility was approved in 1999 with a completion date of 2007. Current projected completion date is 2018 and this date is questionable. In addition to being well behind schedule, these projects are billions of dollars over the original cost estimates.

There is no data supporting an assumption that a repository superior to Yucca Mountain will ever be identified. In addition, the \$13 billion dollars already spent to build the Yucca Mountain facility will be totally lost if a different site is selected. Considering the current national debt and budget deficit, it is unlikely that adequate funding will be available. Finally it is reasonable to assume, based on the DOE's track record, that there is no commitment to a date now 35 years in the future and even congressional mandates and enforceable agreements with the states will not force DOE to meet their commitments.

The Savannah River Site Citizens Advisory Board would like to make clear that:

- a. The CAB is not taking any position on commercial nuclear power generation.
- b. They are not concerned that the DOE would initiate a program that anticipated the unsafe storage of nuclear waste at SRS

The reasons for the CAB's opposition are:

1. The belief that no site for a long term geologic site superior to Yucca Mountain exists and any alternative site will be technically inferior.
2. The reopening of the repository selection process and, as a consequence, creation of interim storage sites will be a very costly endeavor in a time when the nation does not have the financial resources.
3. The completion of a new repository is generations away and there is no reason to believe the currently proposed 2048 availability date will be adhered to.

4. Future generations of South Carolinians and Georgians will not be well served by having the
5. Savannah River Site become an interim storage site for commercial nuclear waste, and for what will be an undetermined length of time.

The SRS CAB reminds DOE that SRS has never been tested for, studied for, or licensed for indefinite storage of spent nuclear fuel or high-level waste and encourages DOE to develop a plan for removal by 2048. The Savannah River Site Citizens Advisory Board wants the Department of Energy to know that it is opposed the use of SRS as a site for interim storage of spent nuclear fuel from commercial nuclear reactors.

Position Statement approved at July 2015 Full Board meeting. This paper will be up for renewal July 2016