

**Savannah River Site
Citizens Advisory Board**

Recommendation #300

The Savannah River Site Citizen's Advisory Board Concerns Regarding Interim Storage of Commercial Spent Nuclear Fuel and Other Nuclear Wastes and Materials at the Savannah River Site.

Background

The 1982 Nuclear Waste Policy Act (NWPA) provided for the establishment of a permanent repository for nuclear waste in the United States. The Act stated that federal efforts during the previous 30 years (approximately 1952 to 1982) had not been adequate in devising a permanent solution to radioactive waste. The Act, Sec. 111, found that High Level Radioactive Waste and Spent Nuclear Fuel create potential environmental, public safety and health hazards. These wastes and by-products, according to Congress, require safe and environmentally acceptable methods of disposal rather than the existing practice of accumulating Spent Nuclear Fuel from nuclear reactors and radioactive waste and materials from other sources at multiple locations across the country. Provisions in the Act allow for utilizing between 9-10 percent of space in the repository for the storage of High Level Radioactive Waste resulting from atomic energy defense activities.

The Nuclear Waste Policy Act (NWPA) directed DOE to consider at least five sites, and select two, on which to develop deep geologic repositories for the disposal of High Level Radioactive Waste and commercial Spent Nuclear Fuel. The NWPA also directed DOE to begin disposing of the High Level Radioactive Wastes or Spent Nuclear Fuel by Jan. 31, 1998.

In 1986, DOE selected three out of nine potential repository sites for further study. In 1987, Congress amended the 1982 NWPA and designated Yucca Mountain as the only site to be considered, and authorized DOE to site an interim storage facility (called "Monitored Retrievable Storage" in the act) to store limited amounts of Spent Nuclear Fuel temporarily prior to sending it to a repository.

In 2002, based on technical evaluations, DOE recommended to President Bush that a nuclear waste repository be developed at Yucca Mountain. Nevada objected, as allowed by the NWPA, and both houses of Congress voted to override Nevada's objections. DOE began work on the license application. In 2010, President Obama halted consideration of Yucca Mountain, DOE filed a motion to withdraw the application from Nuclear Regulatory Commission (NRC) review, and NRC stopped the technical review of the application. Several entities, including South Carolina and Aiken County, sued DOE for not following the requirement of the NWPA. As of this writing, the final outcome of the suits is pending.

Also in 2010, President Obama chartered the Blue Ribbon Commission (BRC) on America's Nuclear Future to develop recommendations regarding the disposition of Spent Nuclear Fuel (known as the "back end" of the nuclear fuel cycle). The BRC recommendations included (1) a consent-based approach to siting future nuclear waste management facilities, (2) prompt efforts to develop one or more consolidated storage facilities to serve as interim storage for High Level Radioactive Waste and Spent Nuclear Fuel prior to disposal in a geologic repository and (3) recognizing the need to develop one or more geologic disposal facilities.

Discussion

The withdrawal of the Yucca Mountain license application has left the SRS vitrified High Level Waste without its legislatively-designated permanent disposal site, thus requiring DOE to either maintain the waste in long-term interim storage at SRS, or find an alternate disposal site.

The NWPA made DOE responsible for commercial Spent Nuclear Fuel beginning in 1998. The 1987 amendments to the NWPA authorized DOE to site an interim storage facility for the temporary storage of commercial Spent Nuclear Fuel, and because the BRC recommended developing interim storage facilities, DOE could consider siting such an interim storage facility at SRS. The CAB believes this is very likely given that SRS already is storing vitrified High Level Radioactive Waste destined to be disposed with the commercial Spent Nuclear Fuel, and the location of the SRS relative to many commercial power reactors.

DOE has a history of transferring nuclear materials to the SRS for disposition and then abandoning or indefinitely postponing the disposition. Foreign research reactor spent fuel has been received at SRS for decades, originally to be dispositioned through H-Canyon and the Defense Waste Processing Facility (DWPF). It is now languishing in L-Basin with plans to transfer most of it to long-term dry storage at SRS. Excess weapons plutonium from Rocky Flats, Hanford, and other DOE weapons sites, was transferred to SRS in order to close sites, or meet legal obligations to host states, and is awaiting disposition through MOX. The disposition plan for this plutonium is currently in its fourth iteration.

The CAB has repeatedly chastised DOE for abandoning disposition plans, essentially making SRS a *de facto* long-term storage facility. The CAB recognizes, and appreciates, that the Site's infrastructure and human resources are critical to the success of eventual disposal of these materials. However, we believe interim storage of Spent Nuclear Fuel at SRS until a repository is identified would provide little benefit to SRS or the surrounding communities, and we are skeptical that any fuel brought here for storage would leave in our lifetimes. The CAB has previously recommended that the Yucca Mountain facility be considered for interim storage of nuclear wastes and materials. Therefore, the CAB is reluctant to endorse the transfer of commercial Spent Nuclear Fuel to SRS solely for interim storage. We are, however, not prepared to take a final position at this time.

The CAB is aware that the SRS Community Reuse Organization (SRSCRO) is preparing a study regarding the drawbacks and benefits of bringing Spent Nuclear Fuel to SRS for long-term interim storage. We will request that the SRSCRO make a presentation to the CAB once the study is complete, and at that time will probably forward a recommendation based on our assessment of the study's findings. We do not believe that a decision regarding interim storage should be made by DOE before this study has been published and evaluated by local communities and the CAB.

Recommendation

Meanwhile, in the spirit of the BRC recommendation regarding using a consent-based approach to siting future waste disposal facilities, the CAB expects DOE to involve affected stakeholders in any discussions regarding the potential transfer of commercial Spent Nuclear Fuel to an interim storage location. In addition, if SRS is to be considered as a potential interim storage location, the CAB expects DOE to engage the state of South Carolina and other stakeholders about the state's expectations in any discussions regarding the potential transfer of commercial Spent Nuclear Fuel to SRS.

The Savannah River Site Citizens Advisory Board recommends that DOE:

1. Inform the CAB of any plans or discussions for bringing any new nuclear wastes or commercial spent nuclear fuel to SRS (within the bounds of national security requirements).
2. Advise the CAB of those existing or potentially generated wastes that are under consideration to be stored at SRS in an interim storage status.
3. Keep the CAB informed about the status and plans for the creation of a permanent repository for nuclear wastes that is capable of receiving legacy or other wastes or nuclear materials stored at SRS
4. Not transfer any commercial spent nuclear fuel to SRS for any purpose until after the SRSCRO study is completed, and stakeholders have reached a conclusion on the appropriateness of such an activity
5. Make no decision regarding the use of SRS as an interim storage site for commercial Spent Nuclear Fuel until establishing and using a consent-based decision process.
6. Ensure that any nuclear materials or wastes brought to the site a) be processed in a manner that prepares for them for disposition, b) after processing have a defined, scheduled, and viable path to disposition, c) be the subject of a formal and enforceable agreement with the State of South Carolina.