Blue Ribbon Commission
Augusta, Georgia
January 7, 2011

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A path forward for HLW is needed but there is no rush as on-site storage can be secure for the medium term -- reprocessing and “interim” spent fuel storage at SRS are the wrong approach and will be strongly opposed by many sectors of the SC-GA community

NRC “Waste Confidence Decision” - NRC assessing 120+ years storage

Nuclear Regulatory Commission
[NRC-2008-0482]

Waste Confidence Decision Update

“The Commission, as a separate action, has directed the staff to develop a plan for a longer-term rulemaking and Environmental Impact Statement (EIS) to assess the environmental impacts and safety of long-term SNF and HLW storage beyond 120 years (SRM-SECY-09-0090; ADAMS Accession Number ML102580229). This analysis will go well beyond the current analysis that supports at least 60 years of post-licensed life storage with eventual disposal in a deep geologic repository.”

December 28, 2010 Federal Register

http://edocket.access.gpo.gov/2010/2010-31637.htm

DWPF Vitrified Waste Canister Storage - 100 year "estimated useful life"

Citizens Advisory Board
Waste Management Committee

May 18, 2009
Presentation By
Jean Ridley, P.E.
Sludge Processing Team Lead
Assistant Manager for Waste Disposition Projects
Department of Energy Savannah River Operations Office

"Storage of Vitrified High Level Waste"

- **Currently two Glass Waste Storage Buildings**
- **Capacity: GWSB #1 – 2,253 usable positions & GWSB #2 – 2,340 positions**
- **Design Life – 50 years**
- **Estimated Useful Life – 100 years**
- **GWSB #3 – planned for 2020**

http://www.srs.gov/general/outreach/srs-cab/library/meetings/2009/fb/fb_20090518_0519_storage_waste.pdf

Assertion Incorrect: All SRS Vitrified Canisters would go to Yucca Mountain as Presented

Yucca EIS - Appendix A, *Inventory and Characteristics of Spent Nuclear Fuel, High-Level Radioactive Waste, and Other Materials*

"The Proposed Action inventory evaluated in this environmental impact statement (EIS) consists of 70,000 metric tons of heavy metal (MTHM), comprised of 63,000 MTHM of commercial spent nuclear fuel and 7,000 MTHM of DOE materials. The DOE materials consist of 2,333 MTHM of spent nuclear fuel and 4,667 MTHM (**8,315 canisters**) of solidified high-level radioactive waste. The inventory includes surplus weapons-usable plutonium, which would be in the forms of spent mixed-oxide fuel and immobilized plutonium…less than 50 percent of the total inventory of high-level radioactive waste could be disposed of in the repository within the 4,667 MTHM allocation for high-level radioactive waste. There has been no determination of which waste would be shipped to the repository, or the order of shipments."

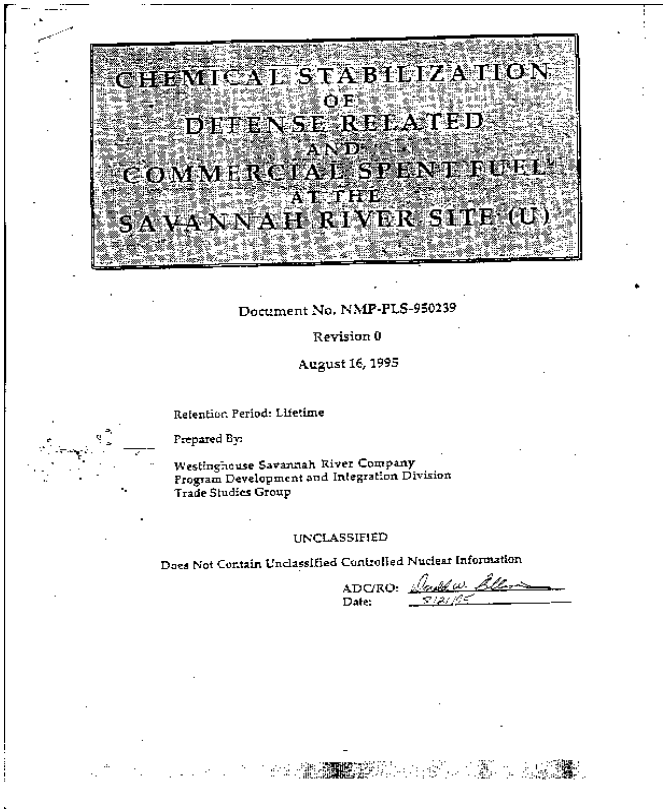
- http://nepa.energy.gov/nepa_documents/EIS/EIS0250/VOL_2/VOL2_A.PDF

Note: SRS alone will produce more than 7,000 vitrified waste canisters and all DOE sites perhaps 20,000 canisters

Our History with Reprocessing: Barnwell (AGNS)Reprocessing Plant Rejected in the Late 1970s

West Valley, NY reprocessing plant: costly, dirty failure we avoided in our community and don't want repeated here or anywhere

Westinghouse 1995 proposal for F- and H-Canyons for commercial spent fuel storage and reprocessing: Rejected



CHEMICAL STABILIZATION
OF
DEFENSE RELATED
AND
COMMERCIAL SPENT FUEL
AT THE
SAVANNAH RIVER SITE (U)

Document No. NMP-PLS-950239

Revision 0

August 16, 1995

Retention Period: Lifetime

Prepared By:

Westinghouse Savannah River Company
Program Development and Integration Division
Trade Studies Group

UNCLASSIFIED

Does Not Contain Unclassified Controlled Nuclear Information

ADC/RO:
Date:

H-Canyon:
Aging, Degraded, Costly and Being Phased Out – Reprocessing on Hold?

Alternatives to Reprocessing in H-Canyon of Research Reactor Fuel being Examined

"OVERVIEW OF CRITERIA FOR INTERIM WET & DRY STORAGE OF RESEARCH REACTOR SPENT NUCLEAR FUEL"

R.L. Sindelar, D.W. Vinson, N.C. Iyer, and D.L. Fisher

Savannah River National Laboratory, Aiken SC

November 2010

http://sti.srs.gov/fulltext/SRNL-STI-2010-00688.pdf

Receiving Basin for Offsite Fuel (RBOF)

GNEP Approach: Rejected

GNEP Proposals for SRS Area

1. EnergySolutions, for the AGNS (Barnwell) site;
2. Savannah River National Laboratory & the Economic Development Partnership of Aiken and Edgefield Counties for SRS itself.

-- Draft PEIS meeting in Aiken on December 4, 2008 – majority of comments against reprocessing & prediction made of no Final PEIS or ROD would be issued – GNEP PEIS officially cancelled on June 29, 2009

SC legislature & reprocessing as “renewable energy”: Rejected in 2009

S 232

http://www.scstatehouse.gov/sess118_2009-2010/prever/232_20081217.htm

A BILL

TO AMEND SECTION 48-52-210 OF THE 1976 CODE, RELATING TO THE PLAN FOR THE STATE ENERGY POLICY, TO ENCOURAGE THE USE OF CLEAN ENERGY SOURCES; AND TO AMEND ARTICLE 2, CHAPTER 52, TITLE 48, BY ADDING SECTION 48-52-220 TO PROVIDE A DEFINITION FOR "RENEWABLE ENERGY RESOURCES".

SECTION 2. Article 2, Chapter 52, Title 48 of the 1976 Code is amended by adding:

"Section 48-52-220. For the purposes of this chapter, 'renewable energy resources' means energy conservation and efficiency, **nuclear fuel reprocessing**, solar photovoltaic energy, solar thermal energy, wind power, hydroelectric power, geothermal energy, tidal energy, wave energy, recycling, hydrogen fuel derived from renewable resources, biomass energy, energy derived from municipal and other solid waste, energy derived from waste oil, energy derived from waste tires, and landfill gas."

SC is tired of being dumped on:
Due to citizen engagement, Barnwell LLW dump closed by SC legislature in 2007 to out-of-compact waste – a victory against 36 years of national dumping here

Environmental Assessment (EA) on Lease of SRS Land for Ill-Defined "Energy Park" - Halted by DOE

SRS Environmental Bulletin - April 16, 2009

EA being prepared for the proposed lease of SRS lands to the SRS Community Reuse Organization

DOE has determined that an environmental assessment (EA) will be prepared to evaluate the potential environmental consequences of the proposed lease of a 2,700 acre tract of undeveloped SRS lands to the SRS Community Reuse Organization (SRSCRO) for the development of an Energy Park. The purpose of the proposed action is to facilitate economic development in the Central Savannah River Area by allowing commercial entities to take advantage of the many positive attributes of the SRS which make it well suited for alternative and nuclear energy activities. The scope of the proposed action is limited to evaluating the impacts of leasing the SRS lands to the SRSCRO. The SRSCRO would work to obtain tenant entities for the Energy Park, and appropriate NEPA review of the environmental impacts of constructing and operating any alternative or nuclear energy facilities would be conducted when a specific proposal comes forward.

Notifications of DOE's intent to prepare this EA were sent to the States of Georgia and South Carolina on April 8, 2009. If you would like a copy of the predecisional EA when it becomes available, please contact:

Andrew R. Grainger, NEPA Compliance Officer
U.S. Department of Energy, Savannah River Operations Office
Building 730-1B, Room 3150, Aiken, SC 29808
e-mail: nepa@srs.gov
Fax/telephone 1-800-881-7292

http://www.srs.gov/general/pubs/envbul/documents/v20n9.pdf

SRS to SRS CAB, March 2009, Concept for an EM "Energy Park Initiative" – included "spent fuel storage"

Stakeholder Feedback

"ROI drives industrial interest"

- **Support for "green" power generation (e.g.: solar, carbon sequestration and alternate biofuels)**

SRS Reuse Organization
- possibly EIS if their env. assessment points to this

- **Support for Nuclear applications (e.g., hydrogen generation and spent nuclear fuel storage)**

"that it is one of the things out there"

- **Licensing & Permitting**
- **Financial risk (i.e., loan guarantees, capping risk)**

SRS is an EM Site: Clean-Up is the Goal, Not New Waste; Clean-Up is Budget King

Mission

The mission of the Office of Environmental Management (EM) is to complete the safe cleanup of the environmental legacy brought about from five decades of nuclear weapons development and government-sponsored nuclear energy research.

The EM program has made significant progress in shifting away from risk management to embracing a mission completion philosophy based on reducing risk and reducing environmental liability. As an established operating cleanup completion and risk reduction program, EM is demonstrating the importance of remaining steadfast to operating principles while staying focused on the mission. For example:

EM is fulfilling its commitments to reduce risk and complete cleanup across all sites for the generations to come.

http://www.em.doe.gov/Pages/Mission.aspx

EM & Clean-Up: King at SRS

SRS Budget Summary
($M)

ENVIRONMENTAL MANAGEMENT APPROPRIATION	FY 2010	FY 2011 Request
Environmental Cleanup	1,210	1,218
Safeguards & Security	132	132
Federal Program Direction	55	54
TOTAL EM BUDGET AUTHORITY	1,397	1,404

AMERICAN RECOVERY AND REINVESTMENT ACT	1,615

http://www.srs.gov/general/outreach/srs-cab/library/meetings/2010/fb/srsenergypark.pdf

Energy Park Scheme: Flawed from the start

- SRNS has presented the idea of reprocessing LWR fuel, including “disposition path for used nuclear fuel in South Carolina”

-Small Modular Reactors (SMRs) as part of “potential alternative to Yucca Mountain”

-- Aim to “acquire buy-in” from DOE/NNSA and the community within six months, yet no meetings with community public interest groups nor opportunity for them to discuss the concept

- DOE has no “energy park” guidelines nor does EM have money for this – who will pay?

- We can support clean jobs at SRS but not another big government scheme which would strap the tax payer with the costs and South Carolina with the waste

<u>BRC Charter</u> – does not include analysis of jobs programs or other missions at DOE sites, such as reprocessing or "energy parks"

"Consideration of a wide range of technological and policy alternatives, and should analyze the scientific, environmental, budgetary, financial, and management issues, among others, surrounding each alternative it considers. The reports will also include a set of recommendations regarding policy and management, and any advisable changes in law."

Secret Meeting on MOX Plant and Fast Reactor Fuel – Beyond Mission

Summary of TVA Meeting held 22 April 2009

Attendees:

TVA		AREVA		MOX Services	ORNL	
Ashok Bhatnager	David Brown		D. Stinson		Don Williams	
Jack Bailey				S. King		
TA Keys				A. Simonti		DOE
Jim Robert				P. Newby		Dan Stout
Dan Stout				D. Leach		Carol Elliott
					H. Lawrence	Dean Tousley
					R. Whitley	
					W. Elliott	
					D. Martin	
					G. Meyer	
					K. Trice	
					R. Clark	

Meeting Discussion

Jim Robert presented TVA's activities working with DOE-NE to study recycle MOX fuel use in the US and develop a MOX Qualification Plan. **TVA has prepared a white paper on the benefits of a recycling center in the Tennessee valley.** Much of the work on PWR and BWR MOX is being performed by AREVA and should be completed by August 2009. This includes trying to revise the NRC material classification such that fresh MOX fuel can be more easily transported.

Also discussed was the need to make fast reactor fuel for the first core of a Advanced Recycle Reactor and the MFFF ability to fabricate this fuel if it is oxide fuel. BWXT is also considered an option for building fast reactor fuel.

Action Items:

Dean Tousley is to verify that utility participation in the WG MOX disposition program would not cause foreign countries to refuse to supply equipment to that utility.

David Brown was to prepare a comparison of TVA's LEU fuel with the MOX LTAs and also provide a correct summary of the MOX LTA PIE data.

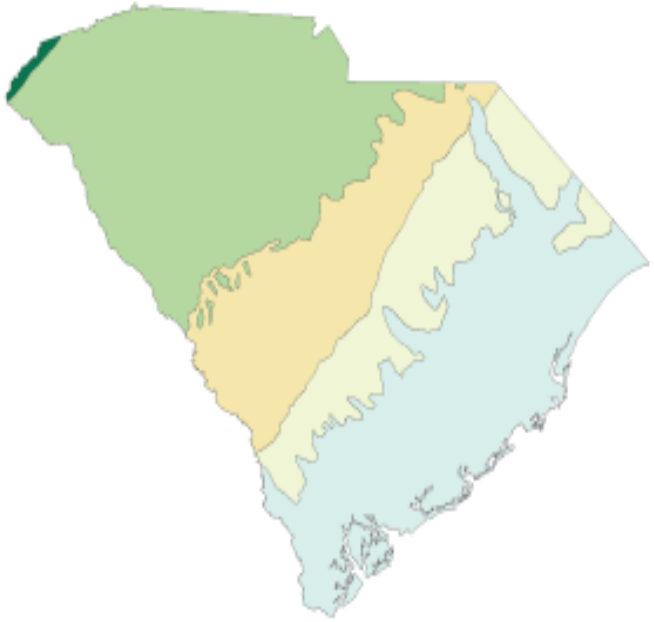
AREVA will be developing a licensing strategy for Rx grade MOX. MOX Services should review and comment on it's applicability to WG MOX.

What is the motivation for pushing for reprocessing when it's proved wrong time after time?

Does it have anything to do with energy policy or does it have to do with money and profit and manipulation by special interests of big government ?

But, we see the same thing in the UK and Japan, where reprocessing is a failure. In Russia, which like the UK, hasn't reused any plutonium. And in mainland Europe, which has pulled out of reprocessing, leaving only France to pursue a state-sponsored socialist industry.

SRS: Geology Dictates in Atlantic Coastal Plain - high water table, sandy soils – unsuitable for additional HLW storage



SC public interest groups with local membership have spoken against reprocessing at SRS

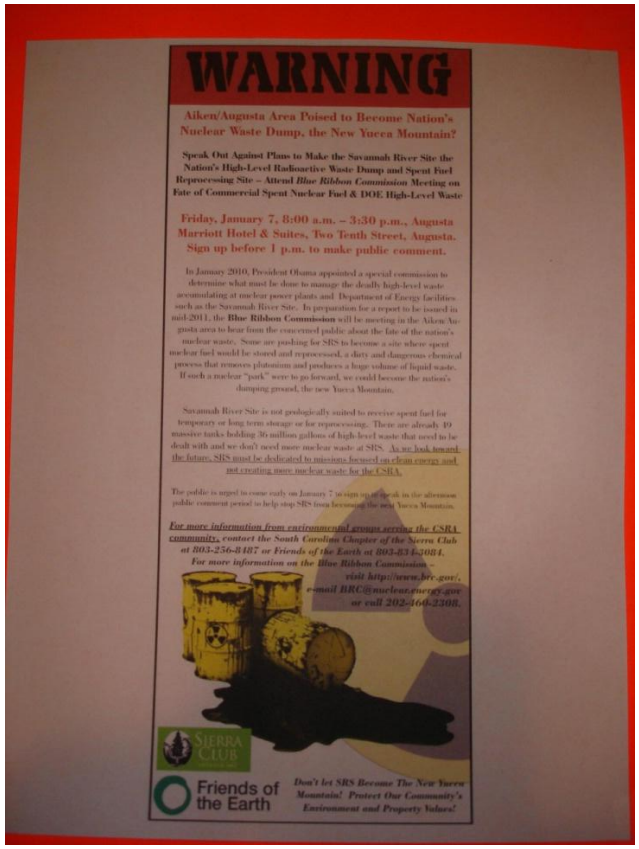
South Carolina Chapter - Sierra Club

Conversation Voters of S.C.

S.C. Coastal Conservation League

Friends of the Earth

Environmental groups have warned about Reprocessing and Spent Fuel Storage at SRS



Governor Dick Riley, 1982

When commenting about
U.S. nuclear waste policies:

“There is a basic law of political physics, often overlooked…that waste tends to stay where it is first put.”

And others have added: all temporary storage sites tend to be de facto repositories

Recommendations

1. For environmental, technical and geology reasons, no “interim” spent fuel storage or reprocessing at SRS; Yucca Mountain or any another repository must not be pursued simply to give special interests as “way out” of SRS for high-level reprocessing waste from what is mistakenly called a “closed fuel cycle”;
2. Clean-up of SRS must remain the focus and the BRC must not complicate the mission of cleaning up the site by making proposals which could result in more waste at SRS;
3. Future projects at SRS must not create more nuclear waste burden & be privately financed;
4. Secure on-site storage of commercial spent fuel - Hardened On-site Storage (HOSS) - and secure storage of DOE HLW;
5. The Yucca selection was tainted by politics from the start, so it’s time to base decisions on science and sound policies;
6. Honor the pledge to develop a plan to remove SRS waste and not generate more;
7. If H-Canyon for reprocessing R&D is pursued for commercial spent fuel – what are the cost of upgrades, life extension costs, Kr-85 capture, NEPA documents, NRC licensing, etc.?
8. Be aware that varied communities and coalitions in South Carolina and Georgia will oppose SRS becoming a HLW dump or reprocessing site;
9. If the BRC makes any recommendation for reprocessing or reprocessing R&D, please explain in detail how the myriad of waste streams, including contaminated uranium, will be handled and disposed of. Please clarify that the majority of material from reprocessing is waste and will <u>not</u> be recycled.