

**Yucca Mountain – A Regional Voice
From Solo to Chorus - 11066**

R. V. McLeod

Savannah River Community Reuse Organization
P.O. Box 696, Aiken, SC 29802

ABSTRACT

Over the past year and a half, the SRS Community Reuse Organization (SRSCRO) undertook a comprehensive regional education campaign aimed at developing a community consensus regarding a path forward in responding to the Government's decision to halt work on Yucca Mountain. As a regional voice for issues related to the Savannah River Site (SRS), the SRSCRO campaign was designed to raise awareness of this important topic among community leaders.

The SRSCRO made presentations to elected bodies, economic development groups, nuclear advocacy and technical organizations, civic clubs and others with an interest in energy and economic growth. The SRSCRO stressed that those responsible for public safety, job creation, image enhancement and citizen confidence must now lead in a new reality. We must come to terms with our community's lingering – perhaps permanent -- role as caretaker for the Nation's highly radioactive waste.

It was the goal and intent of the SRSCRO to assist the communities in our region in reaching consensus concerning a path forward in addressing with the Federal Government the impacts on our region resulting from the absence of a promised permanent repository for nuclear waste.

INTRODUCTION

During the summer of 1993, through the efforts of the local SC & GA Congressional Delegation, the need for a bi-state regional committee was identified to work with the Department of Energy (DOE) at the Savannah River Site (SRS) to formulate a regional economic development plan. A community initiative called the Savannah River Regional Diversification Initiative (SRRDI) was established.

In September 1994, the Office of Worker and Community Transition was formed to mitigate the impacts on workers and communities caused by changing Department of Energy (DOE) missions, consistent with Section 3161 of the Defense Authorization Act of 1993. DOE encouraged communities affected by the downsizing of nearby DOE facilities to establish a Community Reuse Organization (CRO). A total of fifteen (15) Community Reuse Organizations (CROs) were designated or formulated between 1994 and 1997 across the DOE complex. SRRDI was formally recognized as DOE's designated CRO for SRS during this time. Eight CROs exist today.

In 2006, the Board of Directors formally changed the organization's name from the Savannah River Regional Diversification Initiative (SRRDI) to the SRS Community Reuse Organization (SRSCRO), to more closely reflect its role in utilizing the Savannah River Site's resources to facilitate economic development and job creation in its two-state, five-county region.

The 501(c) (3) private non-profit, SRSCRO, has a community based Board of Directors which includes community leaders from education, industry, business, banking, area economic development organizations, and state and local governments. The 22-person Board members are selected equally, eleven from Georgia and eleven from South Carolina.

The SRSCRO's region of responsibility covers the five counties of Richmond and Columbia in Georgia, and Aiken, Allendale, and Barnwell in South Carolina. The SRSCRO serves as the community interface organization for DOE-SR with respect to local supported area economic development initiatives. The SRSCRO mission also includes serving as an informed, unified community voice for the five-county, two-state region.

The Savannah River Site is one of DOE's major defense production facilities. Located on a 310-square miles site on the South Carolina and Georgia border, it began operation in 1953 with primary responsibility for producing the basic materials for use in nuclear weapons, primarily tritium and plutonium-239. Over its 50 year history, SRS did yeoman's service in meeting the nation's need for nuclear material. In the process, high-level wastes were produced and provisions were made for temporary storage of these waste materials on site.

The liquid high-level wastes were originally stored in more than 50 underground tanks at SRS. The waste was stored with the full expectation that a process would be identified that would lead to permanent disposal. In 1982, DOE published the Environmental Assessment for the federal geologic repository mandated by the Nuclear Waste Policy Act (NWPA) – Yucca Mountain. In this document, borosilicate glass was chosen as the high-level waste form.

In the mid-1980s, the \$1.2 Billion Defense Waste Processing Facility (DWPF) was constructed at SRS to carry out the process of converting the liquid high-level waste to “glass logs” that would then be shipped to Yucca Mountain for permanent disposal. In 1985, the DOE instituted a Waste Acceptance Process to assure that DWPF glass waste forms would be acceptable at the repository. This assurance was important since production of waste forms preceded repository construction and licensing.

Today, SRS has approximately 3,000 canisters of legacy high-level waste (glass logs) from the cold war stored on site. Another 3,000 to 4,000 canisters will be generated in processing the remaining liquid radioactive waste now in the aging tank farms at SRS. The finished product of all this waste has been or will be processed with specifications for the eventual disposal in Yucca Mountain.

One of the issues of major concern to the SRSCRO and our region is the decision to abandon Yucca Mountain as this nation's repository for the nation's spent fuel and high-level radioactive waste. The Government decision to “temporarily” store defense nuclear waste and commercial spent fuel in local communities was always based on the Federal promise of a permanent repository. Lack of a permanent repository has major implications for our region:

- We become a permanent repository.
- Our image suffers, potentially impacting economic development efforts.

- There are questions about the safety of “forever” storage on-site.
- The Federal Government has broken its promise to us and to DOE communities nationwide.

FACE THE MUSIC

Yucca Mountain is a 1,200-foot high flat-topped volcanic ridge extending six miles from north to south. It is located in Nye County, Nevada, 90 miles northwest of Las Vegas on federally-owned land on the edge of the Nevada Test Site. Yucca Mountain is comprised of "tuff," a rock made from compacted volcanic ash formed more than 13 million years ago. Yucca Mountain has a desert climate and receives about six to seven inches of rain and snow per year. The Mountain has a deep water table.

The Nuclear Waste Policy Act (NWPA) of 1982 established a comprehensive policy for permanent geologic disposal of the nation's spent fuel and high-level radioactive waste. The Act laid out a step-by-step process for the government to search, study, select, and ultimately, construct a nuclear waste repository by the year 1998. By December 1984, the DOE had narrowed the candidates for repositories to sites in Texas, Washington State, and Nevada, at Yucca Mountain. However, the estimated characterization cost, \$60 million for each site, had already grown to more than a billion dollars per site. As a result, Congress decided to select only one site for continued study. In 1987, Congress amended NWPA to name Yucca Mountain the sole site to be considered for a nuclear waste repository. Yucca Mountain was officially designated as the site to store the nation's spent fuel and high-level radioactive waste in 2002.

In June 2008, the Department of Energy submitted an application to the Nuclear Regulatory Commission seeking authorization to build a deep geologic repository for used nuclear fuel and other high-level radioactive waste at Yucca Mountain. At the end of 2009, President Obama announced plans to withdraw the license application and empanel a blue ribbon commission to provide recommendations for long-term management of high-level radioactive waste. In January 2010, Energy Secretary Chu announced the formation of a Blue Ribbon Commission on America's Nuclear Future to provide recommendations for developing a safe, long-term solution to managing the nation's used nuclear fuel and high-level radioactive waste from defense programs.

Then in March 2010, the Department of Energy filed a motion to withdraw the license application. Several states have filed lawsuits with the U.S. Court of Appeals for the D.C. Circuit, saying that this decision violates the 1982 Nuclear Waste Policy Act. Now pending before the U.S. Circuit Court of Appeals for the District of Columbia are lawsuits brought by Aiken County in SC, the states of Washington and South Carolina, the National Association of Regulatory Utility Commissioners, and several other plaintiffs to stop the licensing withdrawal.

SOLO

The government's about face on this critical issue left state and local leaders with more questions than answers. As a region, we were left wondering what's next. How we will come together in unity to address a path forward in the wake of this broken promise – one that has implications of

the longest possible term and a potential chilling effect on our region's future growth and prosperity?

The SRSCRO characterized the decision to abandon Yucca Mountain after more than two decades of development as a significant community issue. If left unaddressed, it will negatively affect the region's image, create new long-term safety concerns, slow the deployment of nuclear power plants and impact the region's ability to retain and attract business and industry and create new jobs -- all while passing this important job on to future generations for resolution.

Soon after President Obama announced plans to withdraw the license application, the SRSCRO formed a Yucca Mountain Task Force with the mission of undertaking a comprehensive regional education campaign aimed at developing community consensus in responding to the Federal decision to halt work on Yucca Mountain. With this in mind, the SRSCRO prepared a 27-page White Paper designed to serve as a catalyst for public dialog.

The ideas expressed in this paper were intended for information and education and a platform for public discussion as interested citizens and groups work together to arrive at a community consensus and a strategy for communicating our common position to key decision makers. Over a course of several months, the SRSCRO, acting solo, made presentations to elected bodies, economic development groups, nuclear advocacy and technical organizations, civic clubs and others with an interest in energy and economic growth.

PREACHING TO THE CHOIR

A stakeholder is a person or group likely to be affected by (or who thinks they will be affected by) a decision -- whether it is their decision to make or not. In our case, the circle of stakeholders or "Choir" -- we are talking about are the elected officials, business leaders, state and local governments, economic development organizations with a perspective on nuclear issues and the long-term betterment of the community and citizens at-large. Consensus building involves face-to-face interaction among representatives of such stakeholding groups. It aims for "mutual gain" solutions, rather than win-lose or lowest common denominator outcomes.

Consensus is a process for group decision-making. It is a democratic method by which an entire group of people can come to an agreement. The input and ideas of all participants are gathered and synthesized to arrive at a final decision acceptable to all. Through consensus, we are not only working to achieve better solutions, but also to promote the growth of community and trust.

An important reminder: Consensus building does not mean everyone agrees that a decision is optimal. It means a decision is reached that everyone can live with; in other words, the decision addresses stakeholders' most important issues. Engaging the community and key stakeholders can be accomplished in various manners. The following identifies the advantages of the consensus process used by the SRSCRO:

- Education and Awareness -A consensus process provides learning opportunities for all involved. Shared perceptions and experiences provide a deeper, richer understanding of

the issue being discussed. This increased understanding provides the basis for selecting appropriate solutions.

- Better Decisions - Decisions using a consensus process reflect the concerns of all involved parties and draw upon the creativity and breadth of ideas in the group.
- Embracing the Result - Those who have been engaged in creating a solution or making a decision will be more likely to embrace the result. In other words, “buy-in” of parties is enhanced.
- Creation of New Partnerships - New relationships are potentially formed as a result of sharing of common values, interests, and strategies.

However, consensus takes time, patience, and willingness to compromise.

THE CHORUS

Participants in a consensus process must know what they are discussing and deciding. A common understanding of the problem—its location, the extent, and the impacts—is necessary before proceeding. It is helpful to frame the issue in terms of a question or set of questions. As part of our regional dialog, local leaders worked together to examine key questions related both to the status of Yucca Mountain and to the future of reprocessing spent nuclear fuel. For ease of reference, these questions are divided into two categories – (1) Continued Support for Yucca Mountain and (2) Adoption of Reprocessing as a National Policy.

1. Continued Support for Yucca Mountain

- Should Congress reaffirm the 2002 legislation which specifies that Yucca Mountain is to be developed as the national repository?
- Should the Governors of the 39 states with either commercial Spent Nuclear Fuel (SNF) and/or DOE high level radioactive nuclear waste contact their federal delegations to express their concern and request that the Yucca Mountain disposition pathway for SNF and DOE high level radioactive wastes be reestablished?
- Should stakeholders from South Carolina and Georgia be included as members of the Blue Ribbon Commission being assembled by DOE to consider alternatives to Yucca Mountain?

2. Adoption of Reprocessing as National Policy

- Should Congress approve legislation which establishes processing as the national policy for management of spent fuel?
- Should DOE and the Congress approve a vigorous program to (1) select a new spent nuclear fuel process and (2) develop and demonstrate the new process at the engineering scale on SRS as soon as possible?
- Should DOE and the Congress approve a program to develop alternate reactor types which can burn the portion of recovered fuel which is not suitable for use in conventional nuclear power reactors?

In addition to the questions raised above, there are other considerations for the community as well.

1. As affected units of government, should we advocate that the Nuclear Waste Policy Act of 1982 as amended be reopened to address our region's prolonged role as host to high-level nuclear waste? Specifically, should the law be changed to require the Federal Government to compensate local units of government for their willingness to continue to serve as host while the Government develops other, more permanent storage options?
2. Should the region retain the services of Washington, DC-based firm to represent its interests with Federal agencies and elected officials on Capitol Hill? As we face a lengthy delay in progress toward an ultimate solution for nuclear waste storage, is it time to ensure that our voice is amplified and our case is presented in the strongest possible terms with Government decision makers?
3. What groups should be brought together to develop regional consensus and how is this done (e.g. Citizens for Nuclear Technology Awareness (CNTA), SRS Citizens Advisory Board (CAB), Economic Development Groups, County Councils?)
4. Since resolution of this critical challenge impacts many regions besides ours, should we coordinate with affected units of government in other states to amplify our voice, maximize our ability to communicate with policy makers and ensure that the final resolution addresses national needs and concerns in a comprehensive way?

Fortunately, many of the stakeholders in this case had more than a causal knowledge of the issue. The SRSCRO was able to use this advantage to accelerate the consensus building process by providing a resolution "template" for consideration. Only a few face-to-face meetings with elected bodies (City and County Councils) were required to formalize the resolutions and minor modifications of specific language in the resolutions between the disparate groups were not a major issue and did not detract from the main message of the resolutions - objecting to the Federal Government's decision to abandon Yucca Mountain.

The outcome of the consensus building process produced twenty (20) resolutions from political and economic development entities in the region. Formally going on record as a unified "Regional Voice" in opposition to the Government's decision concerning Yucca Mountain, these resolutions were the result of the SRSCRO efforts to raise awareness of the issue in our two state region and nationally. The groups included:

1. South Carolina House of Representatives
2. Georgia House of Representatives
3. Aiken County, SC
4. Allendale County, SC
5. Barnwell County, SC
6. Augusta/Richmond County, GA
7. Columbia County, GA
8. Columbia County, GA, Development Authority
9. Columbia County Chamber of Commerce
10. Greater Aiken of Commerce
11. Augusta Metro Chamber of Commerce

12. North Augusta Chamber of Commerce
13. Aiken Edgefield Economic Development Partnership
14. Southern Carolina Regional Development Authority
15. Augusta Tomorrow
16. CSRA Fort Gordon Alliance
17. City of Aiken, SC
18. City of Barnwell, SC
19. Town of Fairfax, SC
20. SRS Community Reuse Organization

SUMMARY

Spearheaded by the SRSCRO campaign, our region has gone on record concerning our disappointment and outrage at the Government's decision to stop work at Yucca Mountain. At a press conference at the National Press Club, the community leaders from two states who serve on the SRSCRO Board of Directors presented twenty (20) strongly worded resolutions adopted by political and economic development entities ranging from the South Carolina and Georgia House of Representatives to chambers of commerce and small towns near the Savannah River Site objecting to the Federal Government's decision to abandon Yucca Mountain as its preferred option for nuclear waste storage.

The Resolutions were delivered to the Secretary of Energy and to the Georgia and South Carolina Congressional Delegations in Washington during the annual trip to Washington by over forty community leaders, composed of elected officials and business leaders from five counties in Georgia and South Carolina near DOE's Savannah River Site. It was a simple statement: the federal government has broken faith with our communities and with others across the country that trusted implicitly in the Department of Energy's commitment to complete Yucca Mountain as the nation's preferred method of nuclear waste storage. As a community chorus, we wanted all parties involved to know the intensity of our concern as a region and our commitment to being part of this discussion as ideas are put forth and future plans are formulated.

REFERENCES

1. EPA FAQs (<http://www.epa.gov/radiation/yucca/faqs.htm>).
2. "Nuclear Waste Disposal - Showdown at Yucca Mountain" *Issues in Science and Technology* (Fall 2010) Luther J. Carte, Lake H. Barrett, and Kenneth C. Rogers.
3. "What's next for Nuclear Waste? – A New Strategy for the CSRA" SRSCRO (September 2009).
4. "SRSCRO Press Conference, April 28, 2010, National Press Club, Washington, D.C. (<http://www.srscro.org/downloads/YuccaMountainWebcast.mp4>)