

## Statement for the Blue Ribbon Commission, Tuesday Nov. 16, 2010

Presented by Susan Corbett, Chair, S.C. Chapter Sierra Club, Chair,

National Sierra Club Nuclear Issues Activist Team

Good morning. My name is Susan Corbett. I live in Columbia, S.C. I am the Chair of the South Carolina Chapter of the Sierra Club with over 5200 members, and also Chair of the National Sierra Club Nuclear Issues Activist Team, the national Sierra club team that watchdogs nuclear issues. These are both volunteer positions, I do not get paid to do any of this work. I have been following the issues surrounding nuclear power since the middle 1970's. I am here today to not only represent Sierra Club, but also the 70 groups from around the country who have signed the Grassroots Answers document. In addition, and what should be of great interest to this body, I also represent a coalition of South Carolina groups, *the Common Agenda*, which represents the collective efforts of 36 organizations representing over 45,000 South Carolinians.

Our government, partnering with the nuclear industry, has been running a deficit program for over 50 years. Not a deficit in the traditional sense, but a deficit nonetheless. We have been running a program without really paying for it. We have been taking the benefit of electricity generated by nuclear power, but we haven't paid the bill in full. . . . we have been allowing the "deficit of" nuclear waste to pile up, always waiting for another day for the bill to come due. That time is now.

The failure of Yucca Mountain has brought into sharp relief the problems of isolating long lived radioactive materials from the biosphere. Radioactive materials seeping into water tables over time should be a major concern to this body. Every conceivable step must be taken to see that these long lived, highly carcinogenic materials do not enter our present or future water supply and food chain.

What to do with the 67,000 tons of irradiated fuel we have created in the U.S. is a major concern to reactor communities all across this country, as well as those communities who know they are being considered for some kind of nuclear waste disposal. We know there is a strong push to begin a U.S. reprocessing program again, but I am here to tell you today that conservation groups across the country and especially groups around DOE sites in S.C. and other states are opposed to this idea and will stand against it for many reasons. And I am sure you are aware, non-proliferation groups are also very concerned about any plans to separate out more weapons usable materials.

Two weeks ago, I toured the Savannah River site, again. I have been there many times. Each time I come away with great respect for the men and women who work the high tech procedures and tend to this dangerous collection of radioactivity, but I also come away with the question why would we ever start another waste producing process like this again? Why would South Carolina, or ANY state or community, allow a process to re-start that has already created the some of the biggest environmental nightmares in our country and around the world, for that matter? Why would we or any state allow another DOE project to create more radioactive waste when there's already such a legacy of failed solutions and broken promises? The 36 million gallons of high level waste(HLW) still awaiting disposition at SRS are significant and still problematic after decades of attempts to clean them up. On January 8, 2008, Terry Spears, Assistant Manager, Waste Disposition Project, DOE Savannah River Operations office, told the National Academy of Sciences Cleanup Technology Roadmap Committee that "Radioactive waste stored in SRS tanks poses the single greatest environmental risk in the State of Carolina."

Some of the High Level Waste (HLW) in those tanks that was originally going to be removed from our state was "re-classified" by a last minute, un-debated amendment to the 2004 Defense Authorization Bill, allowing what was previously considered High Level Waste to be wrongly re-named *Waste Incidental to Reprocessing*,(WIR) thereby allowing millions of curies to be orphaned at Savannah River Site, a high water table location, sitting atop the Tuscaloosa aquifer, distinctly unsuited for long term storage of long lived radioactive nuclides. The current method of WIR disposition is simply to mix the waste with grout, pour into concrete vaults, cover with earth, and leave it forever. Waste left at the bottom of the tanks would also be grouted and left, even though high levels of radioactive materials remain in that sludge. *Would any new commercial reprocessing include the classification of WIR waste and its subsequent permanent dumping at SRS?* Actions like this and others have created an air of mistrust, as South Carolina become more and more the likely site for even more stranded nuclear waste.

We in South Carolina are not alone in our crisis and our concerns. Other DOE sites around the country share similar stories and stakeholders around potential future sites are aware of the legacy of nuclear waste. DOE must not succumb to the temptation to let contractors and those seeking to profit from new missions to be mistaken or characterized as the voices of the "community". And company towns are notoriously unwilling or unable to confront their big employers, fearing job losses or being ostracized by friends, family or neighbors. Every DOE hearing I ever attended started with a parade of local elected officials, persuaded by some means to feel obliged to sign off on the latest decision or mission, no matter how onerous. What

usually follows these perfunctory performances by local officials are heartfelt and often well thought out and researched concerns by local citizens, though I'm not sure they carry the same weight. (?)

Around the world, reprocessing has not proven to be any good solution to dealing with spent fuel. In October a delegation of Russian and Norwegian scientists toured Vermont to learn about decommissioning practices in the U.S. During that visit, Russian scientist Oleg Bodrov talked about the Russian reprocessing facility at Mayak. He stated that the PUREX process being used at Mayak creates 22,000 cubic meters of waste for every cubic meter reprocessed. While we understand there are several processes around the world being considered or used to separate and recover usable materials, they all involve creating larger volumes of radioactive waste, without reducing radioactivity. Savannah River, or any site for that matter, cannot and should not be used to create, store or process another enormous radioactive burden of waste.

Also around the world, reprocessing to date has created a worldwide stockpile of 215 metric tons of weapons usable plutonium. There is no argument that reactor-grade plutonium (separated via reprocessing) is "weapons-usable". The proliferation risks associated with separation are significant, and our start-up of reprocessing would signal to the rest of the world the acceptance of this dangerous technology as some solution, when it simply heightens the risk of proliferation activities.

This past week it was revealed that two Armenians recently attempted to sell an 18 gram sample of highly enriched uranium (HEU) to buyers they thought were representatives of an Islamic group, as a precursor to a bigger consignment. They smuggled it into the nation of Georgia by train in a cigarette box lined with lead to fool radiation sensors. They only had 18 grams, but had been told by their supplier in Armenia that much more was available. The buyer turned out to be an undercover police officer, but this was the third time in seven years HEU has been intercepted in Georgia. There have been 21 seizures or attempted thefts of weapons-grade material, uranium or plutonium, in the region since the Soviet Union collapsed. In every case the material seized had not been missed by the facility of origin, and in most cases, the theft was by an insider. Before you discount this as a failure of the Soviet Union to police itself, need I remind this body that the way nuclear bomb information was first leaked to Russia was from scientists deeply involved in the research at Los Alamos? In an unstable and economically challenged world we cannot discount the risk and danger of materials diverted by those working inside the industry, in all countries including our own.

Reprocessing sends the wrong signal. Will we engage in some kind of "do as we say, not as we do" technology for our nuclear waste and either try and police the rest of the world's nuclear activities or worse, be the target for rogue states who use it for malevolent purposes?

There are so many reasons to oppose reprocessing it is difficult to articulate them here in ten minutes: a quick overview includes:

- Military reprocessing in the U.S., at Hanford, Washington, Idaho National Lab, and Savannah River Site, South Carolina, has left behind radioactive wastes that will cost hundreds of billions of dollars over time to deal with, while risking major water bodies and aquifers.
- The six year experiment reprocessing commercial irradiated fuel at West Valley, New York, resulted in continuing radioactive contamination of the surrounding soils and waters that threatens Lakes Erie and Ontario downstream, and is costing taxpayers billions in clean up.
- In France, the La Hague reprocessing facility discharges hundreds of millions of liters per year of radioactively contaminated liquid wastes into the English Channel via an underwater pipeline. The French have yet to locate a geologic repository, and are making arrangements to dispose of some of their waste in Siberia. They have also stockpiled a significant amount of weapons usable Plutonium.
- Similar environmental assaults have taken place at Britain's Sellafield reprocessing facility, where 1,000 pounds of ultra-hazardous plutonium have been dumped in the Irish Sea, traces of which have been found in children's teeth hundreds of miles away.
- The Russian reprocessing site at Mayak is one of the most contaminated locations in Russia.
- The Japanese reprocessing plant at Rokkushu has topped \$20billion and still isn't working. Japan Nuclear Fuel Ltd. In October, announced they will delay full scale start up by two more years to 2012. This, the 18<sup>th</sup> postponement of the project, and will leave it 15 years behind schedule
- Reprocessing would be an enormous financial burden on the U.S. taxpayer. In this new era of fiscal accountability, will the taxpayer be forced to underwrite another expensive and unnecessary DOE mission? The French public pays an extra billion dollars per year to keep its reprocessing program going. All world wide reprocessing programs are exceedingly expensive, mostly at taxpayer expense.
- Finally, reprocessing is a "surcharge" on nuclear power according to a November, 2007 Congressional Budget Office report, which concluded that reprocessing adds to the cost of nuclear power 25% more than the cost of direct disposal. *At a time when nuclear power is already struggling to compete with cheaper energy options, any additional cost may price it out of existence.*

All of this is completely unnecessary. The groups signing the Grassroots Answers document oppose reprocessing of any kind. The *once-through* fuel chain is much preferred to any reprocessing cycle which carries with it astronomical costs to the taxpayer and to the environment.

We urge this Commission to put away the idea of reprocessing and concentrate on funding methods to isolate the current waste from the biosphere through improved methods and interim term on-site storage, known as HOSS, *hardened on site storage*. The cost savings to the taxpayer and the environment make this a much preferred method of waste management, although it is still not a long term permanent solution.

Finally, for the record, South Carolina conservation groups, and other conservation groups around the country represented here, are also opposed to any sort of *central interim storage of spent nuclear fuel*. Any centralized site would increase transportation costs, safety and security risks, and lead to the likelihood of de-facto reprocessing, more shortcuts in the disposition, or outright abandonment.

Former S.C. Gov. Dick Riley, expressing his aversion to nuclear waste storage, once pronounced what became known as Riley's Law of Nuclear Waste Storage, " Nuclear waste tends to stay where you put it last." Certainly it is true in S.C. that while we have been the recipient of massive amounts of nuclear waste, very little has ever left. South Carolina's conservation community is opposed to bringing any more out of compact low level waste, or any new high level nuclear waste into our state, and has grave concerns about further reprocessing missions which would dramatically increase the radioactive waste burden at Savannah River Site. Organizations that have taken formal positions opposing reprocessing in South Carolina include Coastal Conservation League, Conservation Voters of South Carolina, the League of Women Voters, S.C. Wildlife Federation, the Sierra Club and many others.

In addition, decentralized storage at the site of generation ensures that multiple congressional districts and large corporate entities remain engaged with this waste while it resides in "decentralized interim" storage. "Out of sight, out of mind" is not a policy we want to encourage or continue, in South Carolina or anywhere.

As DOE struggles to find takers for the MOX fuel that is scheduled to be produced in S.C. starting in a few years, we are reminded of the promises of an "exit strategy" for the surplus plutonium South Carolina accepted. With the canceling of the Duke contract to burn MOX fuel in its Catawba and other reactors, there is no firm promise of where this MOX fuel will actually go, hence no real exit strategy.

Despite claims that all the vitrified waste from SRS was going to go to Yucca, actually only 7000MT of waste from all DOE sites, which includes Hanford and Idaho National Lab, was scheduled to go to Yucca, dictating that a substantial amount of waste would remain on site at SRS awaiting a second repository.

The list of DOE promises to take care of waste disposition and remove long lived waste from a site uniquely unqualified for long term storage goes on. *We in S.C. would look very skeptically at any plan to stockpile spent commercial nuclear fuel in our state based on the promises of future disposition. Other states and stakeholders in those states will have the same concerns.*

In conclusion, we respectfully ask the Blue Ribbon Commission to keep this process open for all to participate. Those who are profiting or stand to profit from radioactive waste producing missions at DOE sites should not be allowed to dictate policies that further burden these sites. If you are meeting with private "booster" groups who promote these practices, then you should also meet with conservation groups around the sites and in the impacted states. We do not believe you should be meeting with special interest groups seeking to profit from these difficult decisions.

Perhaps the discussion that should really be taking place is whether we truly need more nuclear power or are there better, safer, cheaper and non-waste producing, healthy technologies to replace it in the 21<sup>st</sup> century and beyond. As energy efficient technologies emerge, coupled with new renewable energy sources, we may find we no longer need to depend on this very problematic energy source.